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Original Communications.

FELL METHOD—FORCED RESPIRATION.

By GEO. E. FELL, M.D., F.R.M.S.,
 Ex-President American Microscopical Society, etc., Buffalo, N.Y.

(Continued.)

CASE XLIV.—DR. FELL.

While the description of an instrument may appear somewhat detailed, and indicate that the method in operation is somewhat difficult, such, in this instance, is not the case. All there is to forced respiration is the forcing of air under *suitable pressure and control* with *proper periodic intermission*, into the lungs. It can only be properly done with *suitable apparatus*. The simplicity of the method should give to the operation its widest range of usefulness; but, to become practically acquainted with it, one must see it and study it before he can understand it. With proper instruction, the members of a *life saving or a ship's crew* could be taught to utilize this valuable method of saving human life. I presume before the "conservative" (?) medical profession of America will utilize

this method, thousands of its members must have their attention *specially* called to cases of resuscitation through its employment. After the results obtained, this should not be required.

Another matter I may refer to at this time: I believe all will admit that the greatest credit which it is possible to obtain as the originator of a method of wide range of applicability in saving human life consists in the largeness of the list of lives saved by it, and the just appreciation of its value by your fellow-man. There is no higher aim that we as physicians can conceive, than that of preventing the vital spark from taking leave of the human organism. If this be true, it does appear unjust, unfair and unthankful that credit should be withheld from those who are entitled to it, and that the medical world, in any section, should use these methods without the greatest care in giving to those justly entitled to it the credit due them. In the mercantile world, dollars and cents "count;" in the medical profession, reputation only.

This is the only payment which the profession at present allows those who accomplish results of *value* in fields unexplored. Indirect financial benefit is not honest gain. On this account, therefore, the original labors of physicians should be

guarded with the utmost care in all sections of the globe. The following quotations (with additions) from a paper presented before the last meeting of the New York State Medical Association will explain my reasons for the above remarks :

"Through the kindness of Dr. Thos. H. Manley, of the New York State Medical Association, I am enabled to refer to an article in the Proceedings of the Paris Academy of Medicine, under the date of June 2, 1891, in which Dr. J. V. Laborde, in a discussion on 'Anæsthesia,' regarding the dangers of chloroform narcosis, recommends forced respiration, and has devised a face-mask with which to perform the operation. This face-mask is of metal, with the edges surmounted or faced with rubber, and includes the *nose and mouth*. It is, 'to all intents and purposes,' *similar in detail* to the one I have been using for some years, and with which I have saved a number of lives. Dr. Laborde speaks of his invention as novel, of great future value, declaims on the subject never having been brought up for discussion, etc. The members of the New York State Medical Association, who have been acquainted with my work for the last four years, will agree that our Paris physicians can well afford to look westward to learn that progress is not confined to Continental Europe. It is quite strange, also, that Dr. Laborde has overlooked the statements of Prof. Horatio C. Wood, in his address on 'Anæsthesia,' before the Berlin Congress, 1890, in which he distinctly calls attention to my face-mask, and which I had been using for two years previously.

"I am also astonished by the statement in the Paris Academy Report, that noted French physicians have been using my method by tracheotomy with remarkable success, and without giving any credit for its practical introduction to the world from this side of the Atlantic.

"At the Paris Exposition of 1888, which had a department to illustrate life-saving methods, one of my instruments was exhibited by Mr. George M. Bailey, of Buffalo, N.Y., who, having witnessed the remarkable case of Julius Barre, in which instance I respired twenty-four hours for my patient before he was able to breathe for himself, requested, in the interests of progress, the privilege of taking it abroad. He had

with him reprints of my articles published in the Transactions of the New York State Medical Association, which were distributed among some of the physicians and jurors interested officially in the Exposition. *At that time, through ignorance of the value of my method,* they took no notice of my work as being worthy of note as a life-saving invention. Even the *medical representative of the United States Government at the Paris Exposition* did not see anything of value in it, although *no more remarkable cases are recorded in the annals of medical science than some of the first reported in my memoirs,* which were placed at the command of these gentlemen, but possibly not given the attention they deserved; but, what is most remarkable, appropriated it, utilized it, and now claim originality for methods which I had previously used and first recommended in practical shape to the medical world."

I would not speak thus pointedly did I not believe these gentlemen cognizant of my work through the publications left at Paris. It may be, however, that they did not see them.

Also, let me refer you to a criticism which was made some time ago by a Dr. Herzog, of Hoboken, in which he called attention to an instrument having been devised for forced respiration, some twenty years ago, which had been donated to the Humane Society of London, England. The apparatus consisted of one or more cylinders so arranged as to force air into the lungs and also exhaust it. It was costly and cumbersome and, undoubtedly, was never used to save human life, or, if it had been, would likely have failed ingloriously.

In justice to the results of my work, I must give my answer to the article in question. I stated that :—"I would not now be surprised if someone should add that Hippocrates had thought of forced respiration, and even devised an apparatus to perform it with. John Hunter did both, and possibly others, but we have no record of any of these noted men having applied their invention to the saving of human life. See Prof. Horatio C. Wood's remarks in his address before the Berlin Congress, in which he says: "But I have not found that either Hunter or Richardson treated by forced artificial respiration an actual case of disease or poisoning." If

these well-known physicians failed where I succeeded, am I to have less the credit?

In all this apparatus a grave defect existed, in my opinion, in that provision was made to exhaust the air from the lungs; this complicates the apparatus, and, furthermore, is not in accord with physiological conditions, as inspiration is a forcible measure, while expiration, being passive and produced by the elasticity of the fibro-elastic tissue of the lungs, does not call for the utilization of mechanical means to produce it. I also believe that an apparatus provided with means for exhausting air from the lungs would prove a very dangerous instrument to place in the hand of the average physician in an emergency case.

However, *no one* will question that Richardson, Hunter, the designer of the apparatus mentioned in Dr. Herzog's letter and several others whom I could cite, have prepared or invented instruments for forced respiration upon human beings.

With all their labor, what did they accomplish? Was a single human life saved by them? Did they demonstrate the *wonderful possibilities* of the method? Let us see. After my first operation with the instrument used in my physiological laboratory, and with which, notwithstanding its defects or adaptation for the purpose, I had succeeded in keeping my patient alive for nearly three hours, until he breathed for himself, I looked up the home and foreign literature on the subject. Nothing was discovered which appeared to controvert the fact, that I was justly entitled to the credit of being the first to *systematically and practically* solve the question of the value of forced respiration in the saving of human life; or that I had demonstrated, as one physician puts it, "that air can be forced into the lungs without any damage to them." Whatever has been accomplished, also should be stated, was without *any previous knowledge* of the failures in the same field which had ante-dated my efforts.

I can say, with the practical knowledge obtained from operating upon human beings, that the instruments used in the physiological laboratory do not meet the conditions to be successfully overcome in breathing for a human being for any length of time. They may answer in some in-

stances as a make-shift, but the work is carried on at a great disadvantage, and with many chances in favor of producing, instead of averting, a fatal result. They were never intended to be used upon human beings. The instrument with face-mask, originally devised by myself in all its practical details, and with which the results detailed in this paper were accomplished, was founded upon the experience obtained in my first case; and the results of my labor with it so overwhelmingly annihilates any controversy in opposition to its use, that it is needless to do more than present them to the profession. Had similar results or demonstration been accomplished at the hands of others in the past, nothing could have prevented them from receiving the widest publicity in the medical literature of the day; but no record is found which detracts from the practical value and originality of my labors. As a physiologist, I was acquainted with the apparatus used in the physiological laboratory, from the simple bellows with nozzle poked into the trachea of a dog, to the more complicated, constant Sprengle blower with interruptor, which admittedly would be of no use as an emergency instrument.

The apparatus I had used meets all the requirements for forced respiration in man, with or without tracheotomy, and in the *simplest manner*. It covers* all the methods which can be utilized in the operation, is adapted to be used out of doors or in a cold atmosphere, but may be modified by an arrangement to provide a constant air-supply and automatic inspirator, which would, however, increase the cost, and do away with the emergency feature of the apparatus, as now used.

Dr. Herzog's article, possibly without intent, would naturally lead to the inference that the subject is old, not worth considering; its tenor is not uncertain. The truth is that the work in forced respiration, prior to my own, and running through the past century to a great extent, had simply relegated it to the list of *unjustifiable* procedures. Do we find anything

* I do not question that different mechanical devices might not be successfully used in forced respiration. They would not simplify the operation, and now, since the demonstrations of its value, may spring up as original inventions.

previous based upon *results* recommending us to use forced respiration after all other methods of artificial respiration had failed? On the contrary, we do find in every medical work treating on the subject, the "Ready Method in Asphyxia of Marshall Hall," the highest accepted authority, that we *must avoid the use of bellows* or any forcing instrument.

Now, I propose to talk plainly, as it seems entirely unnecessary at this date to mince words upon this subject. *The practical introduction to the world of the value of forced respiration in the saving of human life, the demonstrations which indicated its great possibilities, must be accredited to an American*, and the work of others in the past had nothing to do with the results obtained by him which were original in conception and in the detail of the method of practical application.

The question simply amounts to the difference between failure and success: will the credit be accorded to those who failed or the one who succeeded? In this Columbian year I might ask, if Christopher Columbus had prepared his ships, but not sailed across the Atlantic, *would he have discovered America?*

What also must be admitted by those who are inclined to accord justice to whom it is due is, that the practice of vivisection in the colleges and laboratories of the land had no relation whatever to the saving of human life, or had it been ever taught in medical institutions, systematically or otherwise, as of any value in saving human life. For over eight years prior to my first operation of forced respiration upon a human being, I had been a practical vivisectionist in the physiological laboratory, and during that time I never heard it even hinted that a human life might be saved by the laboratory methods.

It was in the field of paralysis of the respiratory centres from opium that I began my work with forced respiration, and the demonstrations as to its efficacy, from the first, could not be questioned. Each and every case saved had passed beyond the limit of hope, so far as all known and systematically applied methods of resuscitation were concerned. To be denied the credit which should in all fairness be accorded to the practical originator of a method of such far-reaching importance in the saving of

human life is what I could not and will not quietly submit to. "Honor, gentlemen, to whom honor is due."

Let me correct also another impression coming from high authority: Dr. John O'Dwyer, who advocated intubation, states that there are serious objections to the use of the face-mask and tracheotomy in forced respiration. (See his article, Archives of Pediatrics, May, 1892.)

The majority of cases upon which I have operated have been cases of opium narcosis; cases, it is true, which offer the widest demonstrations of the advantage of the method in its long continued use, and yet it must be borne in mind that the life of the patient is not out of danger until the poison is eliminated from the system.

Now, I am quite sure that neither Dr. O'Dwyer nor any other judicious physician would recommend a method which would prevent the imbibing of fluids, through which means we may most readily aid elimination of the poison. Intubation, which he recommended, would certainly do this in preventing closure of the glottis, and therefore I have not used it; also, it is a fact that one of the difficulties we have to contend with in these cases is the danger of vomited fluids entering the larynx and obstructing respiration. I must contend that in such cases tracheotomy offers more hope for our patient than intubation, as there is no interference with the passage of fluids to the stomach. Experience has shown again that intubation will be seldom needed when the face-mask offers us as good results without any of the difficulties which must be necessarily met with in intubation. The objections Dr. O'Dwyer urged against the face-mask are not in many cases borne out in actual experience; views based upon practical experience must be conceded as of more value than those of a semi-hypothetical nature. Nearly to the present time, so far as can be ascertained, I have probably had more systematic operations of forced respiration *upon man* than all the rest of the physicians of the world combined. What I may say upon this subject is based entirely upon this experience.

