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Original Articles.

ON; TWINS AND DOUBLE MONSTERS AND SUNDRY OTHER TOPICS.*

By J. GEORGE ADAMI, M.A., M.D., F.R.S.

This year's meeting of the Canadian Medical Association is memorable in that, for the first time there has been instituted a laboratory section, at which the increasing amount of research in the various branches of our science carried on in the various medical centres of the Dominion shall be recognized. And I take it that to further signalize that departure, a pathologist has been asked to give one of the general addresses, the first time, if I mistake not, that this honor has been conferred upon one who is purely a laboratory man. Wherefore, under those circumstances it behoves me first and foremost to voice the appreciation and the aspirations of my fellow-workers in research.

THE LABORATORY WORKERS SECTION.

We may be but a small section of the whole body corporate of the medical men of this Dominion, and numerically but a feeble people, but with that supreme self-satisfaction which is apt to characterize inconsiderable minorities, we are firmly convinced that we are the leaven that leaveneth the whole lump. This, of course, is presumption on our part, only the fact is that

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we firmly believe it. We believe that sure advance in modern medicine must be based upon experimental observations, must come most naturally, that is, from the laboratories; that to stand still, to be satisfied with what has been accomplished, is to go backwards; that meetings of an association which purports to represent Canadian medicine, at which, as has too often been the case in the past, laboratory papers have been absent, or if delivered, have come into the world like the supernumerary child, in chilly silence and without acclaim—that such meetings have been even as eggs eaten without salt. We admit contritely that in part and in the past, we have been to blame for this state of things, that in our youth-for we are all young; the spirit of enquiry is the spirit of youth-in our experience, and in our enthusiasm, we have been apt to inflict upon our hearers lengthy and precise descriptions of minutiæ, possibly imagining that what interests us must interest others, and to read dreary tables of statistics which have not come up to the standard of oratorical edification that should prevail at general meetings. In short we have made the mistake of thinking that we should deliver the very words that are to be printed, rather than giving the gist of our enquiries. We have been bores, we admit it. But although there be no virtue in the "tu quoque," we have not found ourselves alone in this respect; we, ourselves, have come to make a fundamental diagnosis of the nature of the wood constituting the seats on which we sat, while listening to the trivial ups and downs, day after day, through, it has seemed, long months, of the patient who has not been allowed to die in peace. All this notwithstanding, if Canada is to take the same place in the medical world that she is rapidly and surely gaining in the world commercial and political, we are convinced that everything must be done to encourage the spirit of investigation among our younger men. We are convinced further, that generous as is the welcome accorded to our workers by the various special societies and scientific journals across the border and across the seas, and useful as it is, and politic, that good work accomplished here should be published broadcast, nevertheless there should be some central opportunity offered here in Canada for the best work of the year to be brought forward and given to the world as a home product. Now this association must lead in that encouragement if it is worthily to represent Canadian medicine, and must afford that opportunity. This Montreal meeting represents a proper appreciation of the place that investigation holds at the present time, an appreciation that we laboratory workers appreciate. Taking into consideration all the circumstances, it is perhaps a

happy solution that we should be treated as Peter is said to treat the members of a small but spiritually exclusive denomination, and be conducted to a little Paradise of our own and to ourselves.

THE ASSOCIATION AND MEDICAL RESEARCH.

But badinage apart, I am convinced that in former years those in charge of the programmes for our meetings have shown grave error in judgment in not encouraging more actively the publication of the more scientific communications before this association. The prime object of our body is to bring together practitioners from all parts of the Dominion, and Canada being mainly country, diluted perhaps with a considerable body of water, and the country practitioner being in the majority, the impression has been advanced work in medicine would frighten him away. Now I believe that this has been a piece of Pharisaism on the part of our town physicians who have had the arrangement of the meetings. There is, of course, the practitioner who has rusticated and has rusted, but that class is both of urban and of rustic incidence; it exists in our cities to, I believe, an even greater extent. Nothing will bring men of that type to our meetings. Despite my lack of opportunities I have come across here in Canada, country practitioners whose libraries outshame those of most city consultants, men right up to date, eager and active to know the last advance; and those, I judge, are not few I can, on the contrary, recall the study of one leading physician in one corner of which lay the year's accumulation of medical journals, still in their wrappers, all unread. appeared only to take in two, or at most three. That man, despite his position, characteristically absented himself from meetings of this association and of our local society.

Here let me confess that I never realized so vividly the might and keenness of the general practitioner on this continent as I did this last June. It was my good fortune to be invited to attend the meeting of the American Medical Association at Atlantic City. Now I had heard of that association as, in the past, a huge body of which those who were not politicians and officeseekers had joined because of the excuse for a cheerful annual holiday afforded by the meetings; and that the papers presented, when not barefaced advertisements on the parts of specialists to increase their clientele, were crambe repetita "cabbaged" from the more popular text-books. I knew that there had been a rapid change for the better—one had but to read the journal of the association to see this—but I was wholly unpre-

pared for what I encountered. In every one of the many sections, judging from the syllabus afforded, the papers were of as high order as one finds at Washington and elsewhere at meetings of the special associations—I know that they were in the Pathological section which I attended. There was a combined meeting one morning, to discuss the subject of Disease of the Thyroid. Thyroid disease is not common; it is only in Michigan and the northern States that goitre is at all frequent, while exophthalmic goitre in general cures itself if you give it time. The subject is not one making a special appeal to the general practitioner; what is more the discussion was opened by a relatively young physiologist, followed by two equally young pathologists, and only then by a physician and two surgeons. Throughout there was maintained the same high scientific level. But there were between three and four thousand practitioners The acoustics of the hall were poor, attending that session. there was no brilliant discovery to be announced, but so intent was everyone that the hall remained packed to the very end, and so still was the audience that it is scarce an exaggeration to state that, save between the addresses, one might hear drop the pro-I have been at the crowded general meetings of verbial pin. more than one international congress, but never has a collection of medical men so appealed to me. There was that mass of, in the main, general practitioners straining to hear the last news, the latest word that science and practice had to say; not to gain tips, but to know for the love of knowledge.

And if, gentlemen, that is the spirit animating our colleagues south of the line, I am convinced that the same animates the body medical here in Canada. It is an attempt to tickle the palate of the aforementioned "rustics," rather than an appeal to the thoughtful and those who would advance themselves and welcome advance in the profession they love, to run down research and decry a practical intimacy with the basal sciences upon which is built the science of medicine, as was done, I regret to say, in an address delivered at the last meeting of this Association in Mont-I speak frankly, for the speaker on that occasion is nothing if not frank, and his crime deserves the pillory. What perverse spirit entered into him upon that occasion I do not know, for his life stands out in violent contrast to his words—his life, not merely as a constant student, but as enthusiastic teacher, one who, if any one had sinned in requiring too much laboratory work, was himself the prince of sinners, for he demanded, and still demands, that the students put in at least four times as much work in his laboratory as they do in the laboratory connected with any other subject of the curriculum.

I do not in the least mean to uphold that we should turn out the ordinary graduate a finished chemist, an accomplished bacteriologist, an anatomist of parts, a man who can use the latest stain devised by Mallory for differentiating the different orders of fibrils in the spinal cord-nothing of the kind. Nor has the curriculum at any Canadian university so far permitted anything of the kind. To make a man not an investigator, but merely a competent working bacteriologist, requires a course of four hours a day for two months, or about 200 hours' steady work at the least; we have been able to give at most 70-have been able, that is, to give our men a good knowledge of the medical aspects of bacteriology, to make him able to carry out the simpler and more important clinical procedures in connection with the establishment of a bacteriological diagnosis, and that not as a mere mechanician, but as comprehending the why and wherefore of the processes, and above all, I trust, have given him that amount of knowledge that will permit him in after years to follow rationally and with interest the developments of the subject as they appear in the medical journals. That is not making a bacteriologist; it is helping to educate a well-equipped medical man. Given a good solid Could less be asked, or be striven after? foundation, and the house can be builded well and surely at the time, and can support additional storeys in time to come. a poor foundation, and the house at most is pretentious, but insecure; it will not stand additional superstructure, save of the flimsiest, and if, recognizing its weakness, there is desire later to strengthen the foundations, that can only be done at great labor, great cost, and the imminent danger of cracking the walls. There is only one period at which the foundations can be laid satisfactorily in medicine; one builds the structure of clinical knowledge and dexterity upon this all the rest of one's life.

THE FIVE YEARS' COURSE.

I do, however, fully admit that during the course of this generation, the development of medicine in every direction has made it that the increase in basal knowledge demanded from the student has been so great, that the labors of the children of Israel in Egypt were child's play in comparison. For the four years of the course, his has to be an Egyptian bondage with a vengeance, and, for us as teachers, it has been a question which, as taskmaster, could most stimulate and get the best work out of

him. But meanwhile there has been nothing of the nature of a protest from the profession at large that we, the university teachers, as a body, have asked too much. All the same, it is cruelty to animals to compress into four all too brief sessions what we have sought to administer to the student. It is at least suggestive of what are the ideals of the profession at large to observe the wide approval that has greeted the move taken by Winnipeg, McGill, and Toronto, in establishing a five years' course.

