DOMINION MEDICAL MONTHLY

AND

ONTARIO MEDICAL JOURNAL.

EDITED BY
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VOLS. X AND XI.

January to December, 1898.

TORONTO:
OFFICE OF THE DOMINION MEDICAL MONTHLY.
1898.

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Vol. X. TORONTO JANUARY, 1898. No. 1.

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GLANDULAR THERAPEUTICS.*

By DR. W. H. MERRITT, St. Catharines.

It did not require a wise or observant man to remark that history repeats itself; and that it does, even in therapeutics, will hardly be gainsaid or argued. That fads in all walks and callings of life are rampant, have been and always will be, is perhaps true beyond contraversion. That they are prone to occur in the actual practice of medicine may be seen from a perusal of the various medical periodicals at our hands. It is to be regretted, of course, that all fads, like land booms, cause a reaction; the more extensively used and pushed the fad has been, the further it is thrown into disuse and oblivion apparently by the reaction. Some, possessing more virtue than the rest, are revived after a short period of disuse or forced absence; others take cycles and generations to be repeated, and others never return to the scene of their useless existence. And who will deny that some of the most obnoxious and foolish of these fads may be again thrown upon us as a result of the reaction from barbarous ignorance and worse than empiricism, to the knowledge of the microscopic and macroscopic science of to-day. I shall, further on, give my reasons for making such a peculiar statement—a micro-organism daring, as it were, to raise its voice against the accumulated mass of evidence that has been produced from the careful study and experimental, as well as clinical, knowledge from the workers of all lands and times. I owe them an apology for daring to hint that they obtained their cue from the crude and barbaric practices of medicine men, of and previous to the dark ages. Perhaps, however, it was no cue obtained from ancient cult, but a germ life of thought, something that sprung *de novo* in the thought-secreting apparatus of some curious individual to which we must credit this reversion to a previous system. If so, we are in very great danger, for the cerebral cells of many are inventive enough to ring in on us many strange and

*Read before the Niagara District Medical Association.

awful conditions, substances and distortions of therapy, that most of us may in a moment of weakness (or strength, who knows) be tempted to introduce into the system of an unknowing and unsuspecting mass of humanity. I have been speaking so far around my subject, but intend (if you are sufficiently long suffering to allow me) to speak of some new forms of drugs, doses or substances, alterative, tonic or recuperative, as their function and use may appeal to the individual user. That many such or allied substances have been used, nay, were extensively used, and probably became fads, may be found in writings which have become classical and historical. To one thinking how much the present century has added in scientific research and knowledge, and how much, too, it has taken away from the attic or lumber room of a doctor's arma-mentorum, it appears almost strange that the earth is inhabited; so much in previous ages had they that we have not, and so much, on the contrary, do we consider indispensable that they had not. That it has not been so much with the aid or the skill of the physicians of the various periods of time (and, for the sake of the memory of our forefathers, many times removed, I would not like to say in spite of them) seems a fact. Still, leaving out the fact that the advance of high-tension civilization has brought many peculiar pathological conditions that were perhaps unknown in past centuries, previous to this microscopic age, with its advance in scientific knowledge, there lived a people obeying nature's fundamental laws, living largely in the open air, and living on proper food and thus very near to a natural state, who, in spite of their scientific ignorance and want of fear of germs, spores and bacilli, and therefore oblivious of the various toxins and organic products, lived to a good old age, or died a violent death, which they so often sought. This age, if it might be called one, was a period of sufficient length to make a record into which the present age of scientific medicine is again entering after such an interval, and after such an uplifting as we can appreciate to-day. I should be almost tempted to call this an era of organic compounds. I say *an* era because certain organic compounds or substances, and perhaps all, or even more than we have at our disposal to-day, were freely used before. Just think for a moment; we can reach that exalted therapeutic condition of bygone years, when the husband's urine was considered a specific for the vomiting of pregnancy. Only to-day we would be more dainty, and probably introduce it by the hypodermatic route probably as urate of something. I am not sure that it is any worse than some of the many other substances that are daily produced for our trial and credulity.

Is it not a wave of superstition that is making us cling to such substances as testiculine and ovarine, and many others? Is it the rapid advance in the study of bacteriology that makes us demand a new remedy or antitoxim for every new or strange germ, spore or bacillus found wandering across some microscopic field; or is it the reverse, that a new germ being found it must be fitted to a condition of the body which the scientific world say belongs to it or forms it; or, most likely still, that the germ is the one and only cause for

the morbid change? A speaker at a late Ohio State medical society thus speaks of the position of bacteriology. He says, "We have a pathology of the zymotic diseases which is scientific and conformable to the true spirit of induction. But it falls in my way to-day to say that it is not at all to the credit of our craft that the old credulity breaks out anew with every announcement of bacteriology. Greedy gulping acceptance of improved or half proved facts in bacteriology is the disgrace of the day. Most of us have been obliged to change front three times on the bacteriology of diphtheria, and it is as certain as death and taxes that we shall play the jumping-jack through future years if we do not, after the manner of scientific men, receive valuable hypotheses as hypotheses."

Now, we are here as an association of scientific men and only too anxious to avail ourselves of the researches of others, and far be it from me to appear to make little of what has been done in this field; but I do wonder if the good results reported from agents, that I will mention hereafter, are not in a great measure due to other, even if allied causes. Have not better hygienic conditions as much or more to do with the general improvement in health and eradication of disease as these new agents used and vaunted? However, that the profession think these substances play no little part in curing ills of the flesh may be gathered from this one fact. I pick up half a dozen copies of a New York medical paper lying before me and note the remedies used that are formed from animal tissues or secretions. Verily, it is astonishing; they are as follows: Anti-cholera serum, ovarine and ovarian juice in the treatment of chlorosis; splenic extract in therapeutics; the antitoxine treatment of diphtheria; the injection of erysipelas toxines in malignant growths; the use of anti-streptococcus serum in hæmorrhagic septicæmia; injections of serum in cholera infantum; the thyroid treatment in the idiopathic tetany of children; medicinal hæmoglobin. Is that not enough? These subjects are taken out of exactly half a dozen numbers of one journal. Does it not look as if we were about to revert, if not to cannibals, at least to being able to supply our medical wants, if not from our fellows, at least from animals on which we feed? What is the superior virtue of thyroid extract to that of a well cooked sweet bread? Why will not liver and bacon supply that hepatic substance—'tis not yet called hepatine. Gentlemen, is it not a scientific joke, or are we really coming to the time when we can go to the butcher instead of the apothecary or doctor for our medicine?

The *Presse Medical* for August 15th, publishes a paper presented by MM. Spellman and Etienne, on the subject of "Ovarine and Ovarian Juice in Chlorosis." Their reasoning is interesting and results fortunate. They said, "If chlorosis is a disease of the ovaries, their function was changed or abolished, and with the suppression of menstruation, chlorosis appeared, and, on the other hand, a defective general condition interfered with and impeded recovery of the ovarian gland. If, however, the internal ovarian secretion was restored to the organism in any way, it was possible, perhaps, to stop the intoxication, to influence the organism in general, and to afford a means of

recovery of the local ovarian affection." The authors had made use of three products: The fresh ovaries of a sheep, dried ovarian substance, and the ovarian juice prepared after the Brown-Sequaid-d'Arsonval method. These remedies had been given to six chloritic patients with the result that after the first dose very sharp pains, especially in the abdomen, were felt; there had also been headache and vague muscular pains. In two of the subjects the temperature had risen to 99° and 100°, the pulse to 100. In three of the patients remote results had been distinctly favorable, the general condition had been rapidly improved, the pallor had rapidly diminished, the number of white globules increased, and the strength restored. Menstruation which, in one case, had been suppressed for over three months, returned in fifteen days after beginning treatment. In another case it had returned after three months. The authors concluded that in the treatment of chlorosis, ovarine favored the elimination of the toxine and introduced into the system an antitoxic principle, and in this way it exerted a favorable action on the general condition, on the increase in the number of red globules and on menstruation.

Listen to this also. Dr. Cabot writes in the *Annals of Surgery*, September 1896, as follows: "In December, 1894, I saw J. W., aged 75, suffering from enlarged prostate and vescical calculus. On January 2nd, 1895, the stone was easily crushed and pumped out. The patient being in good condition at the end of the operation, the testes were removed. Previous to the operation the patient was, for the most part, clear mentally, though occasionally he had slight confusion of ideas. After tearing off the dressings when coming out of anæsthetic he continued for a month in a wildly maniacal condition. Passing on, I find that on February 19th, he was as much confused as ever, constantly referring in his talk to the loss of his testes and business troubles. It was now decided to try the effects of testiculine." Without further quoting the article, I may say that for a week he had thirty to forty minims daily, when his mental condition changed decidedly. "He is less restless, worries less and sleeps better," says the report. Under the testiculine he regained his usual health, but died in May from some kidney trouble. Now, these two cases are somewhat analogous, or from analogous organs. What a pity the old man's testes were removed, for with them *in situ*, and urged on by a little testiculine, he might have begotten a prodigy who, having been born, after due time might have found among the corporeal structures and secretions a true elixir of life. Some one should try it. Again, while musing on these therapeutic possibilities, I wonder what result a small dose, say ℥ ss., of testicular extract would have, introduced into a young woman in an artificial opening beneath the skin instead of *per vias naturales*, would it simply produce a stage of excitement, increased vigor and strange sensations, or would it produce ectopic gestation wherever introduced, or, forsooth, some new and unforeseen condition to be quoted at length in some future periodical of the advanced school; and, conversely, to some old rake and ruè, would not a corresponding dose of ovarine of itself produce

that pleasure and satisfaction which he had so long lost even in the arms of beauty's voluptuous suggestion? Would it not tend to lessen vice and raise the morals—but the cost. Ye gods! what possibilities are open to us and still opening. Are we reaching the time when a person may carry in his pocket a half dozen different pills labelled as follows: this, dinner; this, wine; this for fatigue, this for sensual pleasure, and so on? Again, but the cost. The pleasures of life would be gone, our gustatory nerves would shrivel up, our gums become toothless ridges, the gastric juice and saliva cease to be secreted by savory smells and tasty viands and the human form divine would lose its charm and power to please. Surely the cost is too great, and we cannot afford, even for convenience, to sacrifice the real pleasures of life to this nanny pill business with which we are threatened.

But let me just mention some tabloids of organic extracts that are prepared and for sale to the profession to-day. 1. Pituitary body used for restoring perverted nutrition of brain and nervous system. 2. Pineal gland, also recommended for functional disorders of the brain. 3. Salivary gland, being tried by clinical observers. 4. Lymphatic glands have been employed in lymphadenoma and exopthalmic goitre. 5. Thymus and thyroid gland used in graves disease, anæmia leucocythæmia and chlorosis. 6. Kidney substance used for impaired nitrogenous transmutation which may arise from abeyance of the renal function. 7. Spleen substance used for various diseases of the blood. 8. Supra renal substance. A dose of $\frac{1}{800}$ grain of the active principle produces a distinct physiological effect on the arteries. 9. Pancreas substance; this is said to be useful in some cases of diabetes, and is supposed to effect carbo-hydrate metamorphoses. 10. Ovarian substance used for the nervous manifestations and irregular tissue changes which follow the menopause. 11. Cerebrine used for chorea, perverted sexual habits, hysteria, etc. 12. Didymine is said to be aphrodisiac, and to cure perverted sexual habits. 13. Red bone marrow used for hyperfluidity and non-coagulability of the blood elements. 14. Uterine and fallopian tube substance used for cachexia due to removal of those organs. What a list! What a joke! and there are many more that I have not named.

Now, while on the whole, I think we all must admit that this question of animal extracts seems ridiculous, and as yet to me is so. However, I must confess that I have used a few of them with undoubted success; and, after all, if some that we individually know of have answered their purpose, why may not others that we know not of be as successful and beneficial? That antitoxine for diphtheria is potent for good all will, perhaps, admit; at least the majority of the laity will demand it where called for. Protoneuclein in my hands has done good work. Thyroid extract, too, has proved its claims to recognition. I hope there are some here who will be able to speak of the virtues of some of these peculiar remedies, and my only object of bringing them out in this slighting manner was to get some information practically that I was unable to furnish myself. That I am sceptical about the majority, however, goes without saying.

Reports of Societies

TORONTO CLINICAL SOCIETY.

The forty-first meeting of the society was held Dec. 8th, 1897. Dr. A. A. Macdonald occupied the chair.