Dr. O'Dwyer states that: "In forcing air through the mouth or nose of an insensible patient; the tongue, unless secured, is almost certain to cause obstruction, or th"

vocal chords may be forced together by in-rushing air, and act as a valve as in paralysis of the abductor muscles, because there is no expansion of the glottis as in normal inspiration." This does not generally hold, I can safely state, from the observations I have made and now repeat tersely.

In my eleventh case, young woman, I used the face-mask for four hours; my fifteenth case, female, for seven hours; seventeenth case, female, two hours; case nineteen, old lady, two hours; case twenty-first, female, seven hours; case twenty-second, female, four hours; twenty-fourth case, male, five hours; twenty fifth case, female, two hours. In all these cases, and many subsequent for the time mentioned, which resulted in the majority of instances in saving the lives of my patients, there was absolutely no interference with the air passing directly to the lungs. Furthermore, the chest would heave and fall in many cases in the most natural manner. That such results could be obtained by the cheap apparatus mentioned in "The Year Book of Treatment," 1891, page 193—Dr. Wood being given the credit as originator—and lauded as the best, consisting of a face-mask, a few feet of rubber tubing, a pair of bellows, and two sizes of intubation tubes (ordinarily not required), I do not believe. With such an apparatus which, it is stated, could be used by "unskilled persons," I am quite certain I would have lost many of my patients. In the cases referred to, if too great pressure was produced, the œsophagus would expand and cause stomach inflation; but by careful inspirations for a time, followed by pressure on the abdomen, it would pass away without inconvenience.

What appears to me may be urged as facts of value in this connection are the following: The passage to the lungs under ordinary conditions of unconsciousness, except, and even sometimes, in swallowing, is always open. The air forced into the lungs does not, as is generally believed, cause a closure of the glottis any more than the deep auto-inspiration of ordinary respiration. Exceptions may be taken to all rules of course.

If forced respiration by my method, use of face-mask, etc., be carefully conducted, the lungs may be as fully inflated

as under deep auto-inspiration, and the respirations kept up for a period of time ranging from one to ten hours, according to size of individual and degree of obesity. Thin, spare patients appear to be better subjects than those of opposite build. In the few cases in which, from continued work with complete paralysis, the tongue has fallen back and occluded the larynx, a ligature has been placed through it and the organ held forward. Usually, extension of the neck will raise the glottis, but cannot always be relied upon; in such cases intubation would be of value. After the face mask has failed in one or two instances, I have saved life by performing tracheotomy, which was called for through the cases being narcotized by opium (*vide* previous remarks).

As to intubation, it may have its place in some cases of forced respiration, but to urge its value over the use of the face-mask when the latter has accomplished so much, is unwarranted.

Dr. J. S. McLain of Washington, D.C., who has supplied himself with an apparatus for forced respiration, propounded the following questions, which, having a practical bearing upon the use of the instrument, might prove of value to others.

First Question:—After padding the face-cup to make it fit the face of the patient, is it necessary to exert considerable pressure thereon when the air is being sent into the lungs, to keep the air from escaping at sides of cup? The amount of pressure will vary in different patients, but not to a great extent if the cup fits the contour of the face snugly, or it is padded with a piece of cloth to do so. I have used the face-cup on men with a moustache or whiskers, and it has worked well. It is a mistaken notion that much pressure of air is required to inflate the lungs in inspiration. The artificial lungs which I have used in demonstrations very nicely illustrate this, and with them the actual pressure used can be readily obtained. The presence of cyanosis is the most important condition which calls for more active or forcible inspiration. In producing it, it should be borne in mind that *too great* pressure will distend the œsophagus and inflate the stomach and intestines. If this should take place, pressure upon the abdomen at intervals will relieve the condition, so as not to

prevent the descent of the diaphragm and interference with inspiration. In the majority of instances I have not found it necessary to hook up the tongue. If it falls backward and prevents the air from passing to the lungs, a coarse ligature may be passed through it, carried out at the side of the face-cup and retained in place with very little trouble. Sometimes, but not always, by raising the larynx or extending the head, the respirations will be facilitated. My experience would lead me to state that forced respiration by the face-mask is more readily applied in the case of lean than in corpulent individuals, that the difficulties noted above are hardly to be experienced in the former.

A case in point was that of Mrs. N——, who had taken eleven grains of morphine; artificial respiration, Sylvester method, was of no avail; four hours of respiration Fell method placed the lady out of danger. In this instance the slightest movement of the air control valve would cause the chest to heave, when the respiratory centres were almost completely paralyzed; the marked cyanosis was quickly overcome, and the most complete control of the respirations existed.

Second Question:—Is it necessary, when using the face-cup, to pry the mouth open and raise the tongue, or will the air enter in sufficient quantity through the nostrils, supposing the mouth to be closed? In the majority of cases, air will enter through the nostrils in sufficient quantity to supply the respiratory needs. If the base of the tongue occludes the glottis, a ligature passed through the tongue, as stated, will aid the inspirations. This will be seldom required.

The object of presenting this paper to the members of this Congress is that through the unquestioned results obtained by the methods first systematically and practically recommended, and by giving a clear record of the experiences which brought them about, they may be readily taken up and utilized for the benefit of the profession and humanity.

Dr. Pepper, the worthy president of this body, gave his opinion, to the effect that the reading of papers, and giving demonstrations before medical bodies, would do but little towards introducing a new practice, so that it would be generally utilized by

the profession. He urged that I would succeed better by placing into the hands of the well-known clinicians of the country a few instruments at cost price, and await the results of their use. This I will endeavor to do, as there is no evidence that instrument manufacturers will do anything with the apparatus until the clinicians generally have demonstrated that it is a necessity and a valuable addition to our armamentarium. More than this, medical opinion must be moulded so that it will be considered hazardous to attempt to save life without proper appliances being provided beforehand. A physician of Syracuse, N.Y., telephoned me to send him an instrument, that he had a lady patient in danger of dying from an over-dose of opium or morphia. I received the word two or three hours after it was sent, and forwarded by express the only instrument I had at my disposal, offering it to the party at less than the actual money outlay I had incurred in preparing it. Next day the instrument came back, with the statement that, while the physician was at the depot obtaining it, his patient died; that now, knowing where he could procure one, he would wait until he had another patient before procuring it. If the second patient comes around, he will undoubtedly have another death certificate to fill out.

The following letter, in answer to an enquiry of Dr. J. Frank, of Chicago, who is supplied with an apparatus, may be of practical value to anyone desiring to use the method: "Suppose a case of asphyxia from any cause, as opium narcosis, drowning, inhalation of gas, a case of shock from any cause in which the respiratory centres are disturbed or in which the respirations are shallow from loss of vital energy, and in which the Sylvester or any other method or artificial respiration has failed or is of no value. Use the apparatus as follows, with the parts in the following relations to each other: Face mask or cup, rubber tube connecting it with air valve, air valve, rubber tube connecting air valve with bellows.

With your patient on a table, bed or floor, as the case may be, press face-cup over the nose and mouth, and have bellows worked by an attendant at the rate of from 120 to 150 times per minute for an adult, and less for infant or youth. For

each three movements of bellows, press down piston of air valve, which permits the air to pass to the lungs, bulging out the cheeks, and produces an inspiration. Then release piston of air valve for three movements of bellows, letting the air pass out of lungs and producing the expiration — keep it up. If cyanosis does not pass away, make the inspiration a little longer. With the air valve you can absolutely control the outward or inward movement of the air, and by watching, if attempts at respiration should be made by the patient, you can materially assist them and change instantly from one to the other. The puffing out of the cheeks, heaving of the chest and vibration of the vocal chords (slight snoring sounds) are all indicators of value in the progress of the work. This method of forced respiration in such a case is doing more than to keep up the life of the patient where all the old methods of Sylvester, Marshall Hall and other methods of artificial respiration would fail. Through the extra quantity of oxygen supplied to the blood it overcomes to a degree the effect of the narcotic, and thus enhances the chances of recovery of the patient. In addition, however, all methods calculated to tone up and invigorate the heart muscle and system generally, with those calculated to eliminate the poison circulating in the system, must be used. Don't fail to try forced respiration even when the prospects for successful resuscitation seems useless, as I have many instances in which life has been saved when the indications gave little cause for hope.

Now, gentlemen and ladies, I was in hopes that my experience at the Pan American Medical Congress might prove different from that with other medical bodies with which I have discussed this subject, but I have found it the same. No special recognition which has resulted in calling the method into general use has been taken. If not when thirty human lives have been saved by a procedure not heretofore intelligently utilized, will it when sixty or a hundred or more have been saved? I have given to the world a simple, practical and thoroughly valuable method of saving life, which, had it been utilized in the last four years, after ample time had elapsed to demonstrate beyond doubt its value, not one but from two to three thou-

sand lives would have been saved which have been sacrificed to an outrageous conservatism which has no right to prevail among intelligent beings at the present period. The reasonable recognition of a procedure which has accomplished so much would interest thousands who would not give it a thought without it, and do much toward bringing into general use a life-saving method, well known, but lying dormant, listless, inadvertent. I ask you in all earnestness, if this great American body can do better than give this subject the consideration it deserves, or let the opportunity pass to somebody of equal or greater magnitude to do it? The results of my work will continue to be added to. I hope to live to see them figured in the thousands. In the ordinary course of events it must come. I appeal to our American foreigners here to have it utilized at their homes, and can assure them that it will do what has not been accomplished before, and exceed their most sanguine anticipations in the results which are ordinarily obtained.

72 Niagara St., Buffalo, N.Y.

Society Proceedings.

THE MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, May 12th, 1893.

JAMES STEWART, M.D., PRESIDENT, IN THE CHAIR.

Large Scrotal Hernia.—Dr. ARMSTRONG brought before the Society a man suffering from an enormous hernia. It had been gradually increasing for the last twenty-four years; a truss had never been worn. The sac seemed to contain the greater part of the small intestines, and the ring was large enough to admit the fingers to the knuckles. Dr. Armstrong intended to transplant the cord and close the opening.

Dr. SHEPHERD referred to a similar case upon whom he had operated several years ago. The sac contained all the abdominal contents, except the stomach and rectum. The testicle, which was cystic, was removed, and the canal completely closed. There has been no return.

Macroglossia.—Dr. SHEPHERD showed an infant of six months suffering from an extreme

degree of macroglossia. The tongue projected about two inches from the mouth, and great difficulty was experienced in feeding the infant. He proposed to remove the tongue with the écraseur.

Poisoning by Sulphate of Copper.—Dr. WYATT JOHNSTON exhibited the stomach of a man, aged 28, who had committed suicide by drinking nearly a quart of a saturated solution of sulphate of copper from a battery jar in the electric works, where he was employed as a night watchman. Death occurred in an hour and a half. The stomach and intestines had externally a leaden-blue color, and contained a large amount of pale grayish-green flocculent fluid. The mucosa had the appearance of having been tanned, and was stained a deep green color. Chemically, the contents of the stomach were found to consist of basic or sub-sulphate of copper. Heart muscle and liver parenchyma looked opaque and grayish. No examination for copper was made of these organs.

Dr. W. F. HAMILTON said that the patient had been admitted to the General Hospital shortly before death. Large quantities of warm water and mustard failed to produce emesis. He seemed to suffer from extreme pain and difficulty of respiration, owing to a quantity of mucus in the throat. Extremities were cyanotic; superficial capillaries were markedly dilated. There were some mucous and watery stools.

Dr. MILLS asked if there was any evidence along the course of the vessels and lacteals to indicate whether the salt had been absorbed into the blood.

Dr. JOHNSTON replied that there were no signs to indicate that absorption had taken place; no naked-eye changes in the blood.

Localized Tuberculosis of Ascending Frontal Convolution.—*Tuberculosis of one Suprarenal.*—Dr. ADAMI exhibited the drawing of a brain recently removed by him, presenting a peculiarly rare localized tubercular lesion, affecting the centres for the movements of the upper limb and neck of the left side.