And here in speaking of that five years' course and speaking for McGill-I believe the same is true of Toronto-let me sav that our plan is not to cram in more subjects, but to teach more thoroughly and without over-pressure; to so teach preliminary and intermediary scientific branches of the curriculum, as to prepare the student to take full advantage of his later opportunities, so that the greater part of the fourth year, and practically all the fifth, shall be spent, not in the college lecture rooms and laboratories, but in the hospital. Our plan at McGill is that in that fifth year, save on one day in the working week, the student shall be in the wards, and out-patient department, and operating room, in medical theatre and clinical laboratories of the hospital from nine o'clock in the morning until five o'clock at night. If thereby we do not turn out soundly trained clinicians, it will not be for lack of opportunities afforded. I do not wish to be Chauvinistic, but I am firmly of the opinion that by this means we shall send forth a sounder product, a more capable, self-reliant, and better provided practitioner than any school upon this continent. I do not wish to be mistaken in this matter; there are schools to the south of us that are already provided to develop better specialists, whether in the medical sciences, physiology, pathology, bacteriology, pharmacology, or in particular branches of medicine and surgery. I speak here of the bulk of the students that come to us to be equipped for their life's work, to those intending to be general practitioners. they that should be, and that have been, our first thought as a teaching body; it is to them that I now refer.

TWINS AND DOUBLE MONSTERS.

So much, perhaps too much, by way of introductory remarks. Now to the subject which I have taken as the main title of this address. I think it will be generally admitted that I might have chosen one having a somewhat more practical bearing and direct

As for double monsters, one rarely encounters them in the ordinary course of professional life, and if one does, there is nothing for us but to conduct them to the nearest museum, and as for twins, there is no call for us to interfere with what Providence in His abundance sees fit to send. At most the only variation from the ordinary that they entail upon us, is that, if I mistake not, we undertake two deliveries for the one fee, with no appreciation on the part of the male parent of the generous and forbearing nature of our act. Let me acknowledge with set purpose and of malice aforethought, if you like so to term it, I have carefully chosen the subject which, on the face of it, seemed furthest remote from practical bearing, just because of my belief that those attending this Association do not come purely for the purpose of acquiring tips, but because of their interest in all medical advance. Contrary to appearances, it has a very direct bearing. A study of the principles underlying double births leads directly to a fuller understanding of the phenomena underlying tumor growth, and a right grasp of the nature of cancer is the most serious problem before us at the present time; all this I hope to demonstrate in the paper I am giving in the pathological section. Here I shall confine myself to an attempt at a description and classification of the main forms of double growth.

The rest of Dr. Adami's address consisted so largely of a demonstration, by means of the lantern, of different orders of twins and double monsters, that without abundant illustration it would be impossible to render his remarks clear to the general Briefly he discussed the previous theories enunciated regarding the mode of origin of twins and double monsters, pointed out wherein he considered that these theories were imperfect, and suggested a theory that he had been led to develop by study of the problem extending now for many years, which he would term the "growing point" theory. He holds that the development of the embryo from the first appearance of the gastrula stage, up to the stage of development of the medullary groove, and appearance of the first indications of the cerebral vesicles-up to the time, that is, of the laying down of the matrices of different parts of the future organism—is of a nature identical to what occurs throughout life in the plant, namely, that growth in length occurs by the giving off of cells backwards from a superior and inferior growing point respectively. mode of development of the bilaterally symmetrical embryo demands that there be not a single apical growing point cell, but a pair of these, and as these cells have the potentiality to give rise, by successive division, to all the orders of tissue, and all the tissues of the individual, so each when separated from its fellow can give origin to a complete (anterior or posterior) series of organs. Dependent upon the period in early embryonic life at which the separation occurs so may we have,—

1. Complete division, with formation of two separate embryos from the one ovum (monochorial twins). Dichorial, dissimilar,

twins originate from two separate ova.)

2. Separation of the superior growing point cells at early or late period, leading to the various grades of anterior or superior deduplication from Dicephalus quadribrachius (earliest) down to deduplication only of the pituitary body (latest).

3. Separation of the inferior growing point cells causing inferior or posterior deduplication, with a corresponding series of forms, the slightest and latest being cases of deduplication of the external organs of generation.

4. Combinations of both superior and inferior dichotomy

(Anakatadidymus).

5. Separation of the primordial cells given off from the superior and inferior growing points, the cells at the growing point

not dividing, leading to Mesodidymus (very rare).

Besides these conditions of dichotomy, he discussed the series of cases of complete division of the embryo, and tendency to form two embryos upon one ovum, with subsequent fusion. This fusion he divided into:

1. Ventral.

2. Latero-ventral.

3. Superior—(a) apico-polar (early fusion, leading to Janiceps formation), and (b) dorsi-polar (late, craniopagus).

4. Inferior—(a) apico-polar, leading to the condition of pygopagus, and (b) dorsi-polar (late, leading to xiphopagus).

He further pointed out that the continuance of proliferation by the growing point cells, after the Anlagen of the axial organs have been developed, affords the simplest and most satisfactory explanation of the curious series of teratomas developing at the site of the anterior and posterior poles of the embryo, namely, conditions of epignathus and congenital sacral teratoma.

Lastly, he pointed out that premature exhaustion of the growing point cells affords adequate explanation for the conditions of cyclops formation at the superior pole, of sympus

or symelia at the inferior pole.

TUBERCULOSIS OF BONES AND JOINTS-BIER TREATMENT.*

BY S. H. WESTMAN, M.B., TORONTO.

For the last fifteen years, Professor Bier, of Bonn, has been treating cases of acute infective diseases of joints, bones and soft parts, by arterial and venous congestion, maintaining the diseased foci in a condition of hyperæmia for a longer or shorter interval. For purposes of treatment, he has divided hyperæmia into two varieties, Arterial or Active, and Venous or Passive.

The best results have been obtained with passive hyperæmia, which he has applied, especially, to the treatment of tuberculous affections, and I wish, to-day, to describe to you Bier's method of treating tuberculous joints of the extremities, by means of venous hyperæmia. For the production of venous congestion a Martin's india-rubber bandage is applied to the limb, about two inches above the diseased joint, allowing the folds of the bandage to overlap slightly, and to cover the soft parts for an area of about three inches. The bandage is drawn so firmly as to produce a strong engorgement. The area below the bandage becomes bluish and swollen. The subcutaneous veins swell, and the joint is felt to be hotter than the corresponding joint of the opposite side. Tingling sensations are felt, but actual pain is rare, but if it does occur, and is not relieved after the bandage has been applied for a few minutes, the latter must be loosened. The patient should suffer no discomfort or pain from a properly applied "Engorgement Bandage," (Staungsbinde), and yet the joint has the appearances of moderately acute inflammation. In some cases slight ædema follows, but with such a short application of the bandage this is a rare occurrence. When it does occur, however, it can be reduced by the elevation of the limb for a short time after the bandage is removed.

The indications which point to too strong application of the bandage, are pain, severe cedema, absence of the peripheral pulse, decrease in temperature, and presence of vermilion spots in the

parts on the distal side of the bandage.

This treatment is employed daily for one hour, and carried on for a period of nine months to one year. Care should be taken, in using the bandage, to apply it always above the diseased joint, and to bind a different part of the limb; otherwise, con-

^{*}Read befo e the Ontario Medical Association, June, 1907.

siderable atrophy will result, at the site of the bandage, after

nine months' treatment.

In applying the method of hyperæmia to the shoulder joint, it is necessary to use a piece of rubber tubing, somewhat resembling an Esmarks' tourniquet, instead of the broad Martin bandage. A piece of cotton is put loosely around the neck, forming a loop, The rubber tubing, covered with felt or wadding, is wound around above the joint, one end is slipped through the loop, the other over it, the right degree of constriction is produced and maintained, by clamping the two ends of the tubing together, on the upper aspect of the joint. Two straps are then passed under the ring of tubing, and fastened to it, one in front, the other behind the joint. The straps are then carried around the thorax and tied in the opposite axilla. The same degree of hyperæmia is produced and maintained as in the other joints.

During the course of the treatment, provided the diseased joint be in the upper extremity, the patient is allowed to go about, and to use his arm cautiously in gentle, active movements; passive movements are employed by the physician, or by the friends of the patient. Such manipulations must never be vigorous

enough to cause pain.

When the disease affects the lower extremity, the patient is confined to bed, to prevent the weight of the body from causing deformity of the already diseased and softened joints. After a month or two, however, he is allowed to get up, with the joint fixed in removable plaster of Paris splints or some form of mechanical apparatus. Active and passive movements of the diseased limb are carried out in the pauses of the hyperæmia. Many objections have been raised to this exercise of tuberculous joints, and some surgeons have gone so far as to accuse Von Bier of employing gymnastics as a remedy. His answer to this is a reference to the excellent results he has obtained by this combination of movement and venous congestion.

Bier therefore renounces, on the whole, the well recognized treatment of rest for these cases, because of the fact that immobility leads to stiffness and a bad functional result. His object is to obtain, wherever possible, a movable and good serviceable joint; for he considers that the annihilation of such an important and useful apparatus as a joint is a very poor result of any treatment.