The following were present: Drs. McDonagh Peters, Parsons, Boyd, Garratt, Temple, Ryerson, Primrose, Wright, Macdonald, Fenton, Murray, Bingham, King, Oldright, Grassett, Hamilton, Cameron, Fotheringham, Brown.

Dr. Graham Chambers was elected a member of the society.

Dr. Fotheringham reported a case of hysteria in a girl aged ten. Three years before he saw the patient she had an attack of diphtheria, which might have given rise (in the opinion of those who saw her) to the paraplegic symptoms which appeared on Nov. 31st, 1895, disabling the child from feeding herself for ten months. One eye was closed for three months, and the movements of the other were impaired. Some weeks after there were twitchings of the arms and legs, but not spastic. For a time there were rhythmic movements of the head which were carried on in a rotatory fashion against the fists. The paralysis disappeared during sleep. There was no tendency to bed sores; and there was no marked wasting. At first there was some headache and some insomnia. The patient was hyperæstheitic in the presence of the mother; less so when the doctor was in. There were two sensitive spots over the two upper lumbar vertebræ. Under purely suggestive treatment there was a complete cure. The doctor then discussed the differential diagnosis. The diagnosis of hysteria depended upon the following facts:—The interval between the diphtheria and the onset of the paralysis; the distribution of the paralysis and its disappearance during sleep; there was no active atrophy; the absence of bedsores; the increased knee jerk; the position of the legs-that of simple helplessness; the rhythmic spasms; the twitchings; the hyperæsthesia, more marked in the mother's presence; and the hysterical stigmata.

Dr. Bingham referred to a case in which he had operated for empyæma. Although complete recovery took place the child would not allow its mother to touch the affected side.

Dr. Wm. Oldright said that it was stated that there was an absence of faucial refles in these cases.

Dr. Fotheringham said that he did not think that this was so. In certain cases the fauces might be one of the anæsthetic areas.

Dr. Primrose presented a child, aged seven, who had come to the Children's Hospital with a psoas abscess. The treatment consisted of opening the abscess, curretting with the fingernail, injecting a ten per cent. solution of iodoform and glycerine, stitchings and sealing up with a collodion. Healing took place by first intention.

Dr. Bingham presented a child upon whom he had done an œsophagotomy, for a button at one point had begun to ulcerate through, which made him pleased he had not persisted with the forceps in trying to extricate it prior to operating. The case was doing well.

Dr. Parsons related having assisted at removing a set of false teeth from the œsophagus. The wound suppurated. It was a difficult matter to keep such wounds from being contaminated.

Dr. E. E. King reported having had two cases of foreign body in the œsophagus—in one it was a cent, in the other a piece of oyster shell. He was able to locate the cent with the X-rays. He was able to remove them by the probang.

Dr. Garratt reported a case he had seen with Dr. Harris. A cent had

lodged in the œsophagus, which they were able to locate with the X-rays. They introduced a bougie and shoved it into the stomach.

Dr. McDonagh reported a case where a child had swallowed a small tin whistle which became lodged in the œsophagus. He was able to reach it with an ivory pointed bulb and removed it with a pair of forceps.

Dr. A. Primrose read a paper on "The Physics of Surgical Dressings." This was the review of a paper by a Russian medical man who holds that the success of the treatment of wounds by the Listerian method depends, not so much upon the antiseptic qualities of the dressings as the allowance for drainage and evaporation from the wound, in the stream of which the germs would be carried.

Drs. Cameron, Oldright and Parsons took part in the discussion.

TORONTO MEDICAL SOCIETY.

The regular meeting of the Toronto Medical Society was held in the Council Building, December 16th, 1897. Dr. MacMahon occupied the chair.

Dr. G. H. Burnham read a paper on "The Use of Pilocarpine in Certain Diseases of the Eye." The paper described his plan of administering the drug in a certain case of rheumatic affection of the eye, complicated with chronic articular rheumatism. The temperature of the room was about 75° F. The patient was clothed in flannel and put to bed between blankets of the same material. Care was taken to prevent any draughts of air to strike the patient. He would then inject from one-eighth to one-fourth of a grain into the arm, and remain twenty minutes to watch its effect. He did not use any stimulant. As a rule, a profuse perspiration followed with the free flow of saliva, which was voided into a dish, the patient having previously been placed in a position to do so without moving. In two or three hours after such a daily injection the patient was wiped dry, allowed up, but not out of doors, until the next day. This treatment was kept up from ten to twenty days when an intermission of three to eight weeks was allowed, when another series of treatment followed. The patient was altogether under treatment for four years, at the end of which time he had from a condition of almost complete blindness acquired two-fifths vision, and could run about quite freely. Moreover, there has been no sign of relapse.

The essayist extolled the use of the drug in combination with the iodide of potash and mercury in syphilitic affections of the eye. Pilocarpine has come into disrepute on account of its improper administration, having been given irregularly, spasmodically, with stimulants, and without a careful preparation and care of the patient.

Dr. MacMahon thought pilocarpine was not used enough. He had found it a most useful remedy in uræmic convulsions in producing not only free diaphoresis but also diuresis.

Dr. H. H. Oldright had used pilocarpine in a case of marked œdema of pregnancy with good results. In a second case of puerperal convulsions he had tried it, but it had not the desired results.

Dr. Bryans said, owing to the teachings of one of his clinical teachers, he had been afraid to use the drug freely.

Dr. Burnham replied to various questions asked and closed the discussion.

Dr. Wm. Oldright presented a patient who, on the 17th of May last, had suffered a compound fracture of both legs; of the left leg, about one and a half inches below the knee joint, which had done well; of the right, at the junction of the lower and middle thirds, the tissues about being badly

injured, followed by much suppuration with absorption. When septic symptoms had disappeared it was found that the lower fragment had become wedged in behind the upper. This mal-position was corrected, but it was found that the sharp upper end of the lower fragment was endangering the integrity of the skin, a portion of which was taken off. The union of the fragments had, after a long time, taken place, but there was still some discharge and other indications of some dead bone. He proposed to search for this by operation at once.

Dr. Oldright reported the history of a second case—one of extravasation of urine following stricture. There was a small opening in the perineum from which there was a very offensive discharge. The scrotum was very much swollen, as was also the penis. There was a slough on the upper surface of the penis. The doctor opened up freely and covered the uncovered area of the penis by a flap from the scrotum, which did well. Photographs taken by Drs. Edmund E. King and H. H. Oldright were passed around. The first showed granulating anterior and lateral surfaces of the penis after separation of sloughs and the inferior edge of the prepuce thickened by œdematous infiltration. The second showed a granulating lateral surface of the penis extending into the inferior border of the prepuce, and a granulating space following sloughs in the scrotum where incision had been made. The third showed area from which the flaps were taken and other features. The fourth showed the scrotal flap losing its rugous appearance. The fifth showed the inferior border of the prepuce covering part of the original raw surface, but still somewhat thickened.

Dr. G. Gordon moved, seconded by Dr. McKeown, that a portion of the next evening be devoted to a discussion of the Victorian Order of Nurses.—Carried.

Present—Drs. Burnham, MacMahon, G. B. Smith, S. Hay, W. J. Wilson, Bryans, H. H. Oldright, Wm. Oldright, G. Gordon, Oakley, Dickson, Fletcher, McKeown, Machell, Brown.

Dr. McKeown reported that the case of septic pneumonia treated by intravenous injections and high rectal injections of sulphate of magnesium was doing well. But he had tried it in a case of pneumonia, in which the operation was done with great difficulty and when the patient was in a low condition. The patient died.

The society adjourned.

HEALTH BOARDS AND THE PUBLIC WEAL.—The determination of the New York Health Department to destroy a building as "not fit for human habitation, and not capable of being rendered so," has been upheld by the Appellate Division. On the appeal, only the pleadings, decision and exceptions thereto and the judgment were before the court, the appellant's counsel contending that the grounds specified in the decision were insufficient to warrant it, and that consequently no consideration of the facts was necessary. Justice Barrett, giving the opinion of the court, holds that, under the amendments of 1894 and 1895, to Section 1,022 of the code, all that is necessary for the court is to state the grounds on which the issues have been decided; and whether the conclusions of law are justified by the evidence cannot be decided on appeal where there are no distinct findings of fact, and where the court has not the evidence before it. Averments were distinctly made in the petition in this case which, Justice Barrett said, if proved in their entirety would establish the fact that the condemned building was a public nuisance and that it should be abated. The court must assume, upon the record, that the judgment was rendered upon adequate proof of every fact so averred in the petition.—*Journal of the American Medical Association.*

Special Selections

INFLUENCE OF OUR SCHOOL SYSTEM ON THE HEALTH AND DEVELOPMENT OF THE CHILD.*

By E. STUVER, M.Sc., M.D., PH.D., RAWLINS, WYO.

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The strength, happiness, prosperity and stability of nations and races almost entirely depend on their hereditary heritages and their ability successfully to adapt themselves to their environment.

The whole history of man's development from the earliest times conclusively proves that his highest welfare is conditioned on the harmonious development of all his powers, physical, intellectual and moral, and that when one or more of these have been slighted or neglected, he has paid a dear penalty for such neglect.

Glancing down through the ages, we behold untold misery and innumerable wrecks caused by the violation of this inexorable law of nature. Here we see ignorance or disregard of sanitary laws followed by pestilence, disease, lowered vitality, degeneration and extinction; there we behold licentiousness, debauchery and immorality in all its varied forms, produce a similar result. Nor are the most striking examples taken from savage or barbarous peoples, but furnished by the greatest and most powerful nations the world has ever known.

The observance of these developmental laws raised Greece to the pinnacle of intellectual greatness and physical perfection; their violation reduced her to an insignificant dependency and to a position of subordination, which she is now making a gallant effort to overcome. Physical, intellectual and moral integrity made Rome the mistress of the world and the Roman name honored and feared everywhere, but the loss of the virtues which made her great was the signal for her downfall, and now there remains only the name of her former power, grandeur and glory.

Such examples as these should cause us, as a nation, to pause in the midst of our wonderful career and consider some of the dangers that threaten us, and at the same time carefully examine our bulwarks of defence and see whether they are in a condition to resist any or all attacks that may be made against them.

We have always boasted, and justly too, of our national system of popular education, and repose greater confidence, as a means of defence, in the intelligence, freedom and patriotism of our people, than in immense standing armies and monster iron-clad ships. While nearly all will admit that our public school system is a strong bulwark of defence, and has been a potent factor in molding our national character, developing our institutions and promoting our material welfare, still the question naturally arises, have these results followed as the consequence of our educational methods, or have they been largely due to the inherent force of character, mental acumen and physical integrity of the hardy pioneers who laid the foundations of our nation, and to whom is due much of our greatness as a people?

The highest happiness and welfare of a nation or a people is in direct proportion to the highest happiness

*Presented to the Section on Diseases of Children, at the Forty-eighth Annual Meeting of the American Medical Association, held at Philadelphia, Pa., June 1-4, 1897.

and welfare of the great majority of the individuals who compose it; and the greatest welfare of the individual depends upon the inheritance of a strong, well-balanced organization and the symmetric and harmonious development of all his powers; in short, in order to attain the most complete living he must be perfectly adjusted to his environment. To accomplish these results an educational system must provide, in the first place, for a strong physical organization on which to work. Sanitary, hygienic and dietetic laws should be thoroughly understood and their principles carefully inculcated. Every parent and teacher should be strongly impressed with the truth that a "sound mind in a sound body" is a *sine qua non* in every case, if enduring results are desired or expected. Every one, and especially teachers, should understand that plain, nutritious and unstimulating food, an abundance of sleep, and plenty of free, unrestrained exercise in pure air, away from the formality and routine of the schoolroom, where the spontaneous activities are given free play, are of the greatest possible value to the child. They should not only know, but put into practice, the truth that proper food, plenty of oxygen, and frequent periods of relaxation in which to rest and change the activities of the brain, are of infinitely greater value to the child than the details of geography or history, or the memorizing of rules of grammar or arithmetic, frequently drawn from principles they do not understand. Then, too, teachers and all those who have the direction of the intellectual and moral training of children, should have a clear and comprehensive knowledge of the laws and principles underlying and governing the development of the brain, as well as the mental and moral faculties of the child. They should know that the brain of the child, as compared with that of the adult, contains a larger percentage of water, is more unstable, more easily irritated, and that as a consequence, long continued, monotonous work not only fails to strengthen it, but, on the contrary, weakens the mind, besides producing irritation of the brain, with a lowering of the vital powers and retardation of the physical development. They should understand that the motor centers, which preside over and control muscular movements, act much as storage batteries, that is, they store up nerve force, which is almost constantly being discharged and producing muscular movements. The proper development of the muscular system being the foundation on which muscular strength and integrity depend, nature has wisely, by the automatic discharge of nerve force, to a large extent removed muscular development from our volitional control. We might just as well try to compel a normal, healthy child to stop breathing, as to remain quiet for any great length of time. The nerve force accumulating in its motor centres has just as specific and important a function to perform as that which regulates the activity of its respiratory organs. If teachers understood this fundamental physiologic truth, together with the fact that the inhibitory brain centres, as well as the paths of association which connect them with the motor centres, are in an undeveloped condition, thereby necessitating the discharge of nearly all nerve force in muscular movement, and that when the attempt is made to frustrate this provision of nature the effort at inhibition not only requires much brain power, which should be used in quiet thought and study, but that it produces irritation of the brain and weakens the mind, they would not commit the very common error of trying to compel young pupils to concentrate their attention on one subject or remain quiet for a long time.