The patient, a woman of 28, phthisical and a morphine maniac, a patient of Dr. Stewart at the General Hospital, had, for two days before death, suffered from repeated attacks of an epileptic nature, in which there were convulsive movements of the left upper extremity and the neck, so that the head became pulled down to the left, and the face turned partly to that side. These movements were executed with great rapidity, as many as 145 contractions of the extremity being recorded per minute.

At the autopsy, there was found old phthisis of both apices, and, extending from there, a condition of acute tubercular broncho-pneumonia, miliary tubercles of relatively large

size being scattered all over both lungs. Both the kidneys and the liver presented similar tubercles, while the medullary substance of the right suprarenal contained caseous tubercular foci of large size. The left suprarenal had a gray softened medulla, but was not tubercular.

A condition of great interest was exhibited in this brain. Careful examination and section revealed no tubercular affection save at one spot—an area a little over half an inch in diameter, situated upon the right ascending frontal convolution, at either apposed side of a fold forwards in that convolution, at the level of the sulcus which separates the superior from the middle frontal region of the brain. Here miliary tubercles surrounded the surface vessels, and the tubercular process extended along the sheaths of the branches given off from these, and formed small wedge-like masses, passing through the gray to the outer service of the white matter. Dr. Adami pointed out that a tubercular lesion of such small dimensions affecting so distinctly one group of associated movements was almost, if not quite unique. He called attention to the fact that this case supports Ferrier's conclusion, reached by experimental research, that the area for the movements of the neck passes backward to the ascending frontal, and overlies or intermingles with the areas for movements of the upper extremity.

Recto-ovarian Fistula.—The same case presented another rarely recorded condition. Upon removal of the pelvic organs *en masse*, it was found that both ovaries were situated low down in the cavity, and were there bound to the vaginal end of the uterus by firm old inflammatory adhesions. They were fibroid and contracted. The Fallopian tubes curved downward to them, and did not present such extensive evidence of inflammatory disturbance. It is to be noted that the left tube was not at its extremity in close attachment to the ovary.

Upon attempting to cut away the left ovary, a fistulous track, containing foul-smelling contents, was opened, and upon passing a sound into this, it emerged into the rectum at a point about $3\frac{1}{2}$ inches above the anal orifice. The ovary lay curved over the blind end of this fistula, which was $1\frac{1}{2}$ inches in length. There had been so much inflammatory change all around the fistula, that it was not possible to recognize microscopically anything but firm, fibrous tissue in this region; however, macroscopically, the rather thin upper wall of the fistula, seen from above, was in direct connection with, and indistinguishable from, the rest of the ovary, while, clinically, there was the history of acute ovarian disturbance several years previously. Hence, it may safely be inferred that this was a true recto-ovarian fistula.

Not a few cases of tubo-ovarian abscess

bursting into the rectum are on record, but here the tube was not implicated, and Dr. Adami held that the fistula could only be explained as the consequence of an acute suppurating oöphoritis or perioöphoritis with rupture into the rectum. The patient had complained of no recent ovarian or rectal trouble; the fistula, as its walls showed, must have been of long standing.

Dr. WILLIAM GARDNER had never met with a condition of recto-ovarian fistula as described. Ovarian abscess without involvement of the tube is extremely rare.

Dr. STEWART said that the case was unique as a demonstration of the location of the motor areas.

White Sarcoma of the Retina.—Dr. BULIER exhibited the specimen and gave the history of the case. The patient, a woman, aged 49, had a subacute glaucoma, of some standing, in the right eye. A year and a half ago she became suddenly blind. The other eye was absolutely healthy, so he had come to the conclusion that this was not a case of ordinary glaucoma, but that the blindness was due to some cause antecedent to the glaucoma. The lens had become quite opaque, thus precluding ophthalmoscopic examination, and making the diagnosis difficult. He, however, counselled enucleation, which was done. On making an equatorial section, a round growth was seen on the fundus, which proved to be a white sarcoma, a condition of great rarity. The rest of the eye was in a fairly healthy condition; the detachment of the retina had not become complete.

Thoracic Empyæma.—Dr. ALLAN read a paper on this subject, dealing with the surgical treatment.

Dr. SHEPHERD thought that ordinary cases following pneumonia got well after aspiration. But in cases where incision into thorax, with removal of one or more ribs, is performed, the operation gives great satisfaction. He never washes out the cavity, except when the pus is fetid, as he considers it unnecessary to introduce foreign matter.

Dr. MCGANNON said that there was a great difference of opinion about washing out the cavity. Some say that the procedure causes shock, but he thought shock might be due to hæmorrhage. A weak solution of peroxide of hydrogen could never do harm, and might be of great service.

Dr. STEWART had recently seen three cases of pneumonic empyæma, and none had been successfully treated by aspiration.

Stated Meeting, May 26th, 1893.

DR. JAMES BELL, 2ND VICE-PRESIDENT, IN THE CHAIR.

Dr. ARTHUR BEERS was elected a member.
Exophthalmic Goitre.—Dr. J. B. McCON-

NELL presented before the Society the patient, a woman 45 years of age, married 25 years, 4 children, the youngest being 5 years. The trouble began in the summer of '91, when she began to suffer from a spasmodic cough, which seemed to arise in the throat, and was associated with a great deal of palpitation. During the winter following, she got rid of the cough, but the palpitation grew worse. During the summer of '92 the palpitation was so bad that she could scarcely lie down. She noticed the swelling of the thyroids first about Christmas, '92, and they have grown gradually larger ever since. In the spring of '92 she first observed some brown pigment spots on different parts of her body; since then they have appeared on the hands, the shoulders, the inner sides of the thighs, and somewhat less marked on other parts of her body. Associated with these pigment spot are patches of leucoderma. The exophthalmos is not as yet very well marked; it is becoming more so, however, seeming to be following the other two cardinal symptoms. She has also suffered from marked tremor, which has been a little better of late, several days' rest seemingly having rendered it quieter. Her pulse ranges from 90 to 120, and is very irregular.

Examination shows the heart to be considerably enlarged; the apex beat is considerably to the left of the normal point.

It is a very typical case of Graves' disease. The pigmentation, however, does not appear to be a very common complication. In Pepper's system of medicine it is not even mentioned; Osler, however, speaks of it as one of the complications of this disease.

There is no anæmia, although she is emaciated and somewhat pale; the corpuscles number 5,200,000 to the cubic millimetre.

Dr. ADAMI remarked that pigmentation was very common in the cases of this disease, he had seen, in a country where Graves' disease appeared to be particularly common, Lancashire. It was looked on there as the fourth cardinal symptom. Pigmentation is interesting as showing the nervous nature of exophthalmic goitre, and brings it into relation with more than one disease in which there is some affection of the sympathetic system. Addison's disease is another of these.

Dr. LAPHORN SMITH extolled the use of the galvanic current in the treatment of the disease, comparing it to quinine in malaria, and mercury in syphilis. He cautioned moderation in the turning off or on of the current, remarking that the sympathetic nature of the trouble is shown by the tendency of the patient to faint or turn pale under even the slight shock thereby incurred. A single sitting often reduces the size of the tumor quarter of an inch. A lady afflicted with this trouble, and in whom the tumor is so large as to obstruct breathing.

had been accustomed to come to him yearly for several years, just to have it reduced, it growing again in the interim. The strength of the current used varies from 10 to 15, and rarely up to 20, milliamperes. No puncture was ever made, simply an electrode large enough to cover the surface, and, to effect this, it is better to make it concave. Clay or absorbent cotton answer very well for its manufacture.

Dr. KIRKPATRICK related the history of a case where the galvanic current had been used with results corresponding to those of Dr. Smith. The patient usually stood 10 milliamperes, commencing with 5, and gradually increasing. In the *Medical News*, a few months ago, a case was mentioned where the Faradic current had been used with equally gratifying results. On the other hand, a case occurred in the General Hospital some time ago, where the constant current had been used without any result. Probably, after all, it is only in a certain number of cases where it is of use.

Dr. McCONNELL asked on what principle galvanism is used in this disease. The enlargement of the thyroid is a secondary phenomenon. It seems to begin in some affection of the sympathetic, a vaso-motor paralysis localized to a certain extent; in this way the heart is primarily affected. Goitre and other symptoms seem to be secondary and not essential, from a causative point of view. Have they applied the current with a view to reduce the enlargement, or has the sympathetic been galvanized?

Dr. L. SMITH thought galvanism acts, as a powerful tonic to the sympathetic. He believed that the beginning of the disease is a paralysis of the vaso-motor nerves in the thyroid, resulting in a hyperæmia of that gland. Galvanism acts by renewing the tone to these vessels, and the fainting, etc., which are observed to follow a too sudden application of the current, are due to the too rapid tightening of the sympathetic in the brain, the blood being thus temporarily cut off.

Cases of Cystic Diseases of the Ovaries.—Dr. ADAMI had recently received for examination a very interesting series of cases of disease of the Fallopian tubes and ovaries, and brought some of them before the Society, in order to invite discussion upon the subject of ovarian cystomata.

Case 1. Chronic Salpingo oöphoritis.—The two tubes and ovaries exhibited were obtained by Dr. Alloway from a woman aged 38 years, who had been married 11 years. She had been twice pregnant, the last pregnancy occurring 11 years ago, when there was evidence that she suffered from septic peritonitis. Upon examination before operation the uterus was found contracted, the ovaries and tubes enlarged, fixed and acutely tender and painful upon pressure. Dr. Alloway operated upon May 22nd, and upon exposing the parts,

found extensive delicate veil like adhesions binding the ovaries to the surrounding organs; firmer adhesions bound the ovaries to the outer ends of the tubes. These numerous adhesions complicated the removal.

Left ovary and tube: The tube was tortuous and $\frac{3}{4}$ in. in diameter. The walls appeared firm and greatly thickened, but upon section the reverse was found to be the case, for the tube was greatly dilated and thinned in its outer half; the smaller and narrower proximal half alone showed thickening of the walls, while the dilated region was filled with thick, almost solid, inspissated pus, which presented no cell structure, but only granular and fatty débris. There was almost complete stenosis of the uterine extremity of the tube; the ovarian extremity was completely occluded and was distended, all indications of the fimbriæ having disappeared. Upon the outer wall of the tube close to the ovary, there was a small white body of the size of a No. 12 shot; this, when opened, was seen to be a cyst filled with similar inspissated cell débris, but unconnected with the lumen of the tube. The ovary, which was of fair size, presented in the substance of its inner half a cyst as large as a pea. This possessed a well-marked capsule, and was filled with similar fatty cell débris. Apparently this was the remains of an enlarged and suppurating Graafian follicle. The outer half of the ovary was almost entirely formed of a corpus luteum, with thickened sinuous walls and firm central area containing blood pigment.

The right tube presented a condition similar to that of the left. It was enlarged and tortuous, and its occluded extremity was adherent to the ovary. There was the same almost solid cheesy material filling the thinned and distended outer half; no trace of the fimbriæ could be determined, either externally or coiled within the tube. Immediately below the tube and to its outer end was a cyst with contents similar to those of the tubes and cysts already described. The outer wall of this cyst was in direct contact with the ovary, and it was a question as to whether this was of ovarian or ligamentous origin. The ovarian tissues could not be traced into its walls, and this, together with the position, favored the latter view. The right ovary, like the left, contained a small cyst filled with cell débris and an old corpus luteum, and neither attained to the dimensions of those in the left ovary.

The well-formed veil-like adhesions, the nature of the contents of the tubes and abscess cavities, the complete disappearance of the fimbriæ, all indicate a peculiarly long-standing condition, as also did the history and sterility of eleven years' standing, but the most instructive feature of the case is the series of cysts here presented; for these masses of semi-

solid fatty material, surrounded by definite capsules, may quite rightly be described as cysts. Clearly, there had been a tendency towards the formation of chronic suppurative foci, not only in the tubes and ovaries, but also around them, so that we have cysts of inflammatory origin (1) in the ovaries themselves, starting in the corpora lutea, (2) in the broad ligament, (3) upon the outer wall of the Fallopian tube, and (4) in the Fallopian tubes; for these have become occluded, and each with its lumen distended by old inflammatory products may be looked upon as cystic.