During the progress of the disease, local complications are not infrequent, and are not, as some surgeons maintain, a result of

the hyperæmia, but are merely phases of the disease, which are just as liable to appear with other methods of treatment.

When the treatment was in its experimental stage, cold abscesses were frequent, and were predisposed to by the long application of the bandage, and by the extreme cedema which was caused thereby. These abscesses were allowed to grow larger, and were treated by aspiration and injection of glycerine-iodoform emulsion. The results were very discouraging. Now, however, with the daily application of the bandage, for only one hour at a time, abscesses have occurred less frequently, and when they do present, are opened as early as possible. If in doubt as to the presence of pus in a fluctuating or pseudo-fluctuating spot, it is better to incise it, even if no pus be found, than to make the mistake of allowing it to grow larger, for early evacuation of these abscesses gives an infinitely better result. In his treatment of these abscesses. Bier employs the aid of the cupping-glass, or, as the Germans call it, Schröpfkopf. The part is carefully sterilized, the abscess is opened, and the mouth of the cupping-glass is applied to the opening. A suction action of the glass is produced by a strong rubber bulb attached to it. The tissues inside the rim of the cupping glass immediately become swollen and hyperæmic, and pus, caseous matter and blood are drawn off into the cup. After a period of five minutes the cup is removed for an interval of three minutes, and at the end of three-quarters of an hour, including the pauses, the abscess is covered with an aseptic dress-This cupping is employed daily, for the treatment of sinuses or fistulae, either the result of recent or old abscesses.

Under this treatment, the soft, pale, flabby, tuberculous granulations soon become hard and red. When this stage is reached the glass is applied every two days, and as further improvement takes place, every three days, until a cure results. With this method the sinuses are not scraped, neither are they probed, packed or drained.

Great precautions are taken to ensure complete asepsis, and for a long time Bier did not employ the cupping-glass, because he was afraid of secondary infection. After a few weeks of this combined treatment of cupping and bandaging, Klapp, a colleague of Bier, injected the drawn-off contents of these sinuses into the peritoneal cavity of a number of animals. None of them succumbed, showing clearly the absence of any secondary infection.

The very worst cases of tuberculosis are first treated in bed, but even in these cases movements of the limbs are allowed.

Joints of the upper extremity that are painfully sensitive, and in which some displacement has taken place, are immobilized, until the pain and deformity subside.

În the out-patient clinics of the University of Bonn and dis-

trict, Bier employs his treatment, with excellent results.

Joint tuberculosis is very prevalent in some parts of Germany, and where there are so many cases, it is neither possible nor advisable to provide a bed for each case. Many of the cases are therefore treated in the out-patient department by their own physician, under the direction of the chief of the clinic, and the bandages are applied for the first few weeks under his super-The patient remains sitting for an hour, and during that time the bandage is inspected to see that it is acting properly. Later, the patient's physician, with his additional knowledge of the method, looks after his patient at home; and finally, the friends, if they can be relied upon, are permitted to continue the The patient himself soon learns to know the feeling treatment. of a properly applied bandage, and can thus aid its application. The physician sees the patient at his home from time to time, and should complications set in-for example, cold abscesses-the physician brings his case to the clinic, the abscesses are opened, and the pus evacuated by the cupping-glass. Where the friends are intelligent, they can be instructed in the use of the cuppingglass, and allowed to carry on the treatment at home.

Not all cases of tuberculous joints admit of the Bier treatment, and the following conditions are contra-indications to its use. Amyloid degeneration in the viscera, severe cases of pulmonary tuberculosis, cold abscesses filling the whole articular cavity. These last appear very seldom, and almost always in the knee joint. Then, again, in cases seen for the first time, where there is much deformity of the joint, and the latter is in a faulty position, Bier employs operation, removing the disease and the deformity at the same time, either by excision or by amputation.

A consideration of Professor Bier's statistics proves very interesting. The best results have been obtained in the elbow, wrist and ankle joints, and in the bones and joints of the hands and feet; and the worst, in the knee joint. In this last joint more excisions have been done than in any other joint, because of the occurrence of large abscesses and deformity, which necessitate excision. With reference to the hip joint, I may say that the artificial production of hyperæmia in this joint has been so difficult, and has proved so unsatisfactory, that Bier has discontinued it. Some-

times the objective changes in the joint do not keep pace with the improvement in function and the disappearance of pain. The joint may be swollen and hard, and yet be quite movable and painless. The normal expression of the joint only returns gradually after a considerable period. On the other hand, cases have improved so rapidly as to throw a doubt upon the diagnosis.

Bad results of this treatment have been reported, such as the frequent occurrence of large abscesses, increase of the pain, the onset of acute inflammatory symptoms, and a more rapid progress of the disease. The results attained by other surgeons are not nearly so good as the results achieved by Von Bier, mainly because of errors committed in the application of the bandage, or of some other mistake in the technique. I do not wish to infer that all of the cases improve or become cured. Just as in other forms of treatment bad results occur, so in this method; and there are cases, now and then, which not only do not improve, but which become rapidly worse under the treatment.

I come now to the action of hyperæmia. One observer has shown, by test tube experiments, that the germicidal power of the serum from areas rendered hyperæmic by a bandage, was greater than that of the serum from the same part before the application of the bandage. Nötzel injected hyperæmic parts of the body in rabbits, with anthrax bacilli and streptococci in fatal doses; only 16 died out of 67. Some weeks later the remaining animals were again injected, this time into parts that had not been rendered hyperæmic; all of the rabbits died.

Various theories have been advanced to explain this germicidal action. Some have held that the leucocytes are the protective elements in the blood. Others, that the Alexines of the serum are vitally concerned in the destruction of the germs.

Through the investigations of Patch, of McGill, and Wells, of London, working in A. E. Wright's laboratory, a very rational explanation of the proved efficacy of Bier's methods of treatment by hyperæmia was evolved. The venous congestion of the diseased focus determines the presence in it of a fresh, vigorous lymph, and in this way the bacterial foci are flooded at regular intervals with a new lymph, richer in such protective substances as opsonins than that in contact with the diseased part. It was also proved that, by the compression of the bandage, bacteria or their products were driven out into the lymphatic channels, the result of this being to render the blood richer in protective substances or opsonins. In fact, Wells and others have actually measured the effect of compression of a limb, and have proved

that the opsonic index of a patient's blood rose as a result,—that is to say, after the application of a bandage to a tuberculous joint for an hour or two, the opsonic index to tubercle was found to be greatly increased. Such a result is equivalent to that achieved by the inoculation of a measured dose of tuberculin, say I-I,oooth of a milligram. Bier's method, therefore, may not simply be one of artificial hyperæmia, but of inoculation with bacterial products and the consequent increase of opsonins and other antibacterial substances.

In conclusion, I might remind you that the treatment does not take the place of radical methods, where these are indicated, but it does lessen the frequency of severe surgical measures.

In the great majority of cases it is pleasant for the patient, it relieves pain, it allows him use of the limb, it is easily applied and can be used by the physician himself, and, lastly, it affords a complete cure, with the best functional result.

Discussion.

DR. B. E. McKenzie.—Bier is probably entitled to have his name associated with this means of treatment, because of the fact that he has given it so much attention and has presented it so systematically to the profession. Hugh Owen Thomas, of Liverpool, however, described it more than twenty years ago. The success attributed to his treatment of joints was attributed largely to the strap or bandage employed above the joint, causing venous congestion. The method is very efficient, especially in the treatment of acute infections of the joints.

CHRISTIAN SCIENCE.*

BY ERNEST HALL, M.D., VICTORIA, B.C.

In these days of inquiry into things deep and mysterious, when with the advantages of public education and general diffusion of knowledge, the public are refusing to take secondhand their ideas but must think and decide for themselves, it becomes us, who pride ourselves that "we are the people, and wisdom will perish with us," to step aside, rest awhile, and consider some of the fads and fancies that, while largely without the pale of orthodix medicine, yet command a large amount of attention, and which by our neglect are to a certain extent discounting the prestige of our profession. The truly scientific attitude of mind is that of careful investigation, even in the presence of absurd statements and of apparently impossible con-The indulgence in negatives so characteristic of many members of both the clerical and medical professions is not necessarily an indication of great scientific attainment, unusual powers of reflection, or even of a higher grade of judgment. It is better for us to preserve discreet silence with regard to phenomena outside our sphere of activities, than to say, with an air of finality, "It can't be done," or "It is impossible." The results of a century of physical development have closed our mouths to all negations regarding the future. The discoveries in the psychic world, while they have been more phenomena than the complete elucidation of the fundamental laws, are yet almost as great as in the physical realm. We realize and appreciate wireless telegraphy, we experience yet distrust mental telepathy, we exercise indirect suggestion in our daily prescriptions, yet ridicule the direct suggestion as exhibited at St. Anne and Boston. The time has come when we can no longer afford to ignore these forces, nor treat superficially the pretensions of the many cults that claim not a few intelligent followers. What is Christian Science but a timely protest by a large element of our non-scientifically educated, yet more or less intelligent people against the materialism of the Church, and the absence of the appreciation of mental processes and psychic forces

^{*}The introduction to a lecture delivered before the Graduated Nurses' Society, Victoria, B.C., on the Psychic Forces in the Sick Room.

upon the part of our own professions? This has come as a natural corollary of our race evolution and scientific development, a timely warning both to the Church and ourselves, that if we desire to represent what humanity requires, we must adapt ourselves to the demands of the age.