Teachers who understand the natural order of evolution of the faculties can assist nature in directing

the mind in proper channels and help strengthen and develop the various mental powers at the proper time and in the proper manner. Activity is the normal healthy condition of the human mind, and if this activity be properly directed mental work should be a constant joy, a source of the greatest pleasure and happiness to the learner. Show me a school where the pupils dislike their work, where everything is regarded as a disagreeable task and evaded or performed as a matter of routine, and I will show you a school where dreary drudgery and dead formalism have taken the place of generous enthusiasm and noble aspirations; where the laws of mental and physical growth are outraged and the moral nature is being warped and distorted, and in charge of that school you will find a teacher entirely unfitted for his or her work and who is lowering one of the grandest vocations to the level of a mercenary calling.

Every educator should appreciate the fact that in its development the child is an epitome of the development of the race. It passes through savage, barbarous and semi-civilized phases of development with many of their attendant impulses and passions before reaching that culture and refinement represented by our best civilization. In view of all these facts the proper training and education of a child is a most difficult thing and demands on the part of the teacher natural ability for the work, a thorough education and careful professional training, besides an accurate and comprehensive historic knowledge of the mental and moral evolution of the race and a careful observation and study of these faculties in the child.

While educators are being profoundly stirred on this subject and "child study" is receiving much attention and creating great interest, still the fact remains that the great mass of teachers know very little about it; indeed, it is a deplorable fact that the great majority of teachers in our public schools have never had adequate professional training of any kind (only about 15 per cent. have taken a course of training in normal schools, see *Forum*, April, 1896, page 179), and many lack that thoroughness of education necessary to make them first-class teachers. Under these conditions, is it any wonder that the courses of study formulated and the methods of instruction pursued have been either injurious, barren of results or failed to produce that highest good which should be the aim of all education.

To obtain a consensus of opinion on the influence of our school system on the health and development of the child, I addressed to about one hundred and fifty of the leading educators and physicians of the country the following questions:

1. Do you think our present comprehensive course of study is best calculated to develop the highest physical and intellectual powers of the child?

2. How long do you think continuous school sessions should be?

3. What is the longest time that should be devoted to a single recitation? *a*, In primary grades; *b*, in grammar grades.

4. How often should pupils have recesses or periods of relaxation?

5. Which do you think are more beneficial, open-air recesses with spontaneous play, or formal indoor exercises consisting of calisthenics, etc., and why?

6. To what extent does the practice of denying pupils the privilege of attending to the calls of nature or of punishing them for the exercise of this privilege (by making up for the time so lost, etc.) exist in the schools? *a*. What do you regard as the moral effect of such a practice on the child? *b*. What physical evils may or do follow it?

7. What effect does "home" study,

outside of school hours, have on children, and especially on girls during puberty?

8. What should be the outside limit of such study for: *a*, grammar school pupils; *b*, high school pupils?

One hundred and five answers were received: Sixty-nine from educators, including college presidents, professors in colleges and normal schools, superintendents of city schools, principals of graded schools and others eminent as educators; also thirty-six from physicians who occupy professorships in our leading medical colleges or have distinguished themselves as general practitioners or specialists whose work is among children, or who have large opportunities to observe the effects of school work upon the health of those who have recently passed through, or who are now pursuing a course of study in the schools of the United States. As you will notice, the answers come from all sections of the country, and as a consequence the results of the investigation which I herewith subjoin, do not possess a mere local significance.

Answers to No. 1.—Sixty-three of the sixty-nine educators answered this question as follows: Yes, fifteen; no, twenty-nine; doubtful, eighteen, with one no to first part and yes to the second part.

Prof. Joseph Baldwin, LL.D., Austin, Texas: No. Many modifications are demanded.

Prof. Edward Brooks, LL.D., of Philadelphia, Pa.: Yes. The course in the elementary schools is not too comprehensive and does not interfere with the physical development of the child.

President George Stockton Burroughs, LL.D., of Crawfordsville, Ind.: No. Too many subjects are handled at once; the physical neglected.

Prof. William A. Cate, M.S., of Fountain City, Tenn.: Too many studies are carried at one time. I do not find so much fault with the comprehensiveness of the courses of study, however, as I do with the everlasting cramming in teaching.

President Alston Ellis, LL.D., of Fort Collins, Colo.: No. Course of study in higher grades too pretentious.

President Charles W. Eliot, LL.D., of Cambridge, Mass.: Courses are now in stage of transition, are being revised and enriched and will result in a comprehensive and better course.

Principal J. M. Green, of Trenton, N.J.: I do not. I think it contains too many subjects, as generally laid out.

Supt. J. M. Greenwood, A.M., of Kansas City, Mo.: In general the schools are overcrowded with studies.

President G. Stanley Hall, Ph.D., of Worcester, Mass.: It needs great reconstruction.

Prof. Mark W. Harrington, LL.D., of Seattle, Wash.: Probably best for pupils treated collectively. Better means could be applied to pupils treated individually.

Supt. L. H. Jones, of Cleveland, Ohio: I am a believer in liberal and comprehensive course of study,

A. A. Johnson, D.D., of Laramie City, Wyo.: Yes, if proper attention is given to hygiene and physical exercise.

Prof. Joseph W. Mauck, LL.D., of Vermilion, S.D.: I believe it would be better if less comprehensive and more intensive; more thorough grasp of a few subjects and less distraction and anxiety from a multiplicity of studies.

President George L. Osborne, LL.D., of Warrensburg, Mo.: The early part of the course deals too much with books and not enough with nature. It is also defective in its cultivation of the power of expression.

William H. Payne, LL.D., of Nashville, Tenn.: There is a tendency to injurious high pressure.

Col. F. W. Parker, of Chicago.: There are a great number of courses of study and few are adapted to the growth of the child.

Mrs. Frances E. Ramsey, of Westport, N.Y.: Emphatically, no! There is danger of superficiality as well as physical degeneration through feeding the brain at the expense of the body.

President Charles Super, LL.D., of Athens, Ohio: I do not, most emphatically.

Nathan C. Shaeffer, LL.D., of Harrisburg, Pa.: Everything depends upon the teachers employed.

Charles F. Wheelock, of Albany, N.Y.: No. We teach too much and permit the child to develop too little.

Rev. F. R. Wotring, D.D., of Berthoud, Colo.: No. Too much pouring in and not enough drawing out, though there has been a great improvement in recent years.

President Irwin Shepard, A.M., Ph.D., of Winona, Minn.: Yes, if wisely administered.

Thirty-five physicians answered this question (No.1) as follows: Yes, two; no, thirty-two; doubtful, one. The following are some of the opinions expressed:

Prof. Henry M. Brown, M.D., of Cincinnati: Not by any means; too hard on the nervous system.

Prof. N. P. Dandridge, A.M., M.D., of Cincinnati: No. I regard our public school system as defective in many ways.

Prof. N. S. Davis, M.D., LL.D., of Chicago: No; because it taxes the mind with too many studies and prevents thoroughness in any.

George M. Fould, M.D., of Philadelphia: Not by any means. Our modern system of education is the offspring of vanity and sin, for which our future world will justly curse us.

Prof. C. H. Hughes, M.D., of St. Louis: No. It is too exhaustive, overtaxes the perceptive powers and dwarfs the reflective. The tension on the physical centres is beyond their responsive powers and powers of body and endurance.

Prof. Frank Parsons Norbury, M.D., of Jacksonville, Ill.: I am opposed to the present method of conducting primary grades, very large classes and crowding together.

Prof. C. D. Palmer, M.D., of Cincinnati: No. One of the most serious effects of our modern school education, especially in the more advanced grades, is the multiplicity of studies crowded into any course, for the result is that a very imperfect and superficial information is obtained with nothing done in a thorough manner. A few things learned well are infinitely better than many learned superficially. Bad habits of mental training are induced by 'skimming over branches. Good habits of study and strength of mental discipline come only from thoroughness.

Prof. Theophilus Parvin, M.D., LL.D., of Philadelphia: I do not believe in a common education for boys and girls. They have or ought to have different work or calling in life, and the education should not be the same in many departments of study. Of course, it follows that coeducation can not be. On moral grounds, too, I am unfavorable to such education. Not only sex but the individual is disregarded in our system of public education.

Professor Thad. A. Reamy, M.D., LL.D., of Cincinnati: No. They are not taught to think and observe.

W. H. Short, M.D., of LaGrange, Ind.: There are too many branches in one grade; too much required in all grades, especially primary grades, e.g., arithmetic contains too many written exercises and examples which never occur in business, and fractional numbers of large and unusual terms which weary and bewilder, and when written analysis is required a child of only average ability, in almost every case, is compelled to accomplish this at home. If we had teachers of discretion who would cut out half of the text-book and instead give the classes simple practical business questions, both mental and written, much would be gained. Instead of some conception of the simplest laws of mathematics, children are missed with rules

and puzzled by hard questions until they neither know what they are trying to learn nor what powers they are trying to use, and so in other branches. Too much attention is given to details.

Henry Ling Taylor, M.D., of New York City: Not as I am acquainted with it.

Henry E. Tuley, A.B., M.D., of Louisville: The curriculum in the public schools in this city is very good.

DeForest Willard, M.D., of Philadelphia: Fewer branches would yield better results.

Prof. James T. Whittaker, M.D., LL.D., of Cincinnati: I think there is too much study from books and too little from nature.

Wm. Jay Youmans, M.D. (Editor *Popular Science Monthly*), New York City: No. It includes too much, forestalling the exercise of the thinking faculty. I am not an admirer of our school system as now organized. It is artificial to the last degree; while healthy development, both bodily and mental, is a natural process that is oftener defeated than promoted by the school.

Augustus P. Clarke, A.M., M.D., of Cambridge, Mass.: Not for the average child.

Prof. Leonard Freeman, B.S., M.D., of Denver: No. There is too much systematic study and too little systematic physical culture.

Prof. J. A. Larrabee, M.D., of Louisville: The course of study and requirements between eight and twelve years is too laborious, exacting and voluminous.

Answers to No. 2.—One hundred educators and physicians answered this question, and while there is considerable diversity of opinion among them the average length of a session without outdoor, open air recess, advocated, is from one to one and one-half hour. Many insist that the sessions should be shortened and more time given to physical culture.

Answers to No. 3.—Just one hundred answers were likewise received to this question, and while there is considerable divergence between them, the great majority advocate recitations, in the primary grades, of from ten to twenty minutes in length, and in the grammar grades from twenty to thirty minutes. It is urged, very justly too, by many of the respondents that the length of the recitation should be governed to a large extent by the subject, the method of instruction and the kind of teacher in charge of the class; that a good teacher would be able to maintain the interest of the pupils for a longer time and attain good results, while under the charge of a poor teacher, this interest would not be secured, they would soon tire and be more injured than benefited.

In this connection I desire to insist that whenever the children of a class in their efforts to follow the recitation, become tired, or it requires a strong effort of the will to keep their attention on the work in hand, it is time to stop. If this limit be exceeded the unstable brain will be injured and infinitely more harm than good be done The custom of requiring pupils of 11, 12 or 14 years of age to spend two hours or more continuously on a single recitation, review or examination of one subject as is sometimes done, is not only a gross violation of all mental laws and is *prima facie* evidence of ignorance or heartlessness on the part of the teacher, but it is at the same time barren of results; because it is a well established fact that impressions made on a tired brain are very evanescent in character and the effort required to concentrate the attention in such a condition has a very enervating effect on the mind.