Case II. *Pedunculated Sub-peritoneal Fibromyoma: Cystic Graaffian Follicles.*—Here was a sub-peritoneal fibro-myoma attached to the posterior portion of the uterus by a ligamentous membrane, which allowed it to be quite distinct and separable from the uterus. The ovaries in this case also showed evidence of disease. The right one was of fairly normal size; on section, a cavity with a sinuous wall was seen; this cavity is certainly nothing other than a large corpus luteum which has undergone cystic degeneration and is now being absorbed, so that here is another form of cyst of the ovary. In the last specimens we had to do with a cyst which resulted from the suppuration of a Graaffian follicle or corpus luteum; in this one we have a corpus luteum which, instead of undergoing its normal course of enlargement, followed by atrophy, has increased abnormally (it was at least 30 millimeters in diameter). The blood first poured out had become absorbed, and was replaced by a fairly clear fluid, and only now, judging from the sinuous capsule, was absorption taking place. The left ovary in this case showed two other cystic conditions. One appeared to be a comparatively recent corpus luteum, the blood pigment still being in it, with little crystalline masses of hæmatoidin, the centre being a clear cystic space. The second was a simple cyst partially filled with semi-solid broken-down cell matter, the rest of the cavity being filled with clear fluid.

Case III. *Multilocular Ovarian Cyst of Great Size: Cystoma Proliferum Glandulare.*—This case, sent by Dr. Gardner, is interesting on account of its great size, and from the fact that upon first sight it appeared to be one huge single cyst, completely filling up the lower abdominal region. There were, however, towards the lower and hinder portion a few small cysts connected with it, corresponding, it would seem, to the region of the original ovarian tissue, and upon the anterior wall could be felt three or four hardened areas, or "plaques," the largest being several inches in diameter. Upon opening the large cyst and removing the mucoid material contained, these flattened plaques could be seen projecting lightly into the interior. The specimen had

been sent in order to determine the nature of these thickenings of the wall.

Waldeyer has divided the ovarian cystadenomata into two classes, which, it must be admitted, are not sharply separated, for a very large proportion of ovarian cysts, if carefully studied, must be placed under both of his headings. These are: (1) that of the "cystoma proliferum papillare," in which the connective tissue of the wall of the mother cyst undergoes great proliferation, forms papillomatous projections, and the papillæ, covered by a layer of epithelium, and coming into contact here and there, form thus the secondary cysts; (2) in the second class, or that of the "cystoma proliferum glandulare," it is the columnar epithelium lining the mother cyst that is the more proliferous, and that dipping down into the underlying connective tissue, there form follicles, which, becoming occluded, develop into the secondary cysts. Now, the plaques in this specimen, when examined microscopically, are seen to be composed of a relatively small amount of fibrous stroma, enclosing very numerous small follicles and cysts lined by a single layer of columnar epithelium, tending to invade the capsule of the mother cyst. Hence to this extent the tumor must be classed as an adeno-cystoma of the glandular type.

We have, therefore, in the series of examples brought before the Society, a not uninteresting series of the main forms of cystic growth in the ovary, the dermoid cysts alone being deficient. We have the Graaffian follicle, which, owing, it would seem, to coincident inflammation in and around the ovaries, forms a corpus luteum of great size and aberrant course, becoming either the seat of inflammatory change itself, so that the cavity contains eventually broken down cell material, puriform debris, or again becoming a cyst of moderate size filled with clear fluid. And again, we have a very fair example of the form of multilocular ovarian tumor of the more important type clinically, with regard to whose etiology there is still divergence of opinion.

Are the multilocular ovarian cysts, the cystadenomata, also developed, like the simple cysts above described, from Graaffian follicles, or have they another origin? The fact that the columnar epithelium lining them is of a simple type, that they and the tumor which they form are of an embryonic type, and that coincident with this more or less embryonic nature the tumors are of fairly rapid growth and incline towards malignancy, are, on the whole, against the view that they develop from mature Graaffian follicles. And with Waldeyer and Malassez it is generally held that they are developed from an earlier stage; that just as the Graaffian follicles themselves originate from processes or follicles growing inwards from the epithelium covering the surface of the foetal

ovary, so these tumors arise from similar ingrowths in later life; and Malassez has seen such ingrowths from the surface, resembling a cylinder epithelioma. On the other hand, Ritchie states that he has observed the ovum or its remnant in the smaller cysts of a multilocular tumor, and these smaller cysts, like the Graaffian follicles, have limpid contents; while Galabin has seen processes similar to cylinder epithelium starting from Graaffian follicles, and not from the surface. There is, it appeared to Dr. Adami; no inherent improbability that the adenomatous growth should start from the adult (glandular) follicles, just as adenoma or carcinoma of the mammary gland is supposed to start from adult gland tissue in the mamma.

The matter might seem to be one of minor import, for the same original epithelium is implicated in both cases, the only question being as to the stage of development reached by that epithelium at the moment when the tumor begins to form. Nevertheless, it is one that has been much discussed, and a series of examples, such as those brought before the Society, might serve to start and illustrate a discussion on the subject.

Dr. ALLOWAY, commenting on "Case I" of the series just discussed by Dr. Adami, said that since her last childbirth, 11 years ago, when she had puerperal fever, she suffered from pelvic pain, so severe as to almost incapacitate her for work; and that this history led him to suspect that she had wholly inflamed and adherent ovaries and tubes, and that there was also pus, possibly in an inspissated condition, in the tubes. He was pleased to find such was the case. In the operation he found great difficulty in separating the adhesions, which, from their density, must have been there for years. He ligated the tubes close to the uterus, where they were not inflamed. Good recovery.

Case II was a subperitoneal fibro-myoma, which is much more common in the negress than in the white woman. The uterus was in ante-version, somewhat enlarged (9 centimetres in depth), but not sufficiently so to produce much hemorrhage. The fact of the tumor being entirely separated from the uterus simplified the operation; it was only connected to the uterus by a ligamentous band, which was covered with peritoneum,—in fact, by a sort of mesometrium. To cause the complete disappearance of all the symptoms, he thought it better to bring on the menopause, and, to do this, adopted Tait's operation—the removal of the appendages. This, where the uterus is not very much enlarged, is adequate, safer, and, therefore, a better operation than total extirpation. The tubes were found, on pathological examination, to be chronically inflamed.

CANADIAN MEDICAL ASSOCIATION.

A good many years ago it occurred to some of the members of the profession in the Dominion that there should be a way of forming a closer bond of union among the doctors in all the provinces. With that object in view, a Medical Conference was called, with delegates from each of the provinces, to consider the matter. They met in the Hall of Laval University, Quebec, on Wednesday, Oct. 9th; Dr. James Arthur Sewell, President of the Quebec Medical Society, was in the chair; Dr. Alfred Belleau acted as secretary.

After some preliminary business had been transacted, Dr. Wm. S. Harding of St. John, N.B., moved, seconded by Dr. Wm. Marsden, Quebec, Q.: "That it is expedient for the Medical profession of the Dominion of Canada to form a Medical Association, to be named the Canadian Medical Association."—Carried.

A nominating Committee was appointed; they brought in a report, which, after some discussion and one or two amendments, was adopted, the first officers of the Association being:—

President: Hon. Charles Tupper, C.B., Halifax, N.S.

Vice-Presidents: For Quebec, Dr. Hector Peltier, Montreal, Q.; N.S., Dr. R. S. Black, Halifax, N.S.; N.B., Dr. LeBaron Botsford, St. John, N.B.; Ont., Dr. E. M. Hodder, Toronto, Ont.

General Secretary: Dr. Alfred G. Belleau, Quebec.

Local Secretaries: For Quebec, Dr. W. H. Hingston, Montreal; N.S., Dr. Jas. R. De Wolf, Halifax, N.S.; N.B., Dr. W. S. Harding, St. John, N.B.; Ontario, Dr. Wm. Canniff, Belleville, Ont.

Local Treasurer: Dr. Robert Henry Russell, Quebec.

Thus commenced an organization, the value of which cannot be over-estimated by the profession of the Dominion.

Since these large and successful provincial societies have sprung up, it has been thought that the work of the Canadian Medical Association had been completed.

Fortunately for the profession generally, this has been held by but a limited number, and up to the present all attempts to curtail its usefulness have failed. During the last few years there has been much enthusiasm over the meetings, and attendance has been large. Next year the meeting will be held in St. John, N.B., some time in September; and if united effort can do anything, the members of the profession in the Maritime Provinces intend to make this one of the most successful meetings the Association has ever known.

ELEVENTH INTERNATIONAL MEDICAL CONGRESS.

A letter directed to the undersigned by the Secretary General of the Eleventh International Medical Congress, and dated December 19th, 1893, contains the following communications :

"American members will pay on the English, French and Italian railways single fares for double journeys, and will obtain a reduction of twenty per cent. on fares for Italian round-trip tickets.

"The documents required for their identification will be sent to you in January, and Americans intending to visit the Congress will have to apply to you for them.

"Full particulars concerning the journeys will accompany the documents.

"Messrs. Thos. Cook & Son, London, Paris, Rome and Naples, should be applied to for accommodation and for tickets for the excursions at Rome, Naples, and to Sicily. Such excursions will be arranged at Rome under the guidance of Mr. Forbes, member of several scientific societies and correspondent of the *Times*—for Naples, three days, including Vesuvius, Pompey, Capri, Sorrento, Castellamare, Bajae, etc.—for Sicily, ten days from Naples, including Messina, Taormina, Catania, Girgenti, Siracuso, Palermo, and return to Naples.

"The fares for members of the Congress will be considerably reduced, and comprise hotel accommodations, carriages, guides, boats, etc.—about 70 frs. each for the three days, and 285 frs. for the ten days.

"Full particulars concerning these excursions will be contained in a leaflet to be added to the instructions and documents for the journey."

From former communications the following are herewith quoted: The members' fee is five dollars, that of their wives or adult relations two dollars each. Checks or money orders may be sent to Prof. L. Pagliani, Rome, Italy. Credentials have been promised in the near future. When they arrive (none were received last year), they may be too late for many who have started or are about to start. The undersigned, who is not informed of the cause of delay, proposes to supply, in as official a form as he thinks he is justified in doing, credentials which are expected to be of some practical value. The North German Lloyd has promised to recognize them. It is suggested, besides, that a passport may increase the traveller's facilities.

Only the North German Lloyd (22 Bowling Green) and the Compagnie Générale Transatlantique (3 Bowling Green) have thought fit to grant any reductions to Congressists.

The reductions on Italian railways are available from March 1st to April 30th.

A. JACOBI, M.D.,
110 W. 34th Street, New York.

11th January, 1894.

LECTURE ON THE CONDUCT OF MEDICAL LIFE.

By S. WEIR MITCHELL, M.D., LL.D.

A soldier was asked in my presence what was, in warfare, the most interesting thing. He said, "Recruits going into their first battle." What he thought as to the young soldier I feel whenever it is my lot to see a mass of men about to turn from the training of the schools and to face the grim realities of the physician's life.

Here before me are some hundreds of men in the morning of existence. Where will the noonday find you? And the evening hour, when labor is over, and, looking back, the conscience, undisturbed by new ambitions, shall make up the ledger of a life—will it leave you weighted with the debts of wasted chances or rich with the honest interest of accumulated character? That the veteran, like myself, should look with a certain sad curiosity at a group of young soldiers is not strange. Here are men of varied individuality, of unequal fortunes of every condition of life—some for whom all their ways have been thus far made easy, some for whom life has been always hard. Here, at least, within these walls you have all had equality of opportunity. Let me hopefully presuppose you one and all to have used with diligence the precious years of training. You have thought, of course, of what you want to win. You vaguely call it success—success in life. That may mean many things you did not want or expect. You will fail where you least look for failure. You will win what you never dreamed of getting.