We see in the activity of recent faith cure systems but a repetition of what has occurred with regard to the Hydropathy thirty years ago, with electricity about twenty years ago. regular profession were loth to appreciate and incorporate into its therapeutic armamentarium hydropathy until quacks flourished and hydropathic institutions grew wealthy appealing to the popular demand. A similar state of affairs existed with regard to electricity, and even yet continues to a lesser Our profession were compelled by popular mand to investigate these departments, and now the modernly equipped institution is not without its hydropathic and electric departments. What we have seen with regard to water and electricity we are now experiencing in the psychic department. With the exception of a few brave souls, we as a profession refused to recognize these forces until compelled to by the money-making propensity of the quack. We thus recognize in medicine a law of therapeutic determinism with which we must comply. We must investigate the immense mass of psychic material lying around us. We must endeavor to unearth the fundamental laws, the underlying principles which, unconscious to the operators, are the real factors in obtaining the results. It is not necessary that the subject or operator understand the laws upon which depend the result, more than that the infant must understand the alteration of the circulation at birth in order to continue existence in a new environment. A great truth has been grasped, yet they have not discovered it, but have pressed it into therapeutic service with a stage setting no less attractive than the mysticism that has clustered around popular religions.

We have read not a little in our journals regarding "popular delusions," mostly endeavoring to show the ridiculous side of the subject, and endeavoring to belittle the results. While we may have our own opinions regarding their philosophy, and pity those who in blind infatuation deny the evidences of their own senses, we must remember that people are usually better than their creeds, and that theories are to be judged by results, and that the action of a pill does not necessarily depend upon its constituents. We should not allow our attention to be

wholly focussed upon the contradictions and absurdities, neither should we assume the persecutor's role. Open opposition and ridicule have constituted the best tonic; as early Christianity thrived under persecution, so cults thrive on the hatred manifested by orthodoxy. We cannot check the development of any cult by open antagonism. It comes and flourishes because we have left some human desire or demand unfulfilled, to show us our self-appointed limitations, and to indicate the direction which our investigations should take if we hope to incorporate into our professions the complete circle of therapeutics.

We cannot but be impressed with the suggestive element which permeates the whole system. The premises may often appear absurd, the reasoning faulty, but through all runs the cord of suggestion, occasionally direct, but more frequently indirect and more potent in its sub-conscious influence.

Suggestion is now admitted to be a great therapeutic force, and if this system is built upon so potent a factor we must expect direct and striking results in the departments in which this force can operate freely. It is operative consciously and subconsciously, acting deleteriously or in the welfare of the patient, and it is for us to direct this force into channels of construction and reparation, to determine its true sphere and recognize its This is incumbent upon us, for the Christian Science devotees fail in the latter respect and endanger the lives by their inability to determine the inadequacy of Christian While sug-Science with reference to acute physical conditions. gestion has frequently removed acute headache, functional paralysis, and has been a helpful tonic in a hundred minor organic diseases, we have yet to know of strangulated hernia, typhoid perforation of intestine, or acute appendicitis that has responded to suggestion. While the armamentarium of the modern physician is largely suggestion, it plays but a very small part with the surgeon's activities. The public should be taught this limitation, and that can only be done by granting Christian Science its just measure of credit. This is no argument in its favor, but a recognition of the God they ignorantly worship. Many of the patients they handle are really sick; their cures are real recoveries. Some ills are imaginative, but "if a man be ill enough to believe he is ill when he is not ill, he must be very ill indeed," and there are none of us so self-disciplined but we occasionally fall into this category; but aside from this class there is a large mass of invalidism on the borderland between

functional and organic disease that responds to suggestion. Who can limit the action of the hope and expectancy upon distinctly organic lesions, which are inspired by their teachings? With their elimination of evil, which their process of cogitation vouchsafes; with the eviction of a personal Devil, for which they are to be congratulated, and the non-existence of everything that worketh and maketh a lie; with the non-existence of disease, the elimination of post-mortem agonies; with the intensification of all the treasures of Bible promises, the Christian Scientists have much to be grateful for; and with such a creed accepted by the subconscious if not by the conscious mind, many a poor invalid throws off a burden that otherwise would crush him.

When the modern Medical College can make a place for psychic therapeutics, when the law of suggestion has been given its proper place in our therapy, and better theological conceptions will have displaced the fear, Devil worship, and the outrageous conceptions of the Deity, with all the absurdities of the 16th century theology, Christian Science will have accomplished its mission and will cease to be, and will be remembered for what it has been—a factor in our psychic education of

no small pretensions.

Clinical Department.

A Case of Appendicitis Complicated with Acute Obstruction of the Intestine. Henry S. Bennett, M.R.C.S. (Eng.), L.R.C.P. (Lond.), Assistant Medical Officer, Natal Government Hospital, Durban, in the *Lancet*.

The following case is of interest inasmuch as it comprises two serious conditions occurring at one and the same time, the cause of each being unusual.

The patient, a trooper in the Zululand Field Force, was admitted to hospital with the history that four days previously he experienced sudden and severe pain in the lower part of his abdomen; he commenced to vomit from this time. His abdomen had become distended and his bowels had been unopened. The symptoms continued and nothing could be retained in the stomach. On admission he looked worn, his eyes were sunken, and he was vomiting without reference to food, the vomited matter having a fecal odor. The abdomen was tense and distended in the centre, but there was no bulging in the flanks; there was tenderness on pressure all over but this was especially marked in the lower portion; no definite tumor could be made out. Percussion gave a tympanitic note in the centre but a dull one in the flanks, the area of dulness encroaching towards the umbilicus over the appendix region; the dulness in the flanks was shifting. Per rectum nothing abnormal could be felt. pulse was 88 per minute, full and of good tension. His temperature was 96.6 deg. F. An inquiry into his past history then elicited the fact that some five months previously the patient had experienced sudden and severe pain in the lower part of his abdomen, the symptoms lasting, however, one day only. A twopint enema was given, but without result except that a few specks of fecal matter came away.

The abdomen was opened through a median incision made below the umbilicus; the small intestine was much distended and its surface showed signs of acute inflammation; there was no great quantity of free fluid, and what there was was serous in character. On exploring the cavity some thickening could be felt in the neighborhood of the appendix, and on inspecting this site the appendix could be seen wrapped round a coil of gut. In order to facilitate working a transverse incision was made at

right angles to the first one and directed towards the right flank. It could then be seen that the appendix was completely encircling a portion of the small bowel; the organ had formed a collar around a single piece of gut only, showing that it must have taken up that position previously to its blind end becoming adherent, rather than first forming a loop through which a coil of gut had slipped. It was impossible to free the adherent end of the appendix without risk of tearing the intestine, for that organ had formed almost a complete circle on itself, the distal end being adherent to the posterior abdominal wall close to the cecum and beneath that portion of gut which it was constricting. The ring of appendix was therefore divided, the cut ends being immediately touched with pure carbolic acid. The gut having been freed the distal end of the appendix was detached from its bed, the proximal end being afterwards removed in the usual way. It was necessary to evacuate some of the contents of the small intestine in order to lessen tension and so allow the edges of the abdominal wound to be drawn together. The peritoneal cavity was washed out with normal saline solution and a drainage-tube inserted down to the site of the adherent appendix. On opening the appendix its wall was found to be much thickened and a pin, surrounded by a hard fecal concretion, was seen filling its lumen.

As to the immediate cause of the intestinal obstruction, the history of sudden pain, vomiting, and other signs of obstruction had suggested that a coil of gut had become kinked under a band or had slipped through a hole in the omentum or mesentery, but this was found not to be the case, for, as stated, the appendix was encircling a single portion of bowel only, and from the density of the adhesions must have been so situated for some considerable time, at all events for a longer period than four No doubt what had actually occurred was that a fresh attack of inflammation within the appendix had supervened, causing further swelling of its wall, and this had led to such constriction of the lumen of the gut as to cause absolute obstruc-The fact that the patient was on active service with the militia force at the time of being taken ill is sufficient evidence that there was no serious obstruction to the passage of feces before the present illness began; certainly he volunteered no history of constipation or of colicky pains when on duty. patient was extremely collapsed after operation and died within four hours of leaving the theatre. He rallied sufficiently, however, to be able to state that he had no recollection of ever having swallowed a pin.

I am indebted to Dr. Joseph H. Balfe, the medical superin-

tendent, for permission to publish the case.

Note on the Effects of Borax in Infants. James Charles McWalter, M.D. (Brux.), L.R.C.S. (Irel.), D.P.H., in *The Lancet*.