Answers to No. 4.—The importance of relieving the strain on the brain and allowing it to equalize its unergies; that is permitting the stored tp nerve-force of the motor centres to discharge itself in muscular activieies while the higher brain centres are

resting and accumulating force to carry on their proper work, is being recognized by the best educators and physicians who advise frequent periods of relaxation and play.

In response to this question I quote the following:

Prof. Joseph Baldwin, LL.D., of Austin, Texas: Every hour.

Prof. Edward Brooks, LL.D., of Philadelphia: Each hour to once in each half daily session, according to grade.

Pres. Chas. W. Eliot, LL.D., of Cambridge, Mass.: As often as once an hour in all grades.

Supt. J. M. Greenwood, A.M., Kansas City: Two regular recesses of fifteen minutes.

Pres. Geo. L Osborne, LL.D., of Warrensburg, Mo.: Very young pupils at least once in thirty minutes; upper grades once per hour.

Pres. G. Stanley Hall, Ph.D., of Worcester, Mass.: If practicable, a little every hour.

Supt. L. H. Jones, of Cleveland, Ohio: Once in about one hour.

Prof. G. W. Patrick, Ph.D., Iowa City: Every hour.

Col. F. W. Parker, of Chicago: A short period, between every two recitations, of music and gymnastics; fifteen minutes outdoor play in the morning session.

Mrs. Frances E. Ramsey, of Westport N. Y.: After each recitation if practicable.

Prof. W. J. Stevens, M.A., of Carthage, Mo.: At least every forty-five minutes.

Prof. Wm. H. Smiley, A.B., of Denver: Best work would be done with opportunity for free movement every hour for five minutes.

Pres. Z. X. Snyder, Ph.D., of Greeley, Colo.: Every hour or so.

Nathan C. Schaeffer, LL.D., of Harrisburg, Pa.: Twice each day and noon intermission.

Prof. Irwin Shepard, A.M., Ph.D., of Winona, Minn.: Every hour.

Pres. Alfred Holbrook, of Lebanon, Ohio: Every hour a short recess of ten minutes.

Prof. N. S. Davis, M.D., LL.D., of Chicago: Once in the middle of each daily session.

Prof. J. T. Eskridge, M.D., of Denver: Every hour, or at most every two hours.

George M. Gould, M.D., of Philadelphia: Every hour.

I. B. Parkins, M.D., of Denver: At least once in afternoon and forenoon.

Prof. James T. Whittaker, M.D., LL.D., of Cincinnati: In the middle of each session.

Elizabeth K. Matthews, of Des Moines: At the close of every lesson or study period.

Answers to No. 5.—In the whole range of educational subjects there is no question more fraught with important consequences to the child than that of proper sanitary surroundings and ample provision for healthful outdoor exercises. As previously indicated the brain of the child is unstable and easily irritated; nerve-force rapidly accumulates in the motor-centres, and unless frequent opportunity be given for its discharge in muscular movements, the attempt to inhibit the movements by will power, will not only set up irritation of the brain, make the child peevish and unamiable, injure its health and interfere with its proper physical development, but will at the same time weaken the mind and defeat the very object for which long sessions are intended, viz., the accomplishment of the largest amount of work in a given time.

Oxygen is necessary to produce nerve-force (Spencer: "Principles of Biology," Vol. I, p. 50). to stimulate the respiration and the circulation of the blood, to develop the muscular system and to destroy the poisons constantly accumulating in the body. No room with from forty to sixty pupils can be occupied much more over an hour and the air be fit to breathe without dangerous draughts being created; consequently, pupils should have a fifteen minute, open air, outdoor recess in the middle of each long

session. During this recess the windows should be thrown open and the room thoroughly ventilated, the foul emanations eliminated and the air vitalized. This outdoor exercise is best for the child because it removes him from the monotony, formalism and routine of the schoolroom and enables him, yes, compels him to inhale full draughts of nature's life-giving element, pure air, to free his system from accumulated poisons and spontaneously to develop his powers and adjust himself to his environment. A properly conducted recess not only increases the sympathy and fraternal feeling between pupils, increases their physical strength and enlarges their intellectual and moral horizons, but draws them closer to Mother Nature, the source from which to derive inspiration. The recess too gives pupils an opportunity to attend to the calls of nature which under other conditions would be neglected, because, as pointed out by Durante (*Medical Age*, Oct. 10, 1896, p. 601) "the sigmoid flexure in children is of much greater length than in the adult; the nervous forces also are not yet as well regulated; so the child does not feel the need of an evacuation;" and, therefore, children are more apt to put off or disregard these calls of nature than they are to abuse their privileges if permitted to leave the room whenever necessary.

The recess, too, to a large extent, prevents withdrawals from the room during the school sessions and in this way much disturbance is avoided and good order promoted. The objection to the recess on the ground of immorality is, in my opinion, not well founded, because there is much greater danger of immortal practices being carried on when a few pupils are excused from the school at the same time during the sessions than when all are let out together at the general recess. I do not wish to be understood as being opposed to calisthenics and gymnastic exercises. On the contrary, I regard them as of very great value and deserving of a place in every school. What I do wish to insist on, however, is that they should be used in connection with, but not displace, the regular outdoor recess. In the advanced sheets of his new work, kindly sent to the writer, the distinguished author and educator, Prof. Joseph Baldwin, of Austin, Texas, writes as follows:

PLAY AND GYMNASTICS.

Play is eminently hygienic—"Recreation makes the best work possible. The kindergarten by utilizing play has made a large contribution to the-well being of the race. Work fatigues, exhausts the brain cells; play is recreation, for it is free, spontaneous activity. It breaks the spell of work and care. From infancy to age play is a boon to all workers. A self while taking recreation relaxes effort and roams fancy free. Thus the tired brain is given time to recuperate. The men of thought as well as the men of action, double their efficiency by taking regularly helpful recreation."

School work is education when pupils are fresh.—"Drudgery hurts and does not help. Work and then play is the divine plan. We may easily quadruple the value of our schools by studying to keep the pupils fresh. Strong men find recreation a necessity; how much more must immature pupils play as well as work and thus grow. He who helps to lead the school world to play wisely deserves to be crowned as a benefactor."

Recess at the close of each hour is the perfect economy.—"The hygienic and educative benefits of the hourly recess are incalculable. Young children soon become fatigued and so we make their periods of work very brief. The periods of work are lengthened as the pupils advance. The fatigue limit is a great practical study. Much may be done to keep pupils fresh by having easy work follow difficult work. Change rests, but frequent periods of absolute freedom are indis-

pensable. In schools of the future it is believed a recess of ten minutes will be given at the end of each hour."

Play in open air is most hygienic.—"Suitable play grounds with the best play-provoking facilities may safely be counted among the most hygienic agencies. All real play is essentially free and spontaneous, yet at no time is a wise supervision more important than during play. Hurtful plays may be discouraged and the most helpful plays fostered. The teacher feels the play impulses and so guides by suggestion without abridging freedom and spontaneity. Well ventilated, well lighted and commodious play rooms for use during inclement weather are remarkably helpful when the supervision is judicious. However great the cost, these play rooms pay largely in increased pupil vigor."

Systematic physical culture is indispensable.—"In our best schools physical culture goes side by side with mental and moral culture. Graded physical exercise gives pleasure, gracefulness and vigor. During the pauses pointed suggestions are given in practical hygiene. The gymnastic exercises when adapted to the pupils and well managed are educative as well as hygienic. They develop habits of exact obedience, train pupils to work in harmony with others and give artistic command of the body. *Gymnastics require considerable will effort, and hence do not take the place of the spontaneous plays of the recess.* (Italics ours.) The Germans emphasize systematic gymnastics but neglect play. The English exalt play but neglect systematic physical culture. The Americans and the French after the fashion of the Greeks, emphasize both play and gymnastics."

In contrasting romping and calisthenics, Prof. Frank H. Hamilton (see *Lancet-Clinic*, Oct. 31, 1896, p. 477) speaks as follows: Calisthenics may be very genteel and romping very ungenteel, but one is the shadow, the other the substance of healthy exercise. Girls need health as much, nay, more than boys. They can only obtain it as boys do, by running, tumbling; by all sorts of innocent vagrancy. At least once a day girls should have their halters taken off, the bars let down and be turned loose like young colts.

Out of 105 answers to this question all except four strongly advocate outdoor exercise or a combination of calisthenics and the old-fashioned recess. Following are some of the replies received:

Henry S. Baker, Ph.D., of St. Paul: In city schools calisthenics are infinitely better.

Prof. J. E. Brate, A.B., of Fostoria, Ohio: The former; they tend to relieve necessary formality of room and give nature's best tonic, pure air.

Prof. Warren Darst, of Ada, Ohio: Open air, better air, usually more hearty, freer minds, more restful, therefore more free from restraint. Cultivate a free spirit favorable to free institutions, more self-control and self-reliance among pupils.

Prof. C. C. Emigh, of Fort Collins, Colo.: Out-door, wild, free, innocent, natural play at what pleases the individual pupil best. Calisthenics require close attention.

Pres. Alston Ellis, LL.D., of Fort Collins, Colo.: I favor both, the open-air recesses preferred. Calisthenics at close of recitation.

Pres. Charles W. Eliot, LL.D., of Cambridge, Mass.: I would insist on both. If I could have but one I would prefer recesses with spontaneous play.

Prof. L. C. Greenlee, A.M., of Denver: Open-air recesses: 1. Pure air. 2. Not so fatiguing. 3. More natural to child, and relaxation more complete.

President Graves, A.M., Ph.D., of Laramie City, Wyo.: Open-air recesses, and all pupils, unless real invalids, should be obliged to go out every time. I do not believe there is anything like getting good oxygen into the lungs and getting the benefits of sunshine.

Supt. J. M. Greenwood, A.M., of Kansas City, Mo.: Open air; no indoor recess can take the place of the regular old-fashioned spontaneous recess.

J. H. Miller, of Lincoln, Neb.: Outdoor, if possible to have close supervision as in country schools; if otherwise these are dangerous to morals and not needed, as children have nothing to do but play before and after school.

Supt. J. H. Millspaugh, A.B., M.D., of Salt Lake City, Utah: Open-air recesses. Freedom and spontaneity are essential to perfect relaxation, yet rightly directed calisthenics will serve a purpose not met by recesses.

Pres. Geo. L. Osborne, LL.D., of Warrensburg, Mo.: Open air with spontaneous play properly directed. Greater freedom, better health conditions, better results. Calisthenics may be introduced for variety and systematic exercise with a view to regularity of movement and discipline.

Prof. John H. Philips, A.M., of Birmingham, Ala.: Both essential; first must be had; second should be; first, health; second, physical grace and strength.

Prof. W. B. Powell, A.M., of Washinton, D.C.: The latter, because the exercise can be directed to known wants. The child has free undirected exercise enough without this.

Miss Estelle Reel, State Superintendent of Public Instruction, Cheyenne, Wyo.: Open-air recesses, because more helpful.

Prof. Wm. H. Smiley, A.B., of Denver: Open-air recesses with spontaneous play. The child, instinctively, unless abnormal, will harmonize his bodily organism with his environments better than any one can do it for him.

Pres. D. E. Sanders, of Fort Scott, Kan.: Open air. Greater freedom, purer air, more interest.

Pres. Z. X. Snyder, Ph.D., of Greeley, Colo.: Open air by all means.

James Russell Parsons, jun., and Dr. Roland Keyser, of Albany, for Board of Regents, New York: Recess with play, because it affords complete and natural recreation.

Albert E. Winship, of Boston: I doubt the utility or necessity of a recess Indoor recreations, *singing*, calisthenics, etc., would seem all sufficient.

Pres. Irwin Shepard, A.M., Ph.D., of Winona, Minn.: Open-air recesses once each session and calisthenics between recitations.

S Henry Dessau, of New York City: Open air by all means. It restores oxygen to blood and gives vent to pent up energy.

Prof. Chas. Dennison, A.M., M.D., of Denver: Open air always in pleasant weather.

Joseph Eastman, M.D., LL.D., of Indianapolis: By all means open-air recesses with spontaneous play. Exercises by rule keep the mind on a strain. Chest expansion is better facilitated by outdoor exercise and chest expansion determines the capacity of any individual for physical or mental exertion.

Prof. F. Forcheimer, M.D., of Cincinnati: The former. We know that the air in schoolrooms is not the best, therefore as much fresh air as possible.