I shall try to remember only that you are all to be of the great army of medicine. First of all, I own for you the wish that in this vast organized body you shall take honest pride. Through it you will earn your bread, and, I trust, much besides a mere living. That you may correctly estimate its splendid history, that you may fitly comprehend the opportunities it gives, let us look a little broadly for a time at some of its virtues and some of its values. I could wish that you were really taught something of the wonderful history of medicine. I have myself ancestral pride in the splendor of its conquests, the courage and heroism of its myriad dead. I am fond of saying it is a guild, a fellowship, a brotherhood, older than civilization. It had a creed of moral life antique when Christ was born. No other organization is like it. Customs,

code and creed separate the lawyer and clergyman of different lands, but we in all lands hold the same views, abide by the same moral law, have like ideas of duty and conduct. From Japan to London you may claim medical aid for self or wife or child, and find none willing to take a fee. There is something fine and gracious in this idea.

I once asked the care of a physician I never saw or heard of before, in a German town. As I was about to pay him, a card dropped from my pocket-book. He glanced at it, and said, "But you are a doctor; I can take nothing—nothing." I remonstrated in vain. "No," he said, "you will make it up to some other doctor." I believe that I have paid this debt and other like debts with interest. I hear now and then of men who break this beautiful rule which makes professional service given by one physician to another a friendly debt for which the whole brotherhood holds itself responsible. Doctors are said to differ, but these bonds of union and generous amity are mysteriously strong. Try to keep them so, and when you serve medical men, go about it as if they were laymen. Put away all thought of wasted time, of the commercial values of what you give. The little biscuit you cast on the waters will come back a cheerful loaf. I consider it a glad privilege to help thus my brothers in medicine, and let me assure you few are more heavily taxed than I.

And there is another privilege your profession brings. From the time you graduate until you cease to work; whether in town or country, hospital or wretched homes, the poor will claim from you help in time of sickness. They will do it, too, with tranquil certainty of gracious service on your part.

The greatest of moralists has said, "The poor ye have always with ye." I think He meant to speak of the poor as representing opportunities for self-sacrifice never absent. Of a certainty it applies to us. The poor we have always with us—the sick poor.

On every Friday I conduct the clinical out-service at the Infirmary for Nervous Disease. I never go through these long and tiresome hours of intense attention without feeling that it is needful to put some stress on myself that I be not negligent or hasty, vexed or impatient, or fail as to some of the yet finer qualities of social conduct. I want you also to feel that such self-watchfulness is needed. These early years among the poor, or the class of uncertain debtors, are apt to make some men rude, uncared for and ill-tempered. Most honestly do I say that such work is what I may call an acute test of character.

A part of your life-work consists in giving of your best to those who cannot pay. A part consists in work for honest wages. I think you happy in that our work is not altogether paid

labor, and not wholly work without pay. In both are chances which, rightly used, make the good better, the wise wiser; and there are many sides to it all.

I do not like to leave this subject without a living illustration. It is strange and interesting to see what our life does with different kinds of men.

I once went through a hospital ward in France watching the work of a great clinical teacher, long gray in the service of the sick. It was as pretty and gracious a thing as one could see. The examinations were swift, the questions few and ready. Clearly, he liked his work. A kindly word fell now and then; faces lit up as he came near. Now and then he answered a patient gravely and simply where there was real reason to do so, and twice I observed that when he did this he sat down, as if in no haste—a nice trait of gentle manners. It was a ward of women, and he was very modest—a too rare thing in French hospitals in my student days. When he went away his interne told me that he had been very sharp with him for a piece of neglect, "but," said the doctor, "he never says a word of blame at the bedside." In fact, this great physician was a gentleman—a much abused word—but think what that may fully mean; a man in the highest sense of manhood—so gentle (good old English word) that every little or large act of duty or social conduct is made gracious and beautiful because of the way of doing it.

I saw, a week later, a great French surgeon in his clinic of women. The man was as swift and as skillful as could be. He was also ill-tempered, profane, abrupt and brutally immodest—a strong, rough, coarse machine; and this was what the medical life had done with two men. With less intellect this rude nature must have altogether failed of success in life. He did not fail being a man of overwhelming force and really admirable mental organization; and so when you read of Abernethy's roughness and the like, pray understand that such great men as he win despite bad manners, and not because of them. There is no place where good breeding and social tact—in a word, habitual good manners—are so much in place as at the bedside or in the ward. When Sir-Henry Sidney wrote a letter of advice to his son—the greater Sidney, Sir Philip—he said: "Have good manners for men of all ranks; there is no coin which buyeth so much at small cost."

A clever woman of the world once said to me: "I sent for Dr. A. yesterday, and by mistake the servant left the message with Dr. B. He came at once, and really he was so well-mannered and pleasant that I quite forgot what a fool he is."

I know men who have had large success in practice chiefly because of their gentleness and

sweetness in all the relations of life. I know of far more able men who have found life hard and the winning of practice difficult, simply because they lacked good manners or wanted tact. We began about the poor, and here we are discussing manners. I had not meant to say of it so much, but, on the whole, I am not sorry. Pray remember, finally, that neatness of dress and the extreme of personal cleanliness are, shall I say, a sort of physical good manners, and now-a-days the last words of science are enforcing these as essential to surgical success.

There is a wise proverb of the East: "He who holds his tongue for a minute is wise with the wisdom of all time." I am fond of proverbs, and this is full of meaning, for really to refrain from instant speech when irritated is victory. An hour later you are sure to be silent enough. The temptation to speech is momentary. Above all, try not to talk of your patients—even with doctors. It is usually a bore to be told of cases, and we only stand it because we expect our own boring to be, in turn, endured. But my ideal doctor who reads, thinks, and has a hobby will not need to gossip about patients. He will have, I trust, nobler subjects of conversation. When I hear a young man talk cases or read them in societies with heavy detail of unimportant symptoms, I feel like saying of him, as was once said in my presence of one who amply justified the prediction, "That man has a remarkably fine foundation for dullness in after life."

The methods of note-taking you are well taught, and, too, I hope, the best ways of examining your cases. As to this, circumstances must guide you. A patient is often a bad witness, and one man gets at the truth of his case—another does not.

As to acute cases, it is immensely valuable to learn through concentration of attention to be rapid without omissions. Dr. Edward Dalton is quoted as saying to his class: "After careful and repeated auscultation, percussion, palpation, and even succussion of your patient for twenty minutes, you may not be very tired. *He is.*"

As you go on in practice you will get to be fond of certain drugs.

Be careful of this habit, which has its reasonable side. Even the best of us fall into this therapeutic trap. I once met in consultation the late Prof. Blank, a delightful and most able physician. As I came out of the house I fell upon his son, also a doctor. "Ah!" he said, "you have been meeting my father; I am sure he advised Plumer's pills"—an old mercurial preparation. It was true.

As I watch the better medical practice, I see a tendency to rely less upon her mere drugs, and more and more sharply to question their value.

The true middle course is to be sceptical

as to new drugs, to test them over and over before being mentally satisfied. Nor is it well to run into the extreme, which in our civil war caused an order forbidding the use of calomel, because of the folly and indiscretion with which a few men had used it. After all, one of the most difficult things in ours, the most inexact of sciences, is to be sure of the value of a drug. When studying the poison of serpents, I found the most positive printed evidence of the certain value of at least forty antidotes. Not one of them was worth the slightest consideration. Such a fact as this makes one careful of crediting the endless cures to be read in the journals.

When you come to read over the works of the great masters, dead or living, and to see how Sydenham or Rush, Cardan or Bright, did their work, you will be struck, as I have been, with the great stress laid upon habits of living—what shall be eaten, diets, exercise, clothing, hours of work and rest. Curiously enough, these dicta are more often found in their records of cases than as positive theses; a proof that, in his practical work, a man may be better and wiser than in his generalizations. When, therefore, you come to deal with chronic conditions, be sure to learn all there is to learn as to the ways of men, their diet, clothing, sleep, work, play, wine and tobacco. I like to make a man describe to me, with minute care, his average day. Then I consider, usually, how much of what is clearly wrong may be set right by a life on schedule. After that comes the considerate use of drugs.

The desire for drugs is a remainder from barbarous times. It is much in the way of what I call natural medicine. *Do* this and *do not* do that might cover a large amount of useful treatment if men would, but consider the doctor as a wise despot to be implicitly obeyed. But just here I wish to add that the very men who are most chary as to drugs are those who at times win splendid therapeutic victories by excessive diets or heroic use of powerful medicines.

Much nonsense is talked about the injurious influence of drugs until, in the very word drug, there is a malignant sound. Men used to be over-bleed or salivated. This does not occur now-a-days. And if I asked your whole faculty how many people they have seen permanently injured by mere medication, I fancy they might be puzzled to bring to mind illustrations of such mischief. The belief is another survival of conclusions founded on premises which perished long ago.

Men in our profession fail more often, owing to want of care in investigating cases than for lack of mental power. One man looks at the urine carefully once, and decides; another looks once at the night and morning water, and concludes; a third asks that there be made no

change in diet or habits for a week, and examines the urine over and over, both night and morning secretion. Of course, this is the only right way. Troublesome? Yes, very! If you do not want to practise medicine as if ought to be practised, better far to get some business which will permit of indolent intellectuation.

A friend of mine had a consultation in the country as to a case of great importance. The attendant fell ill and could not meet him. My friend went over the case with care. It was one of persistent headache. He took home urine of the night and morning, and wrote word that the patient had uræmic intoxication. The attendant said "No;" that neither casts nor albumen were in the urine which he had thrice examined. At last, puzzled, my friend asked if he had studied the night urine. He said "No." And here was the mischief.

I saw to-day a woman of wealth and social importance who, for years, suffered cruelly from headache. Now, as it always began after an hour of very acid vomiting, a dozen of the ablest men in Europe and America, who were led off by the vomiting, failed to take in the whole possibilities, and did not question the eyes. But a little country doctor did, and a tendon or two clipped put that woman back in state of health. I was one of those who made the mistake, and yet I have written—was perhaps the first to write—on the eye as a cause of headaches of varied type. But to be constantly complete and exact in all examinations is, I admit, hard; nevertheless, in that way lies success.

And the like axiom applies to treatment. You are taught in acute disease to write your directions and to leave no possibility of change unprovided for. And the acutely ill are prisoners of our will. But how many men think it needful to write out a schedule of life, medicine, diet, exercise, rest for cases of chronic disorder—I do not say disease. I never tire of urging that in attention to minutiae lies the most certain success. A large practice is self-destructive. I mean that no over-busy man can continue to give always, unfaithfully, the kind of care patients ought to have. But that is, as I said in my first lecture, a question of enduring energy, and of a firmly made habit of dissatisfaction with the incomplete. If medicine consisted only in mere intellectual endeavor; if to see, hear, feel, weigh, measure, in a word know all there is to know of a case, were really all; if, then, we only had to say do this or that, one's life might be sufficiently easy.

In time of peril, or under stress of pain, anyone, and always the great consultant, can secure absolute obedience. In the daily current of practice, fancy and unbelief, indolence, prejudice and what-not stand in our way. Busy men, indulged children, hysterical women are your worst difficulties. Then come into play

the moral qualities which, in union with educated intellect, make for the triumphs of the great healers of their kind. Are you gentle and yet firm? Have you the power of statement, which is so priceless a gift, the capacity to make the weak, the silly, the obstinate feel as you speak that your earnestness rests on foundations of kindness and of thoughtful investigation of their needs? Can you, in a word, make people do what you want? Have you the patience to wait untroubled by the follies of the sick, to bide the hour when you can carry your point? Have you the art to convince the mother that the sick child is the last of all who should be left to the misery of self-indulgence? Can you sit by the bedside and gently satisfy some hysterical fool of her capacity to take up anew the reins of self-government? It demands earnestness. It means honest beliefs. It exacts such rule over your own temper, such good manners as few possess in their highest degrees of quality and quantity. Above all, it means that dislike of defeat which makes the great soldier.