The question of the propriety of employing borax or other compounds as a preservative for milk or other foods is one which cannot be decided by the mere obiter dicta of the medical Powerful commercial influences are concerned in the use of preservatives in food and it is not sufficient for a medical man absolutely to condemn the practice if he finds himself in the witness box under the examination of an able King's counsel. This, gentlemen, will doubtless demand specific instances of the harmful effects, either from the witness's experiences or from credible works. These instances seem to be particularly scanty in British journals, although Dr. Wyley has done a lot of work on the subject in America. I wish, then, to record a case of chronic borax poisoning which is just now under my care and which seems as conclusive of the evil effects of the drug as a single instance can possibly be, for in this case the mother suckled the infant all the time and gave it no other

The infant was two months old when I saw it and had been born a strong, healthy child. A fortnight after birth it developed thrush, for which borax and honey were applied. child seemed to be relieved of the thrush by this remedy and developed such a liking for it that it was applied most liberally -from two to three four-drachm boxes having been used every week from the second to the eighth week. During this time a progressive wasting had set in, and when I saw the infant there was a marked erythematous eruption on the palmar aspect of the hands and on the plantar aspect of the feet, with distinct desquamation between the toes and the fingers; well-marked urticarial eruption was present on the arms and forearms, but the region between the legs was notably free from eruption. There were tumefaction and tenderness of the abdomen, and a raw, pinky redness of the lips, tongue, palate, and throat, with vomiting and looseness of the bowels. The face had a wizened look, the skin was soft and brownish, the eyes were bright, and the joints, especially the knees, tender, swollen, and somewhat stiff. There was no evidence of syphilis or other cause for the wasting and rash except the borax, of which the child had about ten grains every day for six weeks. On stopping the borax and confining the infant to the breast milk, together with a little raw beef-juice, it appears to be recovering rapidly.

Note on a Case of Belladonna Poisoning. H. Jeaffreson Brewer, L.R.C.P. (Lond.), M.R.C.S. (Eng.), in *The Lancet*.

It is said that children are able to take belladonna well and do not suffer from any toxic effects, and on looking through Woodman and Tidy's "Toxicology" the only cases of poisoning in children were caused by taking large quantities of the berries. From this point of view I think the following case of what was obviously belladonna poisoning may be of interest.

To a boy, aged 4 years and 3 months, suffering from whooping-cough, I prescribed two minims of tincture of belladonna and two grains of bromide of potassium, to be taken every four hours. Within half an hour of the administration of the first dose, the mother told me, a red flush came out round the child's neck and on his chest. The mouth seemed dried up and the child was slightly delirious, but in about an hour he got much better. A second dose of the mixture was given four hours after the first, and again in half an hour the child suffered in the same way and was violently sick. Then I was sent for. On arrival I found the child almost covered with a scarlatiniform rash, chiefly on the neck and chest; the pulse was rapid (120) and very feeble; the mouth was dry; the pupils were fully dilated, a narrow ring of the iris only being visible; and the temperature was slightly raised (100 deg. F.). The child was only semi-conscious and was with difficulty roused and could not speak. On administering brandy consciousness and speech returned, the pulse slowed, and the pupils began to contract. When I saw the child on the next morning he had quite recovered, except for a very faint rash which entirely disappeared within 24 hours.

Considering the very small dose administered I think this idiosyncrasy worth recording.

Physician's Library.

Disorders of Respiration and Circulation. By Prof. Edmund Von Neussen, M.D., Professor of the Second Medical Clinic, Vienna, Associate Editor "Nothnagel's Practice of Medicine." Authorized English translation by Andrew MacFarlane, M.D. Part I., "Dyspnæa and Cyanosis." Price, \$1.50. New York: E. B. Treat & Company. 1907.

This little work, "Dyspnœa and Cyanosis," forms the first part of a series of clinical monographs, the second part of which deals with "Tachycardia and Bradycardia," and the third part with "Angina Pectoris." This admirable series of monographs accentuates the value of the study of symptoms as observed at the bedside of the patient, and reproduces the marvellous clinical pictures of Frousseau, Niemeyer, Sydenham, Flint, and others, illuminated by present-day knowledge of pathology and clinical methods. The publishers are to be congratulated on their selection of these excellent monographs, as well as on that other series grouped under the heading "Disorders of Metabolism and Nutrition," by Prof. Dr. Carl von Noorden, Professor of the First Medical Clinic, Vienna.

A Text-Book of the Practice of Medicine. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Eighth revised edition. Octavo of 1,317 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, \$5.50 net; half morocco, \$7.00 net. Canadian agents: J. A. Carveth & Co., Ltd., Toronto.

That this is the EIGHTH edition of this excellent text-book of medicine speaks for itself. It is only two years ago since we had the pleasure of noticing in these pages the seventh edition. In this we find that it has been brought up-to-date according to the more recent advances in modern medicine. That part dealing with treatment has received especial attention. This makes it exceedingly valuable, as we believe where treatment receives such careful handling in a text-book of medicine it will appeal more to both student and practitioner. Treatment

is essential, and it does not do even for a text-book to dismiss any subject treated of with the curt statement there is no treatment for this or that disease. Pathology is a good deal; Diagnosis goes one better; but Treatment is the best of all. Patients require treatment more than everything.

A Treatise on Diseases of the Skin. For the use of advanced Students and Practitioners. By Henry W. Stelwagon, M.D., Ph.D., Professor of Dermatology, Jefferson Medical College, Philadelphia. Fifth edition, revised. Handsome octavo of 1,150 pages, with 267 text-illustrations and 34 full-page colored and half-tone plates. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, \$6.00 Canadian agents: J. A. net; half morocco, \$7.50 net. Carveth & Co., Ltd., Toronto.

Diagnosis and treatment, the two most essential and practical parts in diseases of the skin, receive in Stelwagon's book careful and extensive attention. These facts have stamped the book first-class amongst similar works. In this, the fifth edition, fifteen new illustrations have been added, and two new plates. The eruptions of the leukæmias receive attention for the first time. There are also new articles which bring us into closer touch with tropical diseases, such as dhobie itch and uncinarial dermatitis. The book is a good one, and the enterprise of the publishers in keeping it up-to-date is to be commended.

Squint and Ocular Paralysis. With a Short Account of the Disturbances of Muscle Balance. By E. Lucas Hughes, M.R.C.S. (Eng.), L.R.C.P. (Lond.), Clinical Ophthalmic Assistant, Royal Infirmary, Liverpool. Illustrated by the London; H. K. Lewis, 136 Gower St., W.C., author. Publisher.

1907. In this work, which will perhaps appeal more particularly to the ophthalmic specialist, the author has endeavored to compare some of the best practical teaching of the English and foreign schools. In the non-operative treatment of squint the two principal instruments advised by the author to be used in the encouragement and development of binocular vision-which frequently forms a difficult feature in the treatment—are the diploscope of Rémy and the amblyoscope of Worth. He emphasizes the importance of the education of the fusion sense being undertaken at the earliest possible date.

Hygiene and Public Health. By Louis C. Parkes, M.D., D.P.H., University of London, and Henry R. Kenwood, M.B. (Edin.), D.P.H. (Lond.). Third edition, with illustrations. London: H. K. Lewis, 136 Gower St., W.C.

This standard work needs very little in the way of commendation, it is so well known and so universally appreciated. Under the conjoint authorship it has been carefully revised. New matter has been added to keep it up-to-date, and the work has been maintained in a handy form for ready reference, although the size of the page has been slightly enlarged. We heartily recommend this work to medical students, practitioners and sanitary scientists in general.

Diseases of the Genito-Urinary Organs and the Kidney. By ROBERT H. GREENE, M.D., Professor of Genito-Urinary Surgery at the Fordham University, New York, and HARLOW BROOKS, M.D., Assistant Professor of Pathology, University and Bellevue Hospital Medical School. Octavo of 536 pages, profusely illustrated. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, \$5.00 net; half morocco, \$6.50 net. Canadian agents: J. A. Carveth & Co., Ltd., Toronto.

A large amount of space in this new book has been devoted to the urinary organs proper; not so much to sexual disorders. It is well, even elaborately, illustrated, printed in clear, good type, and will be sure to appeal to all classes of the profession. Attention has been paid rather to those methods found best applicable than to fully and exhaustively dealing with everything. The book can, therefore, be heartily endorsed as a good working handbook for the general practitioner as well as surgeon.

The Physician's Visiting List for 1908. Philadelphia: P. Blakiston's Son & Co. The price of this is \$1.00. It is now in its 57th year of publication. This speaks for itself. The dose table has been revised in accordance with the new (1905) U. S. P. The book is supplied with pencil and side pocket, handy for prescription blanks.

The Commoner Diseases of the Eye. How to Detect and How to Treat Them. For Students of Medicine. With 280 Illustrations and 8 Colored Plates. By Casey A. Wood, M.D., C.M., D.C.L., Professor of Ophthalmology, Northwestern University, Chicago, and Thomas A. Woodruff, M.D., C.M., L.R.C.P. (Lond.), Ophthalmic Surgeon St. Luke's Hospital, Chicago. Third edition, enlarged and improved, with Index. Chicago: W. T. Keener & Co., Publishers. 1907.

A very handy work for the student of medicine and the general practitioner, by which he may readily acquire a fairly intimate knowledge of the eye signs and symptoms of disease in general, and also of the diseases of the eye most frequently met with in general practice.