Prof. I. B. Perkins, M.D., of Denver: Always out-door. Indoor exercises are of little value; *fresh air is* what they need.

Prof. Henry Sewall, M.D., Ph.D., of Denver: A combination of both. Calisthenics should be practised in the open air when possible, and are then preferable if one mode of recess must be chosen.

P. A. Walling, M.D., of Park Rapids, Minn.: Open air and plenty of it. Reasons: This gives greater freedom and allows the minds to come in touch; also it brings out the slow ones, does away with the idea of a recitation as the set exercises are apt to be viewed.

Prof. James T. Whittaker, M.D., LL.D., of Cincinnati: Open air and spontaneous play because of better

ventilation and because there is no tonic like pleasure; a task is no pleasure.

Wm. Jay Youmans, M.D., of New York: Freedom in the open air because it is natural and superior to any artificial arrangements that can be devised.

Prof. Augustus P. Clarke, A.M., M.D., of Cambridge, Mass.: My experience leads me to doubt very much the pretended benefits of calisthenics and gymnastic exercises, which serve to make the pupil be more like a machine than a living being. Outdoor exercises; they favor spontaneous activities.

Harriet E. Garrison, M.D., of Dixon, Ill.: Open air. The machine system of our schools is crushing out spontaneity from children.

Hon. John J. Lentz, of Columbus, Ohio: Open air for reasons that must be obvious.

Pres. Alfred Holbrook, of Lebanon, Ohio: I would prefer both alternately enjoyed. Indoor exercises when weather is inclement.

Elizabeth K. Matthews, of Des Moines, Iowa: By all means the outdoor. The child gets the benefit desired, perfect freedom without restraint, hence normal development.

Prof. J. A. Larrabee, M.D., of Louisville, Ky.: Primary grades, five minutes' recreation in schoolroom after each recitation. For all grades, fifteen minutes' recess in the middle of the forenoon and afternoon sessions. Morning session to begin at 8 a.m. and close at 12 a.m.; afternoon session to begin at 2 and close at 4 p.m., thus enabling all children to go home for dinner. The recesses, except the recreation above mentioned, should always be outdoors, untrammeled and unrestrained. The windows of the rooms should be thrown open in pleasant weather. Calisthenics and all rhythmic exercise, whether by system or music, tend to continue thought and brain exertion, and is not therefore complete relaxation.

HYPERTROPHY OF THE LINGUAL TONSIL.*

By JAMES J. BOWEN, M.D.,
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While hypertrophy of the lingual tonsil cannot be classed as a very common condition, still its occurrence is sufficiently frequent not to render it extremely rare. When it does occur, the symptoms are such that a throat specialist is consulted in preference to the general practitioner. Consequently the latter has but little opportunity to observe very many cases. All monographs pertaining to the subject recognize the importance of the disease, and now no examination of the throat is considered complete without having brought into view the glosso-epiglottic fossæ in which the lingual tonsil lies.

Unlike the faucial tonsil, it is spread upon the surface instead of projecting from it. The central ligament of the tongue divides it into a right and left portion and forms a slight depression between them. It is composed of simple lymphatic tissue interspersed with trabeculæ. Hypertrophy of the organ is a disease of adult life, and in this particular also it differs from its faucial neighbor.

Bosworth, in the 1896 edition of his well-known treatise, states that "lymphatic changes belong essentially to child life," and the most plausible explanation of this condition comes from the same source, and is, "The morbid process in the tissue of the lingual tonsil commences in early life, while the symptoms do not manifest themselves until later years."

The ætiological factors are numerous—some definite, others obscure. It may have as its starting element a continued sympathetic hyperæmia dependent on some other nose or throat affection. It not infrequently

* Read before the Brooklyn Medical Society, September 17, 1897.

follows diphtheria and scarlet fever, when contracted from children. People who indulge in the use of a great amount of spices and articles of diet that have irritating qualities are extremely liable to suffer from this condition. Likewise, those addicted to the immoderate use of alcohol and tobacco are prone to have it. Heredity exerts no influence in the occurrence of simple uncomplicated cases of hypertrophy of the organ, while it may when the hypertrophy is caused by a constitutional disease. Certainly the neurotic element has an important significance, as on it depends, in a great measure, the degree of severity of the symptoms.

Pathologically, the cells undergo regenerative changes peculiar to all neoplasms. They increase in number and in size. The hypertrophy increases until the organ fills up the glosso-epiglottic fossæ and raises the epiglottis from its normal position.

Uncomplicated, it is purely a local disease and has no premonitory symptoms. The first sensation complained of is a feeling as if something is stuck in the throat, and, should the attack come on after the patient has partaken of a big meal at which he has generously swabbed his mouth with a lot of irritating substances, he will invariably maintain the impression that unswallowed portion of food is causing the trouble. Again, it sometimes starts as a feeling of fulness or stuffiness in the throat, which gradually increases until finally he is compelled to seek relief. Tickling of the throat and an irritating cough are prominent among the constant symptoms. Frequent and unsatisfactory efforts are made to clear the throat, and the continued hawking and scraping thus induced make the voice weak and the larynx tired. There is no hoarseness, however, and phonation is unimpaired. Pain is not always present and seldom severe when it is, being the pain of continued pressure that resembles fatigue more than agony. Should the tip of the epiglottis become imbedded in the mass, paroxysms of coughing and even laryngeal spasm may be produced. Should the hypertrophy take on an inflammatory attack, the larynx might be invaded, and the symptoms thus incited overshadow those of the primary ailment.

The size of the growth differs materially in different patients, not always the one with the largest growth being the one subjected to the most trouble.

Thrasher, in the *Journal of Laryngology*, reports a case where the organ was enlarged to the size of a walnut. Deglutition was exceedingly difficult and the voice was indistinct.

Casadesus mentions a case in the *Atlanta Medical and Surgical Journal* of October, 1894, where the enlargement was sufficient to cause nocturnal asthmatic attacks, which were relieved when the treatment was directed to the lingual tonsil.

A curious case is reported in the *Revue de laryngologie, d'otologie et de rhinologie*, Paris, February, 1895, by Polak. A young man, by trade a tanner, came to him complaining of severe pains in the hyoid region, difficult deglutition, and a chill, followed by a high fever. Inspection showed the lingual tonsil much swollen, very red, and covered with a muco-purulent secretion. The epiglottis was œdematous and inclined backward. The following day small white masses covered the follicles of the lingual tonsil, and to all appearances it was a typical follicular amygdalitis of that organ, a condition that not many of us have ever had the opportunity of seeing.

There is but one way to make the diagnosis definitely, and that is with the laryngeal mirror. A single glance will suffice to show a raw, angry-looking mass, irregularly nodulated, just anterior to the epiglottis, and covered in parts with a mucous secretion. A sulcus may be observed in the median line, representing the central ligament of the tongue, but

occasionally it is not well marked. The epiglottis is congested and inclined backward. The veins at the base of the tongue are frequently in a varicose condition, in which case symptoms are aggravated.

The disease may resemble in its symptoms any neoplasm or foreign body lodged in the same locality or globus hystericus; but the laryngeal mirror reveals at once the real trouble.

Lewin, in the *Laryngscope* of July, 1896, states that the disease not infrequently associates itself with goitre. Within the last year clinical advantages gave me an opportunity to treat six cases of goitre, and in none of these could I discover any enlargement of the lingual tonsil whatsoever.

The methods of treatment vary much, though they all have the same object in view—namely, the destruction of the growth. Chemical caustics, the knife, wire snare, and the galvano-cautery are all scccessful in different hands. Nitrate of silver, iodine in glycerin, chromic acid, and other applications with caustic or astringent properties certainly benefit the condition, if you have the persistence and your patient the endurance to faithfully follow the treatment until a cure is effected. The wire snare is an efficacious remedy when the growth is of such a shape that it can be caught in the loop, and this procedure, on account of its simplicity and thoroughness, has been adopted by many as the correct method of treatment. The knife should never be used as a remedy for this condition—the base of the tongue, where there is a great number of blood-vessels, is a locality in which hæmorrhage is very easily induced, but extremely difficult to check.

The use of the galvano cautery is the ideal method. Results that are almost instantaneous, no hæmorrhage, and a permanent and absolute destruction of the growth are qualities that should make every surgeon its advocate. With the tongue drawn well out by the patient himself, the laryngeal mirror is introduced until it brings into view the field of operation, which has been anæsthetized with a twenty-per-cent. solution of cocaine. The electrode, curved as nearly as possible to the shape of the tongue, is rapidly slid backward until it rests upon a prominent point of the mass. The circuit is then connected and a little pressure made upon the part. For a brief moment the hypertrophied tissue is burned, then the electrode is withdrawn. This done on two or three of the largest nodules will be sufficient. Cicatrices form and extensive contraction results within the following week. For a few days after the cauterization the part may be painful. A liquid diet and cool drinks generously administered is the only after-treatment requisite.—*N. Y. Med. Jour.*

THE FREQUENCY OF DIABETES MELLITUS, AND ITS RELATION TO DISEASES OF THE PANCREAS.

There are a number of features in connection with the general frequency of diabetes mellitus, as well as with its occurrence in certain races and in certain classes, that merit particular attention. Thus, for instance, it appears that the general frequency of this disease is steadily increasing, both in the United States and in the European countries, although the disease is as yet, at any rate, much less prevalent here than across the Atlantic.

The statistics of Saundby* show that the mortality in the United States in 1870 was 2.1 to the one hundred thousand population; whereas in 1890 the death rate was 3.8 per hundred thousand. Now, these statistics show that diabetes in this country is gradually on the increase.

Hare,† in recently published statis-

* Lectures on Renal and Urinary Diseases, 1896.

† *Medical News*, 1897.

tics, also demonstrates that the frequency is on the increase. He points out that in thirty years, from 1850 to 1880, the mortality from diabetes in this country increased 150 per cent. in every hundred thousand deaths.

In Europe the mortality ranges between five and nine to the hundred thousand. In the Island of Malta, where the mortality from diabetes is extraordinarily high, the census of 1891 showed a death rate of 13.1 to the hundred thousand. In Paris the death rate is gradually increasing during the last three or four decades, and in 1891 it reached fourteen to the hundred thousand.

In the Johns Hopkins Hospital of Baltimore there have been treated, according to Thomas B. Futcher,* in all sixty-nine cases of diabetes mellitus, in the ordinary acceptance of the term in the medical wards and the medical section of the dispensary during the last eight years. During these eight years 45,636 medical cases have passed through the wards and the out-patient department, so that the diabetic cases comprise only fifteen per cent. of all the medical cases.

It is well known that some races are especially liable to diabetes. Hebrews are especially susceptible, one-fourth of Frerichs's cases being of the Semitic race. It is rare in negroes and Africans, and the Mongolian races are rarely affected in their own countries. Chinese are comparatively exempt. In the colored races the disease is apparently rare; Tyson‡ has seen several cases, and of the sixty-nine cases of diabetes treated in the Johns Hopkins Hospital five were negroes.

The prevalent belief that persons living in the country are more exempt from diabetes than inhabitants of cities cannot be traced back to any definite statistics; on the other hand, Saundby shows that for many of the counties of England this discrepancy does not exist.

The above statements, taken for the most part from Futcher's article, indicate that the distribution of diabetes is very unequal. The same is also observed with reference to its occurrence among the various classes of people; thus wealth and culture are said to increase the liability to diabetes ten-fold. Statistics for London and Berlin show that the number of cases in the upper ten thousand exceeds the number of cases in the lower hundred thousand inhabitants. The same occurs in India, where the disease is much more frequent in the educated upper class than in the ignorant lower class.

In recent years great interest has been created in the part played by the pancreas in the causation of diabetes. For more than a century, however, it has been recognized that lesions of the pancreas may cause diabetes. In 1788 Cawley* reported a case in which the pancreas was atrophic and contained calculi, but it was not until 1877 that Lancereaux* described a special form of diabetes under the name of *diabète pancréatique*, associated with lesions of the pancreas. He stated that this variety was characterized by suddenness of onset, unusual malignancy and rapidly progressing emaciation, and a special tendency toward tuberculosis of the lungs as a complication. Baumel,* in 1882, advanced the view that all the cases of diabetes were due to the absence of a diastatic pancreatic ferment in the intestine, and he was the first to claim that pancreatic disease was the regular cause of diabetes. These observations seemed to leave no lasting impression until the discovery by Minkowski and von Mering, that permanent diabetes mellitus could be produced experimentally in animals by complete removal of the pancreas, and it is now generally recognized that diseases of the pancreas are re-

*New York *Medical Journal*, Dec. 4, 1897.