A fine thing in our profession that mere hatred of defeat. As I came once out of a consultation with Prof. Gross, he said: "Don't you hate it, sir?" "Hate it; what?" I said. "Hate what? Oh, to spend a life like yours, or mine, and be beaten—puzzled—licked, sir, by a miserable lump in a woman's breast." I always liked what General Sheridan said to me years ago. I asked how he accounted for his constant success in war. He hesitated, and then replied: "It was because I did so hate to be licked." No matter whence comes this feeling, it is valuable. Cherish it; never lose it. Find reason for disaster, but learn to loathe the result. I never see a death or a grave failure to cure that I am not personally hurt by it. I say, then, "A century hence this will be otherwise;" for as I am proud of the past of this great guild, so am I full of glad hope for its future, when it shall have learned the conquest of cancer and tubercle.

I have come half unexpectedly, as I draw to a close, upon this grave question of the moral qualities needed for the noblest success in medicine. It would lead me, and easily, to talk of of the code, of your relations to the secrets of households, to the criminal law as to witnesses, of insurance cases and the like; but all of this I must leave unsaid; and reject the pages in which I had said something of the ethics of our profession.

You have chosen a life inexorably hard in what it asks of soul and mind and body; but be that as it may, you have taken upon you, I surely think, the most entirely satisfactory of earthly pursuits. I have seen much of men and their ways, but nothing I have seen entitles me to think there is any truer, better way of serving God and man, and in this service making your-

self what you ought to be.—*From Univ. Medical Magazine.*

AN ANTISEPTIC, ANALGESIC AND CALMATIVE ADMIXTURE.

H. B. Pettingill, M.D., Mystic Flats, 39th & Broadway, New York city, in an article on "Intestinal Antisepsis" in *New Phar. Prod.*, gives some excellent experience, from which the following is selected:

"Dr. Van Valgah, in a paper on the 'Causation and Treatment of Chronic Diarrhœa,' in the *New York Medical Record*, says: 'Having secured as nearly as we can a clean and sweet state of the digestive tube, our next object is to get perfect digestion of the food taken. This is an aim second to no other in importance. Undigested food in the wrong part of the intestine is an irritant. Rapid absorption is the chief barrier against super-digestion, fermentation and putrefaction, and perfect digestion is the essential preliminary to the easy and healthy performance of the function of the mucous membrane.' Now, with this condition of affairs and the administration of proper remedies, we can expect to destroy the pathogenic bacteria, and the resulting toxins can be rendered innocuous. The tyro-toxicons of Vaughan belonging to the toxalbumen type are readily destroyed by the decomposition of salol in the intestinal tract. Salol is a salicylate of phenol, and, as said before, is not acted upon until it passes through the stomach, and when the phenol is set free in the intestine it has its maximum antiseptic power. Now, in addition to this, we have the calmative and analgesic effect of the antikamnia, which effect is so often necessary, and where in many cases opium is contra-indicated.

"Every physician knows full well the advantages to be derived from the use of antikamnia in very many diseases, but a number of them are still lacking a knowledge of the fact, that antikamnia in combination with various remedies has a peculiarly happy effect; particularly is this the case when combined with salol. Salol is a most valuable remedy in many affections; and its usefulness seems to be enhanced by combining it with antikamnia. The rheumatoid conditions so often seen in various manifestations in this country are wonderfully relieved by the use of this combination.

"The five grain tablet, containing $2\frac{1}{2}$ grains each of antikamnia and salol, is recommended highly in the treatment of cases of both acute and chronic cystitis. The pain and burning is relieved to a marked degree. Salol makes the urine acid, and clears it up. This remedy is a reliable one in the treatment of summer diarrhœa, entero-colitis, dysentery, etc. In dysentery, where there are bloody, slimy dis-

charges, with tormina and tenesmus, a good dose of sulphate of magnesia, followed by salol and antikamnia, will give results that are gratifying."

In closing his paper, Dr. Pettingill adds: "It is also one of the best remedies for the relief of the headache and pains of influenza ('la grippe'). The muscular pains which so often accompany this disease, and which seem to be a part and parcel of it, are often relieved at once by a full dose of this combination. Great reliance can be placed in the admixture of these two drugs in those diseases in which the onset is sudden, and which are attended with great pain and hyperæsthesia, with intense nervous derangement, particularly when the temperature rises to 102° or 103° . By its antithermic, analgesic and neurotic properties, it fills a want scarcely found in any other remedy."

CLASS-ROOM NOTES.

—*Antipyrine*, Prof. Hare says, aids the elimination of uric acid from the economy.

—*Cannabis indica*, Prof. Hare says, will often be found to be very useful in cases of *Migraine*.

—Prof. Wilson says that only the severe cases of *Rubella* or *Rötheln* are followed by desquamation.

—*Belladonna* locally applied, Prof. Hare says, will be found very useful in cases of *localized Neuritis*.

—*Surgical Cases*, Prof. Keen says, should be dressed as seldom as the safety of the patient will admit.

—Prof. Wilson says that *Gastro-intestinal Ulcers* occasionally develop during the period of convalescence of an attack of small-pox.

—*Syphilis*, if it be due to vaccination, Prof. Wilson says, will have the chancre in all cases appearing at the point of vaccination.

—Prof. Montgomery says that the *Uterus* should always be *Sterilized* by some antiseptic after an instrument has been introduced into it.

—A case of *Scirrhus* or *Atrophic Cancer*, seen only in the latter stages of the disease, should not, Prof. Keen thinks, be interfered with.

—*Adenomata*, according to Prof. Keen, are painful only at the period of menstruation, but *Sarcomata* are painful, independent of this period.

—The best treatment, according to Prof. Keen, in cases of *Tubercular Peritonitis* is to open the abdomen and drain for a long period.

—Prof. Parvin says that all drugs which by their therapeutic action tend to increase the *Arterial tension* will also increase the flow of the milk.

—As a rule, Prof. Keen says, in every four out of five cases of *Fistula in Ano*, the patient will be found to be of a tubercular character.

—*Malarial Fever*, according to Prof. Wilson, will be rarely met with, if at all, in those regions in which the temperature does not rise above 60° F.

—Glycerine or any of the mineral fats, Prof. Wilson says, should not be employed by inunction in the skin in cases of *Scarlet Fever*, but fresh animal fats should be employed in making inunctions.

—Prof. Hare says that a combination of bromide and caffeine will often cure a *Headache* that neither the bromide nor the caffeine alone will relieve.

—Prof. Parvin says that two hours should be allowed to elapse before active measures are instituted toward the forcible removal of a *Retained Placenta*.

—Prof. Parvin thinks that the *Involution of the Sexual Organs* after confinement takes place more rapidly and satisfactorily if the mother nurses her child.

—Prof. Parvin does not favor the administration of ergot during the *Third Stage of Labor* unless the patient be a habitual bleeder, if hemorrhage be present.

—The *Hemorrhage* occurring in cases of laceration of the cervix. Prof. Parvin has found, can generally be controlled by the injection of hot water into the vagina.

—*Inability to Nurse*, Prof. Parvin says, is often due to heredity; brought on by the fact that a number of successive preceding generations did not nurse their offspring.

—Unless during the existence of an epidemic of smallpox, a child who is suffering from a cutaneous disease, or who is otherwise in poor health, should not be *Vaccinated*.

—Fifteen to twenty grains of bismuth and one to two grains of carbolic acid administered every hour or two, Prof. Hare says, will be found to generally stop *Reflex Vomiting*.

—*Fibromatous Tumours*, Prof. Keen says, are neither painful nor tender to the touch; they are also slow in growth. They may, he says, by pressure on adjacent parts, produce pain.

—The eruptions produced by the inoculation of *Vaccine Lymph* will manifest themselves, Prof. Wilson says, twenty-four hours earlier, if the inoculation has been performed by human lymph, than if performed by the bovine.

—Prof. Wilson says that relapses of *Scarlet Fever* are rare, but a secondary attack may occur at some later period, the first attack not conferring an immunity from subsequent attacks.

—*Cannabis indica*, according to Prof. Hare, will be found to be a very useful drug in stopping the *Cough of Phthisis*, and it possesses the advantage over opium in that it is not so depressant to the system in general.

—*Sarcoma*, Prof. Keen says, as a rule, is a disease of youth and not of old age. It makes its appearance generally during the period when the tissues are growing. It generally appears between the age of twenty and thirty, more so than after forty.

—Prof. Parvin says that during the *Period of Menstruation* the condition of the mother's milk is altered, and often is the cause of an attack of colic in the nursing child. But as soon as the menstrual period has elapsed then the milk returns to its normal condition.

—Camphoric acid, according to Prof. Hare, is the best drug that can be used in controlling the *Nightsweats of Phthisis*. It should be taken in doses of twenty to thirty grains, and two or three hours before the time that the sweats generally come on.

—*Anteflexion of the Uterus*, according to Prof. Montgomery, is of most frequent occurrence in women who have never borne children. It is also the displacement which is found of most frequent occurrence in the sterile woman.

—The tumour which is *Scrofulous* in character, Prof. Keen says, in the early stages will be found to be perfectly movable, but in the later stages it will be bound down tight and will be immovable, due to its having infiltrated into the surrounding tissues.

—The oxalate of cerium, either alone or combined with bismuth, Prof. Hare says, will very often be found to stop *Excessive vomiting*. Especially has this been found so in such cases as are due to a hyperacidity, or to an irritation of the mucous membrane of the stomach.

—Prof. Wilson favors the treatment of *Scarlet Fever* by chloral. Such doses, he thinks, should be administered as to keep the patient under its hypnotic influence to such an extent as to require wakening at the time when food or medicine is to be administered.

—In cases of *Chancroids*, which are indolent in healing, Prof. Horwitz recommends the following:—

R.	Ung. hydrarg. nitrat.,	ʒj	
	Ung. iodoformi,	ʒij	
	Ung. zinci oxidī,	ʒss	M.

Sig.—Apply locally.

—Dr. Davis says, under frequent disinfections of the vagina, and irrigation through the rupture with boiled water, and the use of the tampon or drainage tube, a large number of cases of *Partial Rupture of the Uterus* will recover.

—In *Acute Urethritis*, in combination with an injection, Prof. Horwitz recommends the use of the following, in capsule :—

R. Cubebæ,	gr. v	
Copaibæ,	gr. x	
Salol,	gr. x	
Pepsin,	gr. j.	M.

Sig.—One three times a day.

—The recurrence of *Malignant Growth*, excepting Sarcoma, according to Prof. Keen, rarely appears before six months after the operation, and if such a recurrence does not take place within three years after the operation, the chances of its not recurring at all are the very best.

—Prof. Parvin calls attention to the fact that in opening an *Abscess of the Breast*, the incision should always be made longitudinally and not transversely. For, he says, when the opening is made by a transverse incision more milk ducts will be destroyed than if the incision had been made longitudinally.

—For *Colic in Children*, especially if associated with some nervous irritation, Prof. Hare recommends the following (the dose is for a child one year old) :—

R. Chloral,	gr. viij	
Sodii bromid.,	gr. xvj	
Syr. lactucarii,	f ̄ ss.	
Aquæ, q.s ad	f ̄ j.	M.

Sig.—Teaspoonful not oftener than every four hours during the night.

HIGHER MEDICAL EDUCATION.