A Manual of the Practice of Medicine. By A. A. Stevens, A.M., M.D., Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania. Eighth edition, revised. 12mo of 558 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1907. Flexible leather, \$2.50 net. Canadian agents: J. A. Carveth & Co., Ltd., Toronto.

This is an especially good little book on medicine for two reasons. The first is that students of the third year can rapidly become acquainted with the salient points in the realm of medicine. The second is that it is a splendid book to review just before examinations. It fills, therefore, a place, and a good one, in the subject of medicine. This, the eighth edition, has been thoroughly revised, and much new material has been brought in, particularly in Diseases of the Nervous System. We can very heartily recommend it, as it will be sure to prove decidedly helpful.

A Text-Book of Physiology. For Medical Students and Physicians. By WILLIAM H. HOWELL, Ph.D., M.D., LL.D., Professor of Physiology, Johns Hopkins University, Baltimore. Second edition, thoroughly revised. Octavo volume of 939 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, \$4.00 net;

half morocco, \$5.50 net. Canadian agents: J. A. Carveth & Co., Ltd., Toronto.

We consider Howell's Text-Book of Physiology one of the best for both student and practitioner. With it the former can secure a fine grasp of this subject; from it the latter always gathers reliable, up-to-date matter. This is the second edition, and it has been thoroughly revised. The book is practically the same size as the first edition, as useless matter has been eliminated to counterbalance the new introduced. There are also some new illustrations. No better book on this subject could find its way into the hands of a medical student.

The Canadian Medical Protective Association

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ORGANIZED AT WINNIPEG, 1901 Under the Auspices of the Canadian Medical Association

THE objects of this Association are to unite the profession of the Dominion for mutual help and protection against unjust, improper or harassing cases of malpractice brought against a member who is not guilty of wrong-doing, and who frequently suffers owing to want of assistance at the right time; and rather than submit to exposure in the courts, and thus gain unenviable notoriety, he is forced to endure black mailing.

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COMMENT FROM MONTH TO MONTH.

The Degenerate.-It must be growing more and more evident to the physician, and even to the thinking layman, that the occurrence of criminal assault is becoming more painfully frequent. It might seem at first sight that this is in a large measure due to two things: our increasing population, and the influx of a large number of foreigners of low mental and moral calibre; but on more careful consideration we think other and more potent factors in the causation of this intolerable condition must be taken into account. Quite apart from this undesirable and, perhaps, unavoidable foreign invasion, there is a most potent native force at work, which, to our way of thinking, is responsible for a large majority of local criminal records; we refer to the ever-increasing number of neuropathic subjects encountered in our everyday life. And it is not enough to state this evident fact; rather should we seek for the causes which produce this greatly increasing number of nervous bankrupts. This is a large order, were it attempted in detail; but for our purpose it may be stated in brief as due to our social and commercial habits, and also to environment—which is perhaps embraced in the former circumstances, or is, at least, their logical product.

For example: We go to great pains to say that minors shall not be allowed to enter into matrimony, while the veriest criminal, the subject of neglected venereal disease, the subject with more than a suspicion of insanity in his family history, is freely permitted to take out a marriage license—that he may be free to procreate at will as many children as he likes! children which nothing but a miracle can prevent from becoming in their turn, if not vicious and criminal, at least nervous incompetents. surance societies take great care in the selection of "risks"; what precaution does society take to safeguard its ranks? take no little pains in developing the finest breeds of cattle and horses, while at the same time the hands of the church are uplifted in blessing over human mental, moral and physical derelicts, with the solemn (?) injunction, "Whom God hath joined, let no man put asunder"! And at the same time we are spending hundreds of thousands for the uplifting of the heathen, while crime grows more rampant in our midst, and disease walks abroad unashamed!

The public press informs us there were something like seven or eight cases of criminal assault at the recent assizes held in this city. One of these criminal monsters not only assaulted a little girl of five, but also infected her with gonorrhea, for which he received a term of two years' imprisonment and the lash!! What effect, in the name of shuddering humanity, could such a sentence have in the way of reforming a brute of this type? Might as well slap him on the wrist! The judge is helpless in such a case, for he may only inflict such punishment as the law allows. Meanwhile the populace sits smugly by and does nothing,—or, at most, says "how terrible!" Meanwhile, also, the scum of the earth marry and beget criminals or lunatics, which are carefully reared and in due time are housed in prisons and asylums at our expense!

It is about time the public should recognize the fact that in the great majority of cases larceny and lechery, murder as well as mania and sexual perversion, are evidences of a grave neurosis, and as such should receive scientific treatment,—which is tantamount to saying, not according to our present-day methods. The jail and the gallows on the one hand, and the church and charity on the other, have had their chance for centuries to work the much-needed reform, and with what result? The Degenerate is on the increase, because he is allowed to breed. Were it not well that some other form of treatment were tried? We think so.

The remedy is at once effectual, easily executed, and quite as speedy, if not infinitely more so, than present methods: Prevent the pervert from procreating his kind. After a due investigation of the case by the Crown, let the Medical Board under the Crown pass judgment on the patient—the nervous degener-Such a board, say, consisting of three medical men of unquestioned character and professional ability, appointed by the Crown (and therefore quite beyond the sway of politics or "price"), having concurred in the guilt of the individual as demonstrated by the legal authorities, should pass the ultimate Such an unfortunate should not only be put away where he can for a time be brought under the restraining influence of confinement, but should also (before being turned loose on the community) be rendered sterile, either by division of his vasa deferentia, or (as in the case, say, of the brute who rapes and infects a child), by total ablation of the external genitals. Even in the case of the so-called "reformed" criminal, vasectomy should be performed, as a safeguard against the transmission of vicious tendencies.

Female criminals could be dealt with in a similar manner, viz., by resection of the Fallopian tubes.

It might be objected that eunuchs have been known to manifest a high degree of viciousness and murderous ability. Let it be understood, however, that the eunuchs of the East were asexualized in youth, and that their murderous habits were

purely an after achievement, due to ample training in the gentle art of cutting throats and strangling, and in no wise the result of their early sterilization. To sum up this phase of the treatment, it may be said in extenuation, that society has a right to protect itself against the breeding of criminals and those who are mentally, morally and physically unfit to take their place in the ranks of sane and healthy citizens.

What of prophylactic treatment? Lydston says: "I am well aware that sentiment is strongly against the regulation of matrimony, as an interference with individual rights. sentiment, however, is absurd, in view of the legal formalities with which it is even now hedged about. . . . Inasmuch as sentiment has hitherto been no bar to the demand for a license. the exaction of a license fee, and the subsequent performance of the marriage ceremony by properly qualified parties, it should not be a bar to the demand for proper qualifications on the part of candidates for matrimony. The law disregards the individual rights of our citizens by demanding examinations and licenses for pilots, engineers, physicians, lawyers, dentists, pharmacists and others, and imposes a special license and regulations upon various occupations. Reeve quite logically asks the question why, in view of this attempt to protect the public despite individual sentiment and rights, a similar protection should not be afforded to society by restriction and regulation of individual rights in the question of matrimony." He further remarks: "I will advance the proposition that society should govern matrimony upon strictly business principles, patterned after those of life insurance companies, in the management of which sentiment is an unknown quantity. . . . Why should not society handle the matrimonial relation from the standpoint of a huge co-operative insurance association, and dam the stream of expensive degenerates at its very source?" Marriage without a satisfactory medical certificate should be subjected to a severe penalty."

Again, to quote from the same author: "If this view of the question is not accepted, as it is not likely to be by individuals who can see a rosy ideal in an incurable or actively infectious

gonorrheic or syphilitic, a drunkard or an epileptic, society has still a means of granting such fools their individual right to marry any degenerate they see fit, while at the same time protecting itself from the degenerate progeny of such ill-assorted marriages. The Court of Appeals to which adverse certificates of matrimonial qualifications should be referred is the surgeon's knife. Individuals who, in the face of an unfavorable medical opinion, still desire to marry, should be given the privilege of doing so, providing they submit themselves to sterilization."

The reader may think to himself: "After all, this is only mere theorizing; the law must be supreme and must be carried out properly. Brother practitioner, does it not occur to you that rape in this fair land is not a theory but a sickening fact? Your child or mine might be the victim! What then? "The law must be supreme and must be carried out properly"? Yes, the law must be supreme, and must be carried out properly—but, in God's name, let us change the law. Meanwhile, can you wonder if some poor illiterate but distracted father says in effect, "The law does not punish; I must take the matter in my own hands"?