‡ *Practice of Medicine*, 1896.

* Quoted by Futcher, loc. cit.

sponsible for a certain number of cases of diabetes. There are some who claim that all cases of diabetes are due to pancreatic disease, maintaining that where there are no structural lesions, gross or minute, then there exists a functional disturbance of the gland; but there are others who believe there is no association between diabetes and changes in the pancreas. Hansemann* analyzed the cases of diabetes which came to autopsy in the Berlin Pathological Institute during ten years, and the results follow:

1. Diabetes without changes in the pancreas, eight cases.

2. Diabetes without any information regarding the pancreas, six cases.

3. Diabetes with pancreatic disease, forty cases.

4. Pancreatic disease without diabetes, nineteen cases.

Of the forty cases in which the pancreas was affected, thirty-six presented atrophy, three fibrous induration of the organ, and one was a case of cyst of the pancreas.

Williamson† has examined the pancreas in twenty-three consecutive cases of diabetes, and in only twelve was the pancreas normal. He also analyzed one hundred cases of pancreatic lesions in diabetes, which he collected from the literature and found that in forty-eight it concerned essentially atrophic changes; in seventeen it concerned fatty degeneration; in seven, cystic transformation; in fourteen, chronic fibrous changes; in two, hemorrhagic pancreatitis; in three, suppurative pancreatitis; in eight, carcinoma of the pancreas, and in one, calculi were present.

In connection with this it is of interest to note that Lepine‡ maintains that the pancreas produces an active glycolytic ferment, which enters the blood and chyle and destroys a large part of the sugar before it reaches the liver, and that his ferment is absent, or greatly reduced in animals whose pancreas has been extirpated. More abundant evidence, however, seems to be required, according to Futcher, before this view can be fully accepted. —*Jour. Amer. Med. Assn.*

* *Zeitschrift f. kl. Medicin*, 1894.

† *Med. Chronicle*, May, 1897.

‡ Quoted by Futcher, loc. cit.

THE TREATMENT OF ACROMEGALY BY THE EXTRACTS OF THE THYREOID AND PITUITARY GLANDS SIMULTANEOUSLY.

The thyreoid and pituitary glands, remarks Mr. H. D. Rolleston, in the *Lancet* for December 4th, have been thought to be compensatory to each other; recently, however, their extracts have been shown to be physiologically antagonistic. Superficially there are some resemblances between acromegaly and myxœdema, and it might be thought that acromegaly was the result of a disturbance of the chemico-physiological equilibrium maintained in health by the normal activity of these two glands. In this connection Mr. Rolleston refers to a paper on "Acromegaly with Goitre," etc., by Dr. G. R. Murray, who, while inclining to the view that acromegaly is in some way dependent on alteration in the function of the pituitary gland, says that the coexistence of acromegaly and exophthalmic goitre suggests that there may be some common cause which brings about similar changes in both the thyreoid and the pituitary glands, each in turn producing its attendant symptoms. Such a consideration, says the author, suggests that acromegaly might be benefited by giving the pituitary and thyreoid extracts at the same time.

He states that he has been able to test this theoretical consideration in two cases of acromegaly in which the pressing symptom complained of—headache—was relieved by taking twice a day a five-grain tabloid of thyreoid and pituitary extract. The

skeletal changes, however, remained unaffected, and the amenorrhœa, from which both patients suffered, remained. The details of the first case are as follows: The patient, who was thirty-five years old, had been suffering since 1891, but it was not until 1894 that definite symptoms of acromegaly began to appear. Her hands and feet began to enlarge, and her sight began to fail. She had optic atrophy and transient glycosuria. After being treated in the hospital in February, 1896, she went home, and was under the care of Dr. Hollis, of Wellingborough. Toward the end of that year the headache became so intense that she was anxious to undergo any operation that would relieve it. She came under the author's care, and, after consultation, it was decided that no attempt to remove the pituitary body, which from the primary atrophy of the optic nerves was probably much enlarged, was justifiable, but that, if the pain continued, the skull might be trephined and the subdural space opened, with the object of relieving intracranial pressure. She was given the combined thyreoid and pituitary extracts, and she gradually lost the headache and was able to get up. The improvement keeping up, she was allowed to go back to her home in March, 1897, and directed to continue the treatment. This advice, however, she did not follow, and in the month of June, epileptoid fits appeared accompanied by loss of consciousness. She gradually grew weaker, and died on August 16th. Fourteen hours after her death the author made an examination, and found that the pituitary body was greatly enlarged by a soft white growth, which had invaded the right optic thalamus and, microscopically, had the structure of a medium-sized round-celled sarcoma. The thymus was persistent, and, microscopically, showed marked enlargement of the concentric corpuscles of Hassall. The thyreoid body was healthy both to the naked eye and microscopically.

In the second case, which was a less advanced one, no changes in the optic nerves being present, the patient had had severe headache for six weeks before she came under the author's observation, in October, 1896. The combined extracts of the thyreoid and the pituitary glands were administered, and she soon lost the headache. She subsequently attended as an out-patient of the hospital until July, 1897, the same treatment being continued. As there was no return of the headache when she was an out-patient, says the author, its disappearance can hardly be explained as being merely due to rest and improved physical conditions.

The author thinks that the results in these two cases are too scanty to establish any reliable conclusion as to the value of the treatment, but he thinks they justify a more extended trial. One point, he remarks, that specially requires investigation is whether any good effect that may result from the administration of the combined extracts is solely due to the contained thyreoid extract or whether the two combined extracts have more effect than the administration of thyreoid alone. Pituitary extract has been generally unsuccessful in the treatment of acromegaly while the treatment with thyreoid extract has given variable results. Mr. Rolleston refers to Benson, Bruns and Bramwell who record improvement, to Bramwell and Ransom who report no effect, and to Murray who mentions temporary improvement which disappeared while the treatment was continued. Under these circumstances, he says, it has been thought that any beneficial effects it may have are of a general nature and not due to any specific action on the morbid processes at work in acromegaly. But since thyreoid extract has been found to relieve the headache of acromegaly, it is possible, he thinks, that the apparent success of the administration of the combined extracts was in reality due to the thyreoid extract and not to the combination. In this

connection it would be interesting to ascertain what is the effect of thyreoid extract on headache other than that of acromegaly; from the fact that it lower external pressure it might be expected to relieve some forms of headache. In the "Report of the Clinical Society," of London, on "Myxœdema," occipital headache was present in a fifth of the cases. On the other hand, excessive doses of the extract give rise among other symptoms to headache.

At the present time, continues the author, the relation of changes in the pituitary gland to acromegaly cannot be considered as entirely understood or definitely settled; it is true that the change in the gland is generally regarded as primary, but it may be that they are both the manifestations of some primary change elsewhere. or, as the occasional association of acromegaly with some or in very rare cases with all the symptoms of exophthalmic goitre on the one hand, and the superficial resemblance to myxœdema, on the other, suggests, the symptoms of the disease may be due to some disturbance of a theoretical equilibrium which in health is maintained between the internal secretions of the thyreoid and pituitary glands. In this state of the question the results of more extended therapeutical trial of thyreoid extract, both alone and in combination with pituitary extract, might be of considerable value.—*N. Y. Med. Jour.*

THE VALUE OF OLIVE OIL IN THE TREATMENT OF TYPHOID FEVER.

In the *Lancet* for November 27th, Mr. Owen F. Paget gives his experience with the employment of olive oil in a hundred cases of typhoid fever, which came under his observation during his residence in Fremantle, Western Australia. Many of the patients, he says, lived in tents and were unable to obtain fresh milk, yet in spite of these disadvantages the percentage of death was *nil*. This, he thinks, is very remarkable, seeing that among those who were removed to the hospital, where they were properly attended to and received suitable nourishment, the percentage was as high as twenty in 1896, and eleven in 1897.

Mr. Owen attributes his success very largely to the use of salad oil. Nearly all typhoid-fever patients, he says, are suffering from constipation or diarrhœa when they first come under observation; during constipation the typhoid bacillus acquires its power of developing, and this constipation is followed by diarrhœa and a a gradual solution of the fæcal accumulations caused by the pouring out of mucus and other fluids from the intestine. These fæcal solutions, being intensely irritating, help to inflame the already infected Peyer's patches and, in addition, give rise to violent peristalsis, preventing rest, which is so important to inflamed regions. Added to this there is the enormous drain of fluid from the intestinal mucous surface. Now, the fluid poured out is, of course, to a certain extent, reabsorbed, but not before it is saturated with ptomaines; this necessarily causes violent constitutional disturbances in the patient, such as high temperatures, cardiac paralysis, and intestinal paralysis with tympanites, exhaustion, delirium and insomnia (with its accompanying uses of depressing drugs), sapræmia, septicæmia, pyæmia, secondary infection of glands, abscesses in bones, and death. The problem, says the author, resolves itself into treating an inflamed and possibly ulcerated surface, and the same laws hold good here as in any other part of the body —namely, rest and protection from irritating substances and collection of discharges. As a proviso it is necessary to remember that the patient must not starve.

Mr. Owen thinks, therefore, that

salad oil only is needed to keep the ulcers at rest and to remove irritating substances. He gives it as an injection by the bowel, a large breakfast cupful (from a quarter of a pint to half a pint) being used for the first four or five days at intervals of from twelve to twenty-four hours. Its benefits, he says, are distinct from the first; the temperature almost always falls 1° F., and the patient, instead of being irritable and restless, becomes calm and composed. After the fifth day it may be given every second day, or left off entirely if the patient is having natural motions at least every twenty-four hours, and if the temperature is steadily falling. There is, however, a certain proportion of cases in which the patients do not respond to injections; nothing comes away and the bowel is apparently empty, but it is in these very cases that the accumulation is worst. Suddenly the temperature runs up and the patient is seriously ill. Now it is the very virulence of the accumulation which, paralyzing the gut, prevents its coming away. The remedy, says the author, is simple. Give salad oil by the mouth, a large breakfast cupful at a time; there is no need to be frightened, no harm will result, but the bowels will almost certainly respond, and injections are now able to manage the rest. If the first dose is without effect, repeat after twelve hours.

Salad oil in typhoid fever, is, he thinks, a perfect boon to the general practitioner. He can leave his patient, fearing neither high temperature, delirium, insomnia, heart failure, nor tympanites. He states that he has never used the wet pack or other appliances for lowering the temperature (except sponging with vinegar and lukewarm water) and that he has never used any of the vaunted intestinal antiseptics, never having had a high temperature or other complications, which did not respond to salad oil, except in two cases. The first was that of a boy with hæmorrhage, whose father and mother were always drunk and neglected him disgracefully. The second was a case of mitral stenosis which came under his care in a late stage of the disease. The patients in both cases ultimately recovered.

The author states that there seems to be no danger in conscientiously palpating and percussing the abdomen during the first week of the disease; he thinks it is a valuable aid in estimating the disappearance of accumulations, although at present, he says, the temperature and general well-being of the patient are his usual guides.

Mr. Owen adds that salad oil, a pint by the mouth and half a pint per rectum, has given him the most gratifying results in two cases of typhilitis. —*N. Y. Med. Jour.*

IS THE APOTHECARY SHOP DOOMED?

Industrial evolution, as well as professional evolution, is constantly changing the relation of individuals to each other. The apothecary shop was originally the medicine-room of the physician. Galen himself is supposed to have used the word, deriving it from the Greek *apotheka*, meaning a store or magazine. It was not until the time of Henry VIII. that apothecaries were recognized as distinct from the medical doctors. They were incorporated in 1606 together with the grocers, but later on had a separate organization, and since then have become more and more specialized. To-day another change seems to be taking place among them. The manufacturing pharmacist with his large factories and hundreds of workmen, is assuming here and there the duties of the dispensing apothecary.

On the one side the physician has his medicines ready made; his pills, tablets, coal-tar combinations, organic compounds, elixirs, etc., are used as

they come from the manufacturer. The apothecary dispenses them as the grocer sells baking powder and soap. No skill is necessary to fill a prescription for "Aunt Martha's Soothing Syrup," or "Roberts' Elixir of New Life." On the other hand, the science of therapeutics is becoming simplified; no twenty-ingredient mixture as in old times; not so much dosing; more expectant treatment; and the pill manufacturer is putting up cough syrups and tonics and fever mixtures to please the taste of the most fastidious.