In pursuance of the policy recently announced in the resolution to be presented to the American Medical College Association, the trustees and faculty of Rush Medical College have decided to require four years attendance at college from students who begin the study of medicine this year with a view to graduation in 1898; however, those who have already studied medicine one year or more with a preceptor, so that the four years of study, already required, will be completed before July, 1897, may graduate after three courses of lectures as heretofore. To encourage proper preliminary study, graduates in arts and sciences from high grade colleges, and graduates in pharmacy and dentistry from colleges requiring a proper amount of study and two full courses of lectures will, until further notice, be allowed to graduate after an attendance on only three courses of lectures.

PUBLISHERS' DEPARTMENT.

PERTURBED NERVOUS FORCES—AN UNSURPASSED COMPOSER AND PAIN-RELIEVER.

The season of pneumonia, typhoid, bronchitis, also the recurring epidemic of influenza, while not so malignant as its predecessor, la grippe, still makes *apropos* an extract from *The Medical Summary*. It says, in speaking of the action of antikamnia :—

“ This drug has a well-earned character as an analgesic. It is one of the few among the many claimants for favor that have successfully stood the test of experience. In a case of acute poly-articular rheumatism prominently affecting both knees, where there was great swelling and exquisite tenderness of the articulations, two ten-grain doses at an interval of an hour procured almost complete relief, followed by several hours of restful sleep. This was the more remarkable as after one or two more doses there was comparatively little pain experienced to the close of the attack. For the relief of nervous headache; hemicrania, menstrual neuroses and neuralgias in general, it cannot be over-praised. In the prevailing epidemic of la grippe its usefulness as a pain-reliever and composer of the perturbed nervous forces is unsurpassed. It has become indispensable, and doubtless there is not a physician acquainted with its decisive action who could be induced to dispense with it. Five or ten grains as a commencing dose, then two, three or five grains every three or five hours, will relieve the severest cases, in a few hours causing the splitting cephalalgia, lumbar and general muscular pains and nervous disquietude to vanish. On the whole, it abates the fever and subdues the whole assemblage of perturbed activities that distinguish la grippe as no other agent, or combination of agents, has ever done, producing not a single unpleasant symptom and leaving no sequelæ. Quinine checks ague, digitalis energizes the drooping heart, ergot promotes uterine contraction, but their action is no more nearly specific than is that of antikamnia in its sphere of usefulness.” In line with and supplementary to the foregoing, Hugo Engel, A.M., M.D., late Lecturer on Electro-Therapeutics, Jefferson Medical College, Professor of Nervous Diseases and Clinical Medicine, Med. Chir. College, and Consultant in Nervous Diseases at St. Joseph's Hospital, Philadelphia, says: “ The remedy has become a favorite with many members of the profession. ‘It is very reliable in all kinds of pain, and is quickly acting as a hypodermic injection of morphia. It is used only internally. To stop pain, five grains are administered at once; three minutes later the same dose is repeated, and, if necessary, a third dose given three minutes after the second. If ten minutes after the third dose the remedy has had a decided effect, but a little of the pain be remaining, a fourth dose of gr. v. may then be administered. In 92 per cent. of all cases it immediately stops the pain.

“ The following is an excellent prescription in la grippe and painful bronchial catarrh :—

“ R. Antikamnia (genuine).....	ʒ ij
Mist. Glycyrrh. Comp.....	ʒ ij
F. E. Rad. Glycyrrh.....	ʒ ij
Vini Rubri Gall.....	q. s. ft. ʒ vj

“ M. Sig.—Two teaspoonfuls every three hours.

“ For whooping-cough in a child four years old :

“ R. Antikamnia (genuine).....	ʒ xxxv
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“ Divide in chart, No. xij.

“ Sig.—At night, one powder every fifteen minutes until three have been taken. Administer in dilute claret, or port or sherry wine.

“ As an antipyretic, from gr. v. to gr. x. should be given every ten minutes until the temperature has been reduced, or 40 to 50 grains have been taken, when the same dose is repeated at longer intervals, until the desired effect is obtained.”

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MONTREAL, MARCH, 1894.

HOW TO PUT A STOP TO HEREDITARY CRIMINALITY.

On several previous occasions we have called attention to the stupidity which characterizes society's present method of dealing with habitual criminals. During the last few years the view has been steadily gaining ground that impulse to crime is an inherited taint; that the criminal is an atavistic creature no more to be blamed for his acts than the child of syphilitic parentage to be called to account for his unlovely skin, or bones, or teeth; and yet every year several hundred thousand habitual criminals, who have been convicted several times of brutal crimes, are allowed to go forth from the prisons to sow a crop of several hundred thousand children, who will be born criminals, and who will in due time prey on society, and require in turn to be imprisoned at society's expense. The whole tendency of science at the present day is to prevent rather than to go on from generation to generation treating disease. Thus have cholera, the black plague, small-pox been almost made to disappear from off the earth, and before many years we will be able to say the same of diphtheria, scarlet fever, measles and consumption. Why should not the physician in charge of social disorders take the same preventive measures? Why go on eternally imprisoning and executing the aberrant race of criminals, when, by a simple and painless operation, an end could be put to the breed forever? Asep-

tic castration applied to every man or woman convicted twice of deadly assault or highway robbery, to every man convicted twice of rape or other abominable crime, would forever remove from them the power to inflict their beastly character upon thousands of innocent babes condemned from their birth to a childhood of misery and a youth of crime. There is nothing cruel or savage about the idea: for it is not to be compared with judicial murder which society fully justifies for her own protection. On the contrary, castration would be an ideal punishment, for all treatment of criminals should be directed to the sole object of preventing crime in the future rather than to have revenge for it in the past, and it would probably in most cases convert the criminal into a gentle and useful member of society. Not only would castration empty our prisons in a generation or two by the lack of supply of criminals, but even the immediate effects upon the diminution of crime in one day would be very marked, for the deterrent effect of this penalty would be even greater than the penalty of death itself. In our former article we quoted from the criminal statistics in England, showing that one criminal alone left behind him nearly one hundred descendants to occupy the prison cells. We feel sure that this remedy has only to be more fully considered in a truly philanthropic light in order to receive the approval of our legislators and of public opinion at large. Without castration, society must, for its own protection, continue to treat cruelly and unjustly unborn generations of wild beasts in human form. It would be more merciful to them as well as to their innocent victims if the criminal class should, by the above means, forever cease to be.

BOOK NOTICES.

A TEXT-BOOK OF PHYSIOLOGY. By Michael Foster, M.D., F.R.S., Prelector in Physiology in the Univ. of Cambridge; Fellow of Trinity College, Cambridge, New (5th) American from the 5th English edition, thoroughly revised, with notes and additions. In one handsome octavo volume of 1083 pages with 316 illustrations. Cloth, \$4.50; leather, \$5.50. Philadelphia: LEA BROTHERS & Co., 1893.

Both teachers and students of physiology in

America are under deep obligations to the publishers for having undertaken the reproduction in this country of such a costly work as this. One cannot read a single chapter without being impressed with the care which the author has bestowed upon it. Apparently, nothing that is known up to the present year concerning vital processes has escaped his painstaking attention; no matter how trivial the details, they receive the fullest consideration. The additions which have been made to this last edition are caused, not by any attempt to enlarge the scope of the work, but by an effort to explain more fully and at greater length what seemed to be the most fundamental and important topics. The publishers have subjected it to the searching revision of one of the foremost American professors of Physiology, but the American editor, we are glad to see, has not abused his right to make additions, there being very few sentences in brackets, but he has added a considerable number of illustrations, which greatly help to explain the text. He would be a bold critic who would venture to find fault with the work of the distinguished Cambridge professor, and for our own part we have nothing but words of the highest praise for the classical and thorough manner in which the work is written, as well as for the liberality of the publishers for selling such a large work, and one which must necessarily be very costly to produce, for the extremely moderate price mentioned above. The same work can only be purchased by the student in England in five volumes, costing three times as much as the American edition. That the students of America have appreciated the enterprise of the Lea Brothers is evidenced by their having rapidly exhausted four editions, and still called for a fifth one now before them.

Lea Brothers & Co. are evidently determined to maintain the lead which they have held long as the principal *text-book* publishers of America. The book may be obtained from any bookseller.

ANATOMY, DESCRIPTIVE AND SURGICAL. By Henry Gray, F.R.S., Lecturer on Anatomy at St. George's Hospital, London. New American from the thirteenth enlarged and improved English edition. Edited by T. Pickering Pick, F.R.C.S., Examiner in Anatomy, Royal College of Surgeons of England. In one imperial octavo volume of 1100 pages, with 635 large engravings. Price with illustrations in colors: Cloth, \$7.00; leather, \$8.00. Price with illustrations in black: Cloth, \$6.00; leather, \$7.00. Philadelphia: LEA BROTHERS & Co., 1893.

We feel safe in saying that no Medical work has ever had so large and attentive a circle of readers as has the above.

Since 1857 Gray's Anatomy has unquestionably been the standard text-book on its subject among all English-speaking people. The demand for thirteen editions has been utilized by subjecting the work to the searching revision of the foremost anatomists of a generation. In no other way is accuracy and completeness to be attained in treating of so complex and detailed a science. The series of illustrations is quite as famous as the text. Their large size not only enables the various parts to be brought into view, but also allows their names to be engraved directly upon them. Thus not only the name, but the extent of a part is indicated at a glance,—a matter of obvious importance and convenience. Many new illustrations appear in this edition, and the whole series has been re-engraved wherever clearness could be promoted. The liberal use of colors lends added prominence to the attachments of muscles, to veins, arteries and nerves. The work is also published with illustrations in black alone.

As heretofore, the revision has been most thoroughly performed, so that the work is kept always abreast with the advances of its science. Special attention has been paid to the applications of anatomy to surgery, and the work is therefore indispensable to all who find in the exigencies of practice the need of recalling the details of the dissecting room.

One other special advantage which may be claimed for this edition is that it has been published in this country exactly as it appeared from the hands of the English editors, and is not therefore defaced by notes and comments of an American one. Gray's Anatomy has reached such a point of eminence and excellence that no other work can take its place, and it is doubtful if any other work will ever supplant it. As more and more stress is laid upon the importance of making anatomy the foundation of surgery, the medical student of the future will probably devote more and more time to his Gray, so that the volume will become indispensable to every Medical student. The volume before us is a great improvement on any other edition we have ever seen, and will no doubt meet with the ready sale which it deserves.

SURGERY. By Bern B. Gallaudet, M.D., Demonstrator of Anatomy and Clinical Lecturer on Surgery, Collège of Physicians and Surgeons, New York; Visiting Surgeon, Bellevue Hospital, New York; and Charles N. Dixon-Jones, M.D., Assistant Surgeon, Out-Patient Department, Presbyterian Hospital, New York. Being the final volume of The Students' Quiz Series, edited by Bern B. Gallaudet, M.D. Duodecimo, 291 pages, 149 illustrations. Cloth, \$1.75. Philadelphia: LEA BROTHERS & Co., 1893.

The issuance of the volume on Surgery marks the completion of the Students' Quiz Series. Like its twelve companion volumes, it is the product of well-known teachers and specialists in New York. The advantages of careful editorial supervision are manifest in the uniformly excellent presentation of the matter and in the compactness attained by skillful assignment of subjects in the original plan of the Series. The volume on Surgery is largely from the pen of the able editor, Dr. Bern B. Galaudet, though many of its sections were contributed by Dr. Charles N. Dixon-Jones. It is not to be classed with "compendes" or "summaries," but is on the contrary an *explanation* of the principles and practice of surgery in an exceedingly terse style. Its tables group a large amount of information in a very compact and convenient form. The volume is richly illustrated, about 150 engravings being printed in its three hundred pages. The exceedingly reasonable price indicates the expectation of a large demand, which is well merited. The book is remarkably well written throughout, but the subjects of Inflammation, Tumors and Cysts, Brain Surgery and Abdominal Surgery have received especial attention. By avoiding discussion on all mooted points, the size of the volume has been kept down to comparatively narrow limits, and yet an immense amount of information has been introduced. Even the old practitioner might study it with advantage, for in the most concise manner it brings the old and often erroneous views of twenty years ago thoroughly up to date. This volume, though the last, is certainly not the least of the series; indeed, it is one of the most valuable of them all.