Over Two Hundred and Twenty-Five Medical Students in the freshman class in the Medical Department of University! This is a very serious matter, and one "Poor fellows!" Now, the practice is forced to say, of medicine is not by any means lucrative. If the young men in large cities would tell the downright truth to the amount they are "COLLECTING" in their practices; if the older men would tell the selfsame truth as to what they are "SAVING" each year; if the country practitioner would also be honest and tell just what he "HANDLES IN CASH" each year, we believe the truth would not present a very "ROSY" appearance. Why this tremendous rush into medicine? Probably because a great many of us strive to keep up too good appearances. If one cannot make a good show, he's not got a "BIG PRACTICE." When a doctor dies, and

his will is entered for probate, we are often astounded at what we read. We considered he had a good practice, a large one, a paying one-but alas! the probate of the will would make us think there was a screw loose somewhere. Take the all-round general practitioner, which most of us are,-wouldn't a great many of us be doing better to-day if we were printers, bookkeepers or carpenters? The chances are that a great many book-keepers, travellers, carpenters and printers are making more money and living happier lives, free from incessant care and worry, than many doctors. If this is so, and we believe it to be a fact, therefore, medicine is to-day one of the very worst callings any young man can choose to follow. The hardships in it, the worries and anxieties in it over patients, and the fact that it is mostly a "CHARGE" business, combines, therefore, financial worries, which, saddled on to the other, make the life of an average physician a life which the young aspirant to medical honors should well consider ere he takes the step which brings into his joys and sorrows the young life, which sooner or later most all do. The fact that medical men are considered none too good risks by insurance corporations; the fact that it is well known the expectancy of life in the medical profession is, comparatively speaking, a short one; the fact, too, that the good die young, should be well weighed by every young man ere he chooses to embark on a career which requires for its best sign-True, a few succeed and do so well, "APPEARANCE." but there are a great many factors more than mere ability which makes them do it.

Friends and gossips have a great proclivity for asking: "HAVE YOU A BIG PRACTICE?" If you have or you haven't—and you judge it by the "CASH" you get—you have got to present, you think, a good "APPEARANCE," and say you have whether you have or have not. It is a mighty fine thing for those who have attained a measure of success to tell others what they should and should not do. They never tell all, the hidden secrets, as to how they were successful. They would have the world believe it was all due to ability and hard

work—but we opine, in the vast majority of the cases, there have been other causes, not permissible to be published. Still, what are you going to do about it? Any one can come into medicine. Percentages for passes are low and easy, and those abominable things called supplemental examinations will enable any one to get in piecemeal.

Toronto University is not a private corporation, else one would not wonder at the influx. It is State-aided. It should look for quality and not quantity. All this may be pessimistic, but we utter the warning to the embryo practitioner—"ALL IS NOT GOLD THAT GLITTERS."

Municipal Health Officers should direct some attention to the rotten and filthy condition of privies, urinals and water-closets on lines of railway traffic, in parks and other public places. The writer had occasion during the past summer to take some children to one of these outhouses in a large public park in Toronto. The interior of the shack was sickening and disgusting; so bad, indeed, that no one could or would go into it. Look into some of the "For Gentlemen" and "For Ladies"—Jupiter save the appellations—outhouses along railway lines of traffic, and one will wish for a flood and another Hercules to douse and douche our modern Augean stables. Have we a Provincial Board of Health in this province, that can make the "responsibles" sit up?

Pure Water for Toronto and a proper disposition of its sewage are urgent and vital. Now that the Academy of Medicine has undertaken to champion the cause thereof, a vigorous and constant campaign should be conducted. The Academy of Medicine now practically represents the entire medical profession of the city. It is in a strong position to do telling work. Going so constantly in and out among the people, physicians can regularly and continually preach the evangel of a pure water supply. It is inconceivable always to the medical profession

how bodies of men like the Toronto City Council should so entirely disregard the advice of men of the medical profession on those vital questions which concern public health. It is a fact that the voice of the medical profession, its counsels and warnings, are continually passed by and for long seasons of time utterly disregarded. It would probably be a good thing if more of our better class of physicians would seek so-called honors in public life. We must have pure water. It is essential to health and happiness. The citizens are crying for it; and it would be a wise step to obliterate the greater part of the present Council next election day. A doctor for Mayor the next three of four years, when this great question is to be determined, would also be a decidedly wise step.

Toronto Hospitals, according to reports of officials of the province of Ontario, and Toronto, are not giving good service to municipal order patients. In four hospitals certain wards for city patienits are roundly condemned; and the authorities of these hospitals are demanding nowadays for these patients, and from all public ward patients, seventy cents a day. At this rate the chances of a poor man getting into a hospital are somewhat lessened, as when they come to find out more is demanded from them than at their boarding-houses, some will decide to stay there. This, of course, will be better for the pocket of a few physicians who will benefit by keeping their patients at home. They are not allowed to follow their patients into the hospitals at this rate, even though the patient might wish to have them. They are debarred from doing so because the clinicians wish them for bedside material, who thus, perhaps, robs some poor, starving young physician of a few dearly needed dollars,-but then, to those who have plenty that does not matter a tinker's coin. Why could not the city order of \$4.90 per week in some cases be given direct to the man, woman or child in the home? Probably a great many would prefer such a scheme. Surely a rigid system could be devised in some well-selected cases, to carry out such work? Then, in a purely charitable case, why could not the municipality pay the doctor to a certain extent?

News Items.

TORONTO, West, doctors have arranged a scale of fees for their guidance.

Dr. R. W. Powell, Ottawa, has returned from a flying trip to New York.

'The death is announced of Dr. Robert S. B. O'Brien, of Nanaimo, B.C.

Dr. A. L. Webb, of Wooler, has sold his practice and goodwill to Dr. S. Anderson.

Dr. Kennedy has received the appointment of Surgeon for the C. P. R. in Wingham.

NINETTE, Man., has been selected for the site of the Manitoba Hospital for Consumptives.

The death of Dr. E. H. Coleman, Belleville, Ont., is announced, at the age of 75 years.

A citizen of London, Ont., has donated \$20,000 for a Consumption hospital for that place.

Dr. G. K. M. Gordon, one time of Teeswater, has moved with his family from Ripley to Gravenhurst.

THERE were 440 married women treated in the Montreal Maternity Hospital during last hospital year.

Dr. John Todd, Professor of Parasitic Protozoology in McGill University, is visiting in Victoria, B.C.

Dr. Babty has been appointed assistant to Dr. C. J. Hagan, Provincial Health Officer for British Columbia.

DR. A. A. WILSON, Montreal, has been appointed surgeon of the C. P. R. S.S. *Empress of Ireland*, to succeed Dr. Winder, resigned.

For the quarter ending 30th September, the Montreal General Hospital spent \$13,038 more than its income.

DR. J. D. Monteith, Stratford, has received an appointment as county coroner from the Provincial Government.

TWENTY-TWO out of thirty-three candidates were successful at the recent British Columbia medical examinations.

WINNIPEG City Council has increased the annual civic grant to the General Hospital of that city from \$30,000 to \$40,000.

DR. E. G. Hodgson has returned to Toronto after two years' graduate work abroad, and has located down town, Bay and Adelaide Streets.

WORD has been received in Guelph of the death, in Etonnami, Saskatchewan, of Dr. J. A. Howitt, son of the late Alfred Howitt, Provincial Land Surveyor, of Guelph.

THERE were 792 deaths in St. John, N.B., during the year ending the 31st of October, 1907. Ninety-seven of these were due to tuberculosis.

Dr. W. J. Robinson, Guelph, Ont., has been appointed head of the London Hospital for the Insane, Dr. McCallum being transferred to Orillia.

Dr. Harvey Clare, formerly with the Toronto Provincial Hospital for the Insane, has accepted a position with a similar institution in New Westminster, B.C.

THE Federal Government will grant Winnipeg \$25,000 for the purposes of the British Association for the Advancement of Science, which will meet there in 1909.

THE Saskatchewan Medical Association met in Regina on the 8th and 9th of November. The members were tendered a complimentary banquet by the Regina Board of Trade.

Dr. Ernest Dickson, of Orillia, has been appointed Resident Physician on the Senior Medical Staff of the Hospital in connection with Johns Hopkins University, Baltimore.

- Dr. L. Sinclair, of Walkerton, has been appointed a special examiner for lunacy, by the Ontario Government.
- DR. P. H. BRYCE, Ottawa, reports great prevalence of and deaths from tuberculosis amongst the Canadian Indian school children.
- Dr. Allison Rolls, formerly of the Manse, Mansewood, is spending a year in England on post-graduate work in the London hospitals.
- Dr. Norman J. Heatlie, Solina, has purchased the practice of Dr. Lapp, Pontypool. The latter goes to New York to take a special eye and ear course.
- Alexandra and St. Paul's Contagious Diseases Hospitals, Montreal, are asking to have their civic grants increased from \$15,000 each to \$25,000 each.
- Dr. Reg. Grier is in Erin, taking charge of Dr. Hamilton's practice in Dundalk while the latter is taking a special three months' course in New York City.
- DR. C. K. CLARKE, Superintendent of the Toronto Provincial Hospital for the Insane, has been appointed Professor of Psychiatry in the University of Toronto.
- DR. JOHN W. CORISEDINE, a widely-known and skilful medical man of Port Dalhousie, died November 12th at his home. Deceased was born in Ireland 88 years ago.
- Dr. A. S. Gorrell, Carleton Place, will leave in a day or two for Regina, where he purposes locating. He intends doing specialist work only, on the eye, ear, nose and throat.
- HON. D. McN. PARKER, Halifax, the second President of the Canadian Medical Association, died on the 4th of November. He was born in 1822, was educated at Edinburgh, graduated in 1845, and was the first to perform an operation in Halifax with an anesthetic.