Where is the apothecary to go? Is he to become a vendor of toilet articles and fancy crockery? Is he to be the commission agent for the pill manufacturer? Or is he to set up a medical advice counter and revert to the old surgeon-apothecary of the Middle Ages?

In the cities many druggists study medicine and advertise *advice* and drugs for a nominal fee, and on the other hand, many doctors buy a case of tablets and mixtures and dispense their own drugs. The manufacturing pharmacist, in all probability, is going to stay and to enlarge his domains. His agents will become more obtrusive, physician's samples will be left in greater numbers, and he will have his retail agents on every corner. Perhaps this is not bad; perhaps it will insure greater uniformity in quality. The large manufacturer can afford to test all the drugs he purchases; he can command the best skill in manufacturing; he can obtain greater accuracy; his pharmacists are not bothered by retail customers, or talkative friends; they need not be overworked and underpaid.

The corner drug store with its boy and one clerk, and its thousand and one things requiring attention, its soda water counter, window cleaning, unpacking of goods, etc., is not in a position to fill prescriptions accurately. The large factory with its labor divisions is surely in a better position.

In the evolution of the trade, the manufacturing pharmacist must supplant the small drug store just as the department store supplants the small dry goods shop.

Even at the present very few pharmacists do more than act as agents for the wholesale druggists. They buy their tinctures and extracts, pills and plasters already made. Their infusions are water-diluted extracts; their waters are mixtures of essences. They have not the time nor the means to make their own preparations, and the chances are that the crude drugs they would make them from would be beneath the standard.

And then they must load their shelves with a dozen makes of pills, a hundred and more new remedies that the physician tries once and abandons. Surely the lot of the apothecary is not a happy one. Can the doctor do anything for him? We hardly think so. Economic reasons are at the bottom of it, and the druggist must go the way of the tailor, the shoemaker and the cigar-maker. His education must fit him for the laboratory of manufacturing apothecary and not for the corner drug store.—*Jour. Amer. Med. Asso.*

TRANSIENT HEART MURMURS.

The *Journal of the Amer. Med. Assn.*, discussing this subject editorially, says:

The *Lancet* in its issue of Nov. 13, 1897, summarizes an annual address to the Northwest London Clinical Society delivered in October, by Sir William Broadbent. The main points dwelt upon are irritable heart and transient murmurs heard over various cardiac and pulmonary areas, with the differentiation of these functional and temporary conditions from organic and permanent disease. Candidates for the public service have sometimes, it is stated, been refused their commissions on wholly inadequate grounds. According to Sir William the candidate presents himself for

examination in a state of extreme nervous excitement, his pulse rapid, perhaps irregular, and his cardiac impulse violent and even diffused beyond the right sternal border. Murmurs which sometimes cause rejection simulate closely a soft systolic mitral, but are heard only during inspiration or when the chest is full, and are due to compression of the overlapping lung by the heart during systole. Pulmonary murmurs may depend on bulging of the conus arteriosus against the chest wall; they disappear when the lung is interposed on deep inspiration. Sometimes bruits are heard, not only in the course of the ordinary mitral regurgitation, but over the greater part of the lung. In such cases there is usually pleural adhesion. The criterion of pseudo-mitral disease is absence of displacement of the apex beat and of accentuation of the pulmonic second sound or undue right ventricular impulse, together with absence of symptoms.

Medical examining boards in the United States have already met with experiences of this kind, which should lead to caution lest injustice be done. A board convened at West Point, N.Y., August 20, 1894, reported ten cadets as having become affected with heart disease while at the Military Academy and as being physically disqualified for service, but recommended continuance at the Academy for a probationary period of six months. They were kept under special medical observation in accordance with the directions of Surgeon General Sternberg, and the report of the medical officer who carried out these instructions, rendered June 23, 1897, when the last of the cadets concerned had become commissioned officers, showed that in nine the heart was free from structural lesion and that there was no symptom of mechanical derangement of the circulation nor of heart strain. In the one case in which the bruit persisted a medical board considered the condition not incompatible with the exigencies of the military service. The conclusion was reached that in all except the last mentioned case the murmur heard in each individual at the time of the examination in 1894 was due to "a temporary irritability of the heart caused by the nervous excitement attending the ordeal of examination." One of these young men, while the subject of medical observation became notable in the athletic events of the Academy, and in March, 1897, was awarded the prize for all-round athletics, having won the greatest number of prizes in the individual contests.

These cases convey their own moral.

Twenty-five years ago the Editor of the *Journal* examined a young carpenter for a Life Insurance Company and was about to reject him, as there was a distinct heart murmur, but he demanded another examination, and two days later when perfectly quiet the murmur had subsided so much as to be scarcely audible. At this writing the applicant is entirely well and to all appearance bids fair to become a septuagenarian.

THE AGGLUTINANT REACTION.

The *Wiener klenische Wochenschrift* for August 19th contains an account of J. Lévy's two series of experiments which he undertook for the purpose of ascertaining if the agglutinant reaction was a reaction of infection or of immunity (*Presse médicale*, November 24th).

In the first series sixteen healthy or diseased subjects, who had not had typhoid fever, were immunized against this affection according to the procedure employed by Haffkine for anti-cholera inoculations. Their serum, the agglutinant power of which had been examined before the inoculation, was afterward studied from the same point of view, at regular intervals, after the injections.

This first series of investigations showed that: (1) The serum of normal subjects sometimes exercised an agglutinant action on the typhoid

bacilli when it was somewhat diluted. (2) After the inoculation with sterilized typhoid cultures, the serum, from the sixth day, acquired agglutinant properties in cases in which it had not formerly possessed any, or else these properties increased considerably in cases in which they had existed before. (3) The injections provoked a local and general reaction the duration of which did not exceed from twenty-four to forty-eight hours.

In a second series of experiments M. Lévy sought to ascertain if any connection existed between the agglutinant properties and the bactericidal properties of typhoid serum. For this purpose he made an estimate of the quantity of the normal serum (of man or of the guinea-pig) or of agglutinant serum (of immunized goats or guinea-pigs) which was necessary to neutralize the effects of a mortal dose of typhoid cultures in intra-peritoneal injections in guinea-pigs.

These investigations showed that the normal serum of the guinea-pig, which possessed an agglutinant power of one in one, neutralized the effects of the intraperitoneal injection of a fatal dose of virulent typhoid cultures when given in doses of eight cubic centimetres. For the non-agglutinant serum of the normal man eight cubic centimetres were insufficient. The serum of the immunized guinea-pig, which possessed an agglutinant power of five hundred, had no action, except when it was injected in a quantity exceeding five cubic centimetres. In regard to the serum of the other guinea-pigs, the agglutinant power of which was respectively one hundred and three hundred, the quantity necessary was more than a cubic centimetre for the first, and more than three cubic centimetres for the second. As for the goat's serum, the agglutinant power of which was one thousand, the necessary quantity was five cubic centimetres.

Concerning three individuals, who had had typhoid fever three or four months before, whose serum had, respectively, an agglutinant power of one hundred, three hundred, and one hundred, the quantities necessary were five, six, and three cubic centimetres. Finally, for a subject with a mild form of typhoid fever, in whom the serum had an agglutinant power ranging from one hundred to three hundred, the amount of twenty-five cubic centimetres was not sufficient to preserve the guinea-pig from the effects of an intraperitoneal injection of a fatal dose of typhoid cultures.

Concerning the nature of the agglutinant reaction, the author thinks that it is rather an immunizing reaction. He observed, notably in his first series of experiments, that the agglutinant reaction was shown in the serum of guinea-pigs that were inoculated only from the beginning of the sixth day after the injections; that is to say, four days after all the reactional symptoms of the infection had disappeared. In the second place, clinically, in typhoid-fever patients the agglutinant reaction appears sometimes late, on the twenty-second day, according to Widal; during the eighth week, according to Breuer; toward the end of the second week, according to Stern; on the sixteenth and seventeenth days, according to Kolle; and on the thirteenth day, according to Pick.

The author thinks, however, that if the agglutinant reaction is one of immunity, it cannot, nevertheless, be identified with the other manifestations of this immunity; for instance, with the formation of antitoxic substances to which the specific serum owes its bactericidal properties. These two phenomena, he says, cannot be coincident, and present themselves separately, without connection with each other; that is to say, man or animals may be strongly immunized and possess a very agglutinant but not bactericidal serum, or, inversely, a very bactericidal, but not immunizing, serum.—*N. Y. Med. Jour.*

A DANGEROUS INTRAMURAL CEMETERY.—The necropolis of Liverpool is situated in about the centre of that city. Although it occupies a space not much larger than a good-sized city block, it receives hundreds of interments yearly. In the five years ending January, 1896, 2,255 bodies were added. The largest number of interments appear to take place at the necropolis. No notice is required to be sent to the sanitary department when these interments take place, but occasional visits are made to this burial ground. Here there is an arrangement of tiers, separated by a course of flagging, and with brickwork between each coffin. The walls between the vaults are four and one-half inches in thickness, and a stone flag covers over the top course of coffins, about two feet six inches below the surface of the ground. The vaults contain about thirty-six coffins, and it is probable that, within an area ten yards square, there will be over three hundred bodies of adults and children. Interments in this greatly overcrowded graveyard not only take place in family graves and vaults, but new graves are also being opened. The approximate number of interments (not including still-borns) which have taken place in the cemetery since it was opened is 82,341. There is said to be accommodation for 2,160 more bodies, besides graves already sold, but which have not yet been fully utilized. The inhabitants of the houses abutting on the necropolis have, as a whole, occupied them but a short time. Many of them complain of offensive smells, which they believe come from the cemetery. In many instances the occupiers also state that their houses are infested with mice of a peculiar light fawn color, which they believe come from the cemetery. Some light may be thrown upon the probable condition of the subsoil in this city graveyard, from the following extract from a report by an inspector of the city engineer's department. It will be noticed from this report that the offensive condition described was in that part to which material from the burial grounds would be most likely to gravitate. It was not found in the sewer nearer the surface. "The sewer in West Derby Road is what is known as a rock sewer, and is cut in the sandstone. It is about fourteen or fifteen feet below the surface, and is between two and three feet in width. This sewer was undergoing reconstruction in 1889. The bottom was very much worn and "liners" were to be put in. The top is arched over with brick, and the sides were to be cased. When opposite to the necropolis in West Derby Road, a large quantity of black jelly was found adhering to the side of the sewer nearest the necropolis, the other side was the natural color of the rock. When this material was touched or pricked, it emitted a frightful stench. The opinion of the other men and myself was that it came from the burial ground. One of the men at work was taken seriously ill, and died while the work was in progress. The other men objected to work there. The jelly was scraped off, and several coats of cement put on to try to keep the stuff from oozing through. There is also another sewer in West Derby Road which runs above the preceding one at a slight angle. This sewer is only about nine feet below the surface, and is supposed to drain the burial ground. The vaults in the burial ground are about fourteen or fifteen feet deep. This sewer is of similar construction to the other, and was reconstructed at the same time. None of the jelly material was found in this sewer. None of the material was found in the Everton Road sewer, which is about nine feet below the surface. The jelly was only found in that particular length of the sewer outside the necropolis." (From report of Dr. E. W. Hope, Health Officer of Liverpool for the year 1896.)—*Journal of the Amer. Med. Asso.*