FEBRUARY "COSMOPOLITAN." The secret of the great success of *The Cosmopolitan* is not so hard to find, if one looks carefully over the number for February. A story by Valdés, the famous Spanish novelist, the first from his pen to appear in any American magazine, is begun in this number. Arthur Sherburne Hardy's story, "A Rejected Manuscript," is charmingly illustrated by L. Marold, who, we believe, makes his first appearance in the magazines on this side of the water. A profusely illustrated article on the designing and building of a war-ship appeals to the interest taken by all in the new navy, and a thrilling description of a naval combat, under the significant title: "The Meloban and the Pentheroy," describes, after the manner of the Battle of Dorking, a possible sea-fight, the outcome of which is watched by the entire naval world. "Gliding Flight" is an interesting contribution to the problem of aerial navigation by one who has studied the flight of soaring birds

in the East for twenty years. Elaine Goodale, who married a member of the Sioux nation, has some interesting information of Indian Wars and Warriors. T. C. Crawford, the Washington correspondent, gives the first half of a startling story, under the title of "The Disappearance Syndicate." The poetry in this number by Sir Edwin Arnold, Graham R. Tomson and William Young is unusually good. The departments "In the World of Art and Letters" and the "Progress of Science," continue to have as contributors men famous in both continents.

AN AMERICAN TEXT-BOOK OF GYNECOLOGY, MEDICAL AND SURGICAL. For the use of Students and Practitioners. By Henry T. Byford, M.D., John M. Baldy, M.D., Edwin Cragin, M.D., J. H. Etheridge, M.D., William Goodell, M.D., Howard A. Kelly, M.D., Florian Krug, M.D., E. E. Montgomery, M.D., William R. Pryor, M.D., George M. Tuttle, M.D. Edited by J. M. Baldy, M.D. Forming a handsome royal 8vo volume, with 360 illustrations in text and 37 colored and half-tone plates. Price, Cloth, \$6.00; Sheep, \$7.00; Half Russia, \$8.00. W. B. Saunders, Publisher, 925 Walnut St., Philadelphia, Pa.

In this volume all anatomical descriptions, excepting what is essential to a clear understanding of the text have been omitted, illustrations being largely depended upon to elucidate this point. It will be found thoroughly practical in its teachings, and is intended, as its title implies, to be a working text-book for physicians and students. A clear line of treatment has been laid down in every case, and, although no attempt has been made to discuss mooted points, still the most important of these have been noted and explained; and the operations recommended are fully illustrated, so that the reader may have a picture of the procedure described in the text under his eye and cannot fail to grasp the idea.

All extraneous matter and discussions have been carefully excluded, and the attempt made to allow nothing unnecessary to cumber the text.

The subject matter has been brought fully up to date at every point, and the work is as nearly as possible the combined opinion of the ten specialists who figure as the authors.

The work is well illustrated throughout with wood-cuts, half-tone and colored plates, mostly original and selected from the author's private collections.

The chapter on Technique of Gynecological Examination is especially good. This chapter contains the most recent and approved methods of preparation of the operator, assis-

tants, nurses, and patient for operations, both abdominal and vaginal; the best and most reliable methods of preparation and disinfection of sponges, ligatures, sutures, and instruments. In fact, the success of modern gynecological surgery rests on the adoption of the principles and details described in this chapter, which has been brought fully up to date.

Another chapter deserving special mention is the one on Pelvic Inflammation, which is considered from an entirely different standpoint from that found in the older text-books. The subject is covered in a thoroughly practical manner. The pathology and etiology are clearly pointed out, the result described, and the management and treatment in all places considered in detail. The old and confusing nomenclature and pathology have been dropped, and the data given from facts as found to-day, instead of from theory and tradition. Salpingitis, pyosalpinx, hydrosalpinx, hematosalpinx, pelvic peritonitis, and pelvic cellulitis are also included under this chapter-heading.

There are many other chapters in which important subjects are treated in a manner not usual in the text-book, so that the work is of special value to the practitioner. Much of the teaching in the older text-books will have to be untaught in the light of modern knowledge, but in this work such is not the case. If anything, in a few cases the treatment is a little ahead of the times, being rather more rigorous than is always warranted. But on the whole the views expressed are those held by the leaders of gynecological teaching in the United States. Considering the number of illustrations, the cost of the work is surprisingly moderate.

ESSENTIALS OF PRACTICE OF MEDICINE.

Arranged in the form of questions and answers. Prepared especially for students of medicine. By Henry Morris, M.D., late Demonstrator Jefferson Medical College, Philadelphia; Visiting Physician to St. Joseph's Hospital; Fellow College of Physicians, Philadelphia; co-editor Biddle's *Materia Medica*, author of *Essentials of Materia Medica*, etc, etc. With a very complete Appendix, on the examination of Urine, by Lawrence Wolff, M.D., Demonstrator of Chemistry, Jefferson Medical College. Colored (Vogel) urine scale and numerous illustrations. Third edition, revised and enlarged by some three hundred essential formulæ, selected from the writings of the most eminent authorities of the medical profession. Collected and arranged by William M. Powell, M.D., Attending Physician to the Mercer House for Invalid Women at Atlantic City, N. J. Philadel-

phia: W. B. Saunders, 925 Walnut Street. 1894. Price \$2.00.

The fact that this small Manual of the Practice of Medicine should have passed three editions since its issue in the latter part of 1890 is sufficient guarantee of its popularity, and that the Author's plans have not miscarried.

Great care has been exercised in the revision not to increase its size, and thus rob it of its usefulness to the student, who has but little time for large and exhaustive works. All obsolete and useless matter has been omitted, and the very latest physical diagnosis and treatment substituted, thus bringing the work thoroughly abreast with the times.

PAMPHLETS.

THE AFTER-TREATMENT OF CÆLIOTOMY CASES, WITH SPECIAL REFERENCE TO SHOCK AND SEPTIC PERITONITIS. By Eugène Boise, M.D., Grands Rapids, Mich., Gynecologist to St. Mark's Hospital; Fellow of the American Association of Obstetricians and Gynecologists.

CARCINOMA OF THE UTERUS. By J. M. Baldy, M.D., Professor of Gynecology in the Philadelphia Polyclinic; Surgeon to the Gyneccean Hospital. Reprinted from the Proceedings of the Medical Society of the State of Pennsylvania, May, 1893.

THE SURGERY OF THE URETERS; A CLINICAL, LITERARY AND EXPERIMENTAL RESEARCH. Read in the Section on Surgery and Anatomy at Forty-fourth Annual Meeting of the American Medical Association, June 8, 1893, by Weller Van Hook, A.B., M.D., Professor of Surgery in the Chicago Post-Graduate Medical School.

A CASE OF MEDIASTINO-PERICARDITIS IN A CHILD; SECONDARY EMPYEMA; OPERATION; DEATH. By William A. Edwards, M.D., San Diego, California, Fellow of the College of Physicians of Philadelphia, American Pediatric and Philadelphia Pathological Societies; formerly Instructor in Clinical Medicine and Physician to the Medical Dispensary in the University of Pennsylvania; Physician to St. Joseph's Hospital; Associate Pathologist to the Philadelphia Hospital; and Member Advisory Council for the Section on Diseases of Children of the Pan-American Medical Congress. Reprinted from the *International Medical Magazine* for June, 1893.

THE NEW TREATMENT OF HERNIA. By Alexander Dallas, M.D., New York, Fellow of the N.Y. Academy of Medicine, and the N.Y. State Medical Association; Consulting Surgeon to Bayonne Hospital, etc., etc. Read before American Medical Association, at its annual meeting in Milwaukee, Wis., June 6th to 9th, 1893.

PERINEO-VAGINAL RESTORATION. By Edward W. Jenks, M.D., LL.D.; Professor of Gynecology, Michigan College of Medicine and Surgery; Fellow of the American Gynecological Society; Fellow of the Obstetrical Society of London, etc., etc. Detroit, Mich. Reprinted from *The American Journal of Obstetrics*, Vol. XXVIII., No. 5, 1893. New York: WILLIAM WOOD & Co., publishers, 1893.

LECTURE UPON METALLIC INTERSTITIAL ELECTROLYSIS. By Augustin H. Gœlet, M.D. Delivered in the Course of Clinical Instruction in Gynecological Electro-Therapeutics at the West Side German Clinic, New York. Reprinted from the *Times and Register*.

THE LIMITS AND REQUIREMENTS OF GYNÆCOLOGY. By Edward W. Jenks, M.D., LL.D., Detroit, Mich., Professor of Gynecology in the Michigan College of Medicine and Surgery; Fellow of the American Gynecological Society, etc. Reprinted from the *Medical Record*, November 11, 1893. New York: Trow Directory Printing & Bookbinding Co., 201-203 East Twelfth Street, 1893.

HYSTERECTOMY BY A NEW METHOD, which is simple, safe, bloodless, and entirely obviates the necessity of either clamp, cautery, or ligature; a major operation converted into a minor one by a simple process of easy dissection. E. H. Pratt, M.D., LL.D., Chicago.

SUPRA-VAGINAL HYSTERECTOMY, without ligature of the cervix, in operation for uterine fibroids. A new method. Cases of chronic ovarian abscess, illustrating the danger of delay in their proper management. Drainage in abdominal surgery, its unnecessary and excessive use. By B. F. Baer, M.D., Professor of Gynecology in the Philadelphia Polyclinic. Reprinted from the *Transactions of the American Gynecological Society*, Vol. XVII., 1892, and the Philadelphia Polyclinic, Jan., 1893.

SOME CAUSES AND CHARACTERISTICS OF NEURASTHENIA. By A. D. Rockwell, M.D. Reprinted from the *New York Medical Journal* for November 18, 1893.

REPORT OF TWO YEARS' WORK IN ABDOMINAL SURGERY AT THE KENSINGTON

HOSPITAL FOR WOMEN, PHILADELPHIA. By Charles P. Noble, M.D., Surgeon in Chief. Reprinted from the *International Medical Magazine* for December, 1893.

MATHEWS' MEDICAL QUARTERLY, a journal devoted to Diseases of the Rectum, Gastro-Intestinal Disease, and Rectal and Gastro-Intestinal Surgery. Joseph M. Mathews, M.D., Editor and Proprietor, Professor of Surgery, Clinical Lecturer on Diseases of the Rectum, Kentucky School of Medicine, etc. Henry E. Tuley, M.D., Associate Editor and Manager, Clinical Assistant to the Chairs of Practice and Diseases of Children, Kentucky School of Medicine. Louisville, K.Y.: printed by John P. Morton & Company. Copyrighted by J. M. Mathews, M.D. Published on the first of January, April, July, and October. Subscription Price \$2.00 per year. Single copies, 55 cents. We have much pleasure in welcoming this excellent quarterly to our exchange list.

SOCIÉTÉ D'ÉDITIONS SCIENTIFIQUES, Place de l'École-de-Médecin, 4 rue Antoine-Dubois, Paris. - Le Massage Vibratoire et Electrique des Muqueuses; sa technique, ses résultats dans le traitement des Maladies du Nez, de la Gorge, des Oreilles et du Larynx, par le Dr. Paul Garnault (de Paris); Docteur en médecine, Docteur ès sciences naturelles (de la Sorbonne), Professeur libre d'Otologie et Laryngologie, Ancien chef des Travaux d'Anatomie et d'Histologie comparées à la Faculté des Sciences de Bordeaux. Avec une préface du Dr. Michael Braun. Un volume in 8° de 150 pages, broché, avec 10 figures dans le texte. — Prix, 4 fr.

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