On the 1st of October, 1906, there were 139 inmates in the Toronto Hospital for Incurables. Thirty-seven were added during the year. There are now in the institution 141.

Dr. A. M. Campbell has retired from the superintendency of the Winnipeg General Hospital, and Dr. Gunn has succeeded him. He was tendered a banquet by the members of the staff.

British Columbia has got started in the Consumption hospital business. Seventeen beds are now available. Dr. R. W. Irving, formerly of Gananoque and Toronto, is the superintendent.

THE Public Health Act of Ontario, and other statutes or parts having a bearing on health matters, have been consolidated into a pamphlet, which may be had of Dr. C. A. Hodgetts, Parliament Buildings, Toronto, for 25 cents.

EMERSON LEROY HODGINS, M.D., has recently passed his examinations with high honors in London, England, and has been admitted a Fellow of the Royal College of Surgeons. Dr. Hodgins is a son of Thomas Hodgins, a well-known Lucan merchant.

THE death is announced in Chicago of Dr. J. H. Collins. Dr. Collins was an honor man and medallist of Toronto University, having obtained his degree of M.B. in 1889. He was afterwards a house surgeon at the Toronto General Hospital. For several years he has been practising in Chicago as an eye and ear specialist.

DR. James Algie, who has been in Alton for the past twenty-five years, has disposed of his property and practice to Dr. Mc-Kinnon, Orangeville. After spending some time in study in France and Germany Dr. Algie will set up practice in Toronto as a specialist.

ONE-HALF the income of the estate of the late Mr. Henry James, Toronto, for twenty-one years, will go to the Institute for the Blind, Brantford, and one-half to the Sick Children's Hospital, Toronto. At the end of that time the whole estate will go to the Hospital for Sick Children.

. Publishers' Department

We desire to call the attention of our readers to Lecithol, the latest addition to the Armour Laboratory List. Lecithol is a palatable emulsion of lecitlin which is made from fresh brain substance. Each drachm of Lecithol contains one grain of pure lecithin. Lecithol may be employed advantageously in anemia, rachitis, tuberculosis, diabetes, dyspepsia, all nerve disorders and wherever phosphorus is indicated. Suprarenalin solution and ointment stand pre-eminent among things of the kind, because they are permanent, uniform and free from objectionable features.

THE ANEMIAS OF CHILDHOOD.—The anemias of early life are usually sequels of the acute diseases common to this period. The exanthemata are especially liable to be followed by a depreciation of blood quality, and a protracted convalescence often depends on this one condition alone. Moreover, the frequency with which physical stigmata or infirmities actually date from an attack of measles, scarlet fever, diphtheria or any of the other similar diseases of childhood, can often be properly laid at the door of insufficient or improper care during the very important stage of convalescence from these diseases. It should be recognized that the hematogenic function, while exceedingly active in childhood, is yet very susceptible to all inhibitory influences, among which the toxins generated in the course of the acute diseases are most common. When a storm infection of measles, scarlet fever, or any of these similar ailments is passed, there must follow a period of reconstruction. If the damage has been slight as a result of a light storm or an unusually strong structure, the reconstructive process places little demand on the resources of the individual. But if the storm has been unusually severe and the structure ill-prepared to meet its fury, the rebuilding process is certain to be long and laborious. in the quality of the blood is one of the greatest handicaps at this time, and the clinician should recognize this as one of the most important indications for therapeutic assistance. action of Pepto-Mangan (Gude) is always very marked in these cases, and it is interesting to note how rapidly children respond to its upbuilding influence. A marked increase in hemoglobin



at once follows its use and the red cells multiply rapidly. With improvement in the blood constituents there is a corresponding increase in the whole bodily tone, and it only takes a few days to carry the average patient safely away from the dangers of a trying period. Pepto-Mangan (Gude) is therefore a very valuable tonic in childhood and unlike so many of the ordinary hematinics it can be given with impunity to the youngest infant. It has marked alterative properties, and in strumous or marasmic conditions it is especially valuable. It is absorbed rapidly, and is never rejected even by the weakest stomach. In early life its administration is best effected by giving it in milk, and the dose should range from ten drops to two teaspoonfuls, depending, of course, on the age of the patient.

THE CARE OF GROWING GIRLS.—One of the most responsible tasks of the family physician is to advise parents of girls entering upon their 'teens, as to the diet, mode of life, and hygienic measures best calculated to preserve the health of budding womanhood. In dealing with these cases the practitioner is often called upon to treat the anemia which in such a large proportion of instances characterizes the unfolding of the growing girl. Full well does the family doctor grasp the meaning of this anemia, and the vast importance of combating it before it is too late,—before the impoverished condition of the blood of puberty has left its imprint upon the powers of resistance of the adult organism; has done permanent damage to the future woman and the future mother. Unsuitable diet, an overindulgence in sweets or spices, over-study, lack of fresh air and physical exercise, indulgence in late hours and abandonment to novel-reading, to tight lacing and other abominations of dress, contribute their quota to the causes of anemia in the growing girl. Each of these factors is, of course, removable by good common-sense advice to parents and by proper exercise of discipline. Still, when the damage has been done, we must assist nature in its generous work of restoration, and here it is that we are obliged to give that sovereign cure of impoverished blood, iron, in such form as may best be suited to these cases. The question as to what form of iron we should give to produce the best possible effects has been solved by both experimental and clinical researches conducted during the past twenty-five years-ever since Bunge and Hamburger experimentally demon-

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strated the inferiority of inorganic preparations (Morat and Doyen, Traité de Physilogie, Paris, Masson 1904; I., 467). Iron, in the anemia of puberty, produces the best effects when given in a form that will stimulate digestion and increase assimilation, i.e., in the form of peptonate. With it should always be combined that second hematinic which has been shown to enhance the value of iron, manganese, and the two are best given in the form of the well-known solution, styled "Pepto-Mangan (Gude)." With this may be given, in the anemia of growing girls, minute doses of Fowlers' Solution, or else equally small doses of strychnia, which may be incorporated with Pepto-Mangan as indicated in individual cases. Pepto-Mangan has a great advantage over other forms of iron medication in that it does not constipate. Girls at puberty, however, are notoriously prone to constipation. Therefore this should receive proper attention, chiefly in the regulation of diet, including a sufficient amount of fruit, raw and cooked, and of cereals giving a large residue of cellulose. With this method of treatment many a physician has achieved success which was rewarded tenfold, by the sight of rosy faces and bright eyes.

So great has been the demand, that W. B. Saunders Company, the medical publishers of Philadelphia and London, have found it necessary to issue another revised edition of their illustrated catalogue of medical and surgical books. In looking through the copy we have received, we find that since the issuance of the last edition six months ago, the publishers have placed on the market some twenty-five new books and new editions—truly an indication of publishing activity. The colored insert plate from Keen's new Surgery, which enhanced the value of the former edition, has been replaced by a new one from the second volume of the same work, and this alone gives the catalogue a real value. A copy will be sent to any physician upon request.

RELIEF IN RHEUMATOID CONDITIONS.—Dr. Pettingill, of New York City, under the head of "Intestinal Antisepsis," reports some excellent experiences, from which the following is selected: "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





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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 are wonderfully relieved by the use After fevers, inflammation, etc., there of this combination. frequently remain various painful and annoying conditions which may continue, namely: the severe headaches which occur after meningitis, a 'stitch in the side' following pleurisy, the precordial pain of pericarditis, and the painful stiffness of the joints which remains after a rheumatic attack-all these conditions are relieved by this combination called 'Antikamnia and Salol Tablets,' containing 21/2 grs. each of antikamnia and of salol, and the dose of which is one or two every two or three hours. They are also recommended highly in the treatment of cases of both acute and chronic cystitis. The pain and burning is relieved to a marked degree. Salol neutralizes the uric acid and clears up the urine. This remedy is a reliable one in the treatment of diarrhea, entero-colitis, dysentry, etc. In dysentery, where there are bloody, slimy discharges, with tormina and tenesmus, a good dose of sulphate of magnesia, followed by two antikamnia and salol tablets every three hours, will give results that are gratifying."

HAY FEVER.—Dr. E. Fletcher Ingals, Chicago, writes: The prescription for hay fever in the Department of Therapeutics in *The Journal*, July 6, 1907, p. 84, and credited to me, I am unable to remember as having recommended at any time, for it certainly is objectionable in several ways: 1st, I have not tested resorcinol in this connection; 2nd, the adranalin chlorid, one-half grain to two ounces, would be very irritating in most cases of hay fever, and 3rd, the boric acid I do not use in this connection, as I find the biborate of soda much better. I have found the following prescription very useful in some cases, and think it well to try it in every case:

R	Cocainae hydrochloridi	gm.	15 or gr. iiss	
	Suprarenalin (1-1,000)	.gm.	4 " 3i	
	Glycerini	gm.	30 " 3i	

M. Sig.: Use a spray to the nose four or five times daily, or oftener if needed.—Clipping from Journal of American Medical Association, August 10th, 1907.