THE SERUM TREATMENT OF DIPHTHERIA.—Belin (*Munch. med. Woch.* October 19th, 1897) reports upon the cases recently treated in Koht's clinic in Strassburg. A vigorous local treatment was employed previous to the introduction of the serum treatment, but not since. Five hundred and twenty-nine cases of diphtheria were treated in 1896, and of these only 56, or 10.6 per cent., died. There were among them 286 severe or moderately severe cases, and the mortality among these was 19.6 per cent. (1) Of the 243 slight cases none died. (2) Of 98 severe or moderately severe cases 6 died; 3,000 units of Behring's serum were generally injected in these cases. (3) Of 10 severe septic cases 6 died, but 4 of these were moribund on admission. (4) In 181 cases the larynx was involved, but in 29 of these the disease was relatively mild; 42 recovered without thracheotomy, whereas 132 were tracheotomized. In 99 cases tracheotomy had to be done immediately after admission. Of those not operated upon none died, and among the tracheotomized 44, or 33 per cent., died. The results obtained after tracheotomy showed a very considerable improvement upon past experience; the greatest number of these cases belonged to the severe or severest form of diphtheria. Owing to overcrowding broncho-pneumonia claimed some victims among the tracheotomized. A distinct diminution in the mortality was observed among children admitted on the fourth and fifth days of the disease and later. In two fatal cases clotting was found in the heart; the author has observed four such cases in all since the introduction of the serum treatment, but never before. The effect of the serum treatment was undoubtedly favorable. The beneficial action on the local lesion was obvious. In diphtheritic croup the signs of stenosis disappeared much more rapidly than formerly. The general condition of the patient quickly improved, but the good effect on the pulse and temperature was not so obvious. The serum treatment only failed in cases of the severest sepsis, but the author is convinced that even here recovery is not impossible if the treatment be commenced early. Perhaps the doses given were not always large enough. No unfavorable result could be distinctly attributed to the serum treatment except the rash. Some careful observations were made upon the appearance of albumen in the urine, and upon an increase in its amount; the idea of the serum exercising some effect on the kidney could not be definitely excluded. A skin eruption was seen in 2.8 per cent. of the cases. In six cases it resembled scarlet fever, in five uticaria, in one measles, and in three a polymorphic erythema. The presence of a scarlet fever epidemic made the diagnosis between a scarlet fever and a serum rash at times difficult. Post-diphtheritic paralysis would appear to be more frequent since the serum treatment was introduced; here it was present in 20 out of 526 cases. Relapse is also more frequent; it was noted on four occasions. The above evidence, distinctly in favor of the serum treatment, is the more important as the first experiences of the treatment in this clinic did not speak much in its support.—*Brit. Med. Jour.*

BACTERIOLOGICAL RESEARCHES CONCERNING A FATAL CASE OF FEBRILE RHEUMATISM, COMPLICATED WITH ENDOCARDITIS, PERICARDITIS, AND CHOREA.—At a recent meeting of the Paris Academy of Medicine, a report of which is published in the *Independance medicale* for November 24th, M. Triboulet and M. Coyon made the following communication: At the autopsy of a child they had procured some blood from the inferior vena cava, a segment of the mitral valve, and one of the spinal cord, with which they had obtained, in sterilized milk, anaerobic cultures of a special microbe, accompanied by

sparse chains of streptococci. After sowing again, the cultures were obtained in a state of purity. The microbe in question caused the fermentation of the milk which it coagulated and separated into a serous lower layer and a frothy upper layer bearing large, firm bubbles of an alveolar appearance; the culture gave out a butyro-cheesy odor which was not at all fœtid. The medium was strongly acid. On sheets the presence of a large bacillus was recognized; it was of a variable length, sometimes short, sometimes a little longer, with rounded extremities. This microbe colored well with the different reagents, and tolerated Gram's stain. Inoculated in doses of from two to three cubic centimetres in the muscular mass of the thigh of a guinea-pig, the cultures caused death in from twenty-four to thirty hours, and gave rise to the formation of a large sero-sanguineous collection in the fold of the groin. The microbe was met with again in a state of purity in this serous liquid. The morphological characteristics and, better still, the reaction of the cultures in the anaerobic sterilized milk, and also the results of the intramuscular inoculation in the guinea-pig, form a mass of details which absolutely corresponded to that which Thiroloix had described several times in regard to bacteriological investigations made with the blood of living rheumatic subjects. It was shown from that, by the authors, that the microbe isolated by them thirty-six hours after death should not be considered as a common microbe of putrefaction. The observation presented, aside from the ascertaining of a possible specific, pathogenic microbe, was open to considerations of another order. The child had presented, during its life, evident symptoms of chorea. The cultures of a segment of the spinal cord having given pure cultures of the microbe in question, it was allowable, the authors thought, to suppose that the presence of even this microbe in the nervous centres was probably the exciting agent of the abnormal movements.—*N. Y. Med. Jour.*

DIABETIC ALBUMINURIA AND ITS TREATMENT.—Goudart (*Journ. de Méd.*, August 25th, 1897) has recently devoted much attention to this subject: first, the frequency of albuminuria in diabetes is variable and may occur in two forms, functional and that due to grave nephritic disease. In the first form it may be extremely slight, or else may constitute a very marked feature in the case. When slight, proper dieting and small doses of antipyrin combined with a little bicarbonate of soda in the form of a powder may be given every one and a half hour before each meal. This treatment should not be continued more than three or four days, beyond which time the antipyrin will become injurious. It is well to prescribe some quinine wine and Vichy water at meals. After this treatment the sugar decreases considerably, in other cases it remains unaffected. In the first instance anti-diabetic treatment may be set aside and attention devoted to the albuminuria; in the second instance it is advisable to order small doses arseniate of soda combined with codeia and carbonate of lithia. Most usually the glycosuria diminishes under this treatment, and the albuminuria is then treated in the same manner as above This line of treatment is usually followed by extremely satisfactory results. After a fortnight or so it is recommended to give phosphates with nux vomica, or later hypophosphites of lime potash or soda with quinine, etc. Should the quantity of albumen eliminated in twenty-four hours reach 2 to 3 g the case is practically one of Bright's disease, and the patient is put on milk diet. The author now recommends lactate of strontium in small doses.—*Brit. Med. Jour.*

THE DOMINION · MEDICAL · MONTHLY
. . AND . .
ONTARIO MEDICAL JOURNAL

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Vol. X. TORONTO, JANUARY, 1898. No. 1

THE VICTORIAN ORDER OF NURSES.

There is no doubt that many families would be benefited by more experienced nursing. That often in cases of emergency the country practitioner would be pleased to have the assistance of a trained nurse. We will go further, and say that every case of sickness, occurring in any family, located anywhere in this broad land, from the Atlantic coast to the Pacific ocean, from the Niagara Falls to the settlements on the distant Peace, would be the better for and should have a trained nurse. Every physician in this district should likewise have one for an assistant

Everyone admits the need of nursing. The question is first, what supply is there for the demand; and, secondly, in the event of the supply not being sufficient, by what means can it be best increased? The nurses in this country may be divided into two classes, on a basis purely educational. First, those who have gone through a course of hospital training and received certificates. Enquiry among this class, previous to the late flurry, negatived the theory of lack of supply. The other class consists of maiden ladies, worthy widows, or older women, scattered all over the country, without hospital training, without knowledge of anatomy, physiology or chemistry, but the majority of whom have been trained at the bedside, by the good old country doctor, the friend as well as physician of his patient. Her knowledge has been acquired chiefly through long and patient watching with him over relatives and friends. She is of the class whom she nurses, and better understands their feelings and their

pride, and can often help where others would be excluded. The pittance she receives would scarce supply many of the more distinguished of her profession with ribbons. It is for the country physician to say whether such women as we mention exist and whether they wish them replaced. It may, of course, be objected that this is all generalization on our part. It must be remembered, however, that the proposition for the Victorian Order has been under consideration for nearly a year, and that many of the ablest financiers and statesmen have given it their attention, and it is not fair that we should be expected to array our facts in the same definite, clear-cut way that the plans of the Victorian Order have been placed before us.

Until lately many leaders of the profession were bitterly opposed to the scheme and led the profession at various meetings in the fight against it; now, however, they consider it most necessary and beneficial. It should not be urged against them that they have during the champagne and truffles stage changed their mind. Rather should it be a warning to our leaders to be more careful and not give hasty opinions. For when they said the scheme was bad we followed them; now that they said it is good, we must follow them, without grace of meat, or anything, else to ease our self-respect in making our "Volte face." Having convinced ourselves that the scheme is good, why hesitate to eat the leek. Here is a noble philanthropic proposition that is to bring light and happiness into the homes of our poverty-stricken peasantry; why should we, who are a philanthropic profession, battle against it. Under the most distinguished patronage a million dollars is to be raised. Dives, in fear of a prospective drouth hereafter, has opened his pockets and money is rolling into the coffers of the order. Plans have already been laid, a permanent organization formed and the central institution discussed. There must be a better system of training especially adapted for this work. It is special work and it cannot be expected that the hospitals of outlying colonial towns can supply correct training. It is hoped to overcome this defect by importing nurses from Europe and the United States. It is beyond all things, first necessary to have a proper central home and training school. Considering the cost of such institutions elsewhere, we will presume that suitable grounds and buildings could be secured for $150,000. This, it will be objected in the light of experience, is too small an amount, but we expect the details to be much more closely looked after here, as the prospectus of the order would indicate. Such an institution should be run for, say, with all cost of salaries, food, heating, etc., etc., $20,000 a year; this to include interest on capitalization of buildings and equipment. This leaves us $500,000 of the million to provide trained nurses, whose duty (as set forth by the promoters) it will be to go, on call, to any place from Halifax to Vancouver. Calculating the interest on this fund at 4 per cent. as formerly, it of course being impossible to obtain a safe investment for a million dollars at any higher rate, gives us another $20,000 a year to pay salaries and travelling expenses of our visiting nurses. We will put the cost of the maintenance of each nurse, including salary, living, travelling, etc., at $500.00. This gives us forty nurses; that is, the million dollars, when all is collected and invested, gives us forty nurses to do the work from Halifax to Vancouver, or one nurse to each 100,000 square miles of territory. We have seen exceptional nurses who would feel crowded in this space, but it is safe to say that the average nurse would feel somewhat lonely. We hope the elucidation we have given to the scheme may help to allay further opposition. The average practitioner is not expected to be able to grapple with large financial propositions of this kind. All are unanimous in pronouncing it a very large scheme. It is.

THE REMUNERATION OF PHYSICIANS.

An interesting item appears in the "New York Health Report for 1896," which shows the working of what is known as the "summer corps." The Health Board receives every year the sum of $10,000, which is called the "Tenement-house" Fund. They then engage the services of fifty physicians for the months of July and August. The duty of these physicians is to visit every tenement house, "especially in the poor and crowded districts of the city, prescribe for the helpless sick, give needful advice, distribute rules for the care of infants, and cause to be corrected all unsanitary conditions." The city is divided into fifty districts, each under the charge of one of these physicians. The total number of visits to families was 274,742, or about 5,495 per physician. The physician received $200, or a little over 4 cents a visit. In other words, at this rate, if a young physician here wished to write to his parents after making a visit, collecting his fee, buying stationery and stamps, he would have nothing left for himself. And yet we wonder that doctors die poor.

SPITTING IN PUBLIC PLACES.

In travelling on the other side, more especially in New York State, one cannot fail to notice the general distribution of notices in reference to spitting. Much of this is due to the efficient work of New York Board of Health, who, in May, 1896, inserted the following section in their sanitary code, one which should be copied all through Canada: "Section 222—Spitting upon the floors of public buildings, and of railway cars, and of ferry boats, is hereby forbidden. Officers in charge of all such buildings and cars and boats will keep posted permanently in such buildings, and in every railway car, and in every ferry boat, a sufficient number of notices forbidding spitting upon the floors; and janitors of buildings, conductors of cars, and employees of ferry boats shall call the attention of all violators of this ordinance to such notice."

There is no doubt that the section is thoroughly carried out, for in all the cities we were in these notices appeared in large buildings, in street-cars, in fact, almost everywhere; and, as the Board remarks, have no doubt greatly diminished the practice of public expectoration. The ordinance could be made to include sidewalks, without special inconvenience to the public expectorators, and with much added cleanliness and comfort to other people.

We regret to announce the death of two members of the council, both eminent in their profession, Dr. Jas. H. Burns, Toronto, and Dr. G. Shaw, Hamilton. Brief biographies will appear in our next issue.

"THE Lofoten Islands and their Principal Product," is the title of one of the handsomest brochures we have seen for sometime. It describes the country in which the codfish is caught and the method of extracting the oil. The beautiful engravings of scenery, with fish scenes, characteristic of the section, abound in the text. Anyone sufficiently interested in natural history or the source of one of our chief medicinal products, cannot do better than write Parke, Davis & Co., Detroit, for a copy of this elegant brochure.

DAVID STARR JORDAN, President of the Leland Stanford University, will have an article on "The Evolution of the mind" in *Appletons' Popular Science Monthly* for February.

Physician's Library.

Surgical Diagnosis and Treatment. A Clinical Text-Book. By J. W. MACDONALD, M.D. Octavo volume of 800 pages, handsomely illustrated with 328 engravings. Prices: cloth, $5.00 net; half morocco, $6.00 net. Philadelphia: W. B. Saunders; Toronto: J. A. Carveth & Co.

We agree with the author where he says in his preface "The rapid advances made in the art of surgery have caused the literature of the science to grow apace. Systems of surgery in many volumes, and text-books of large dimensions, are now deemed necessary to cover the field. The practical part of the surgeon's work is, however, almost limited to two questions which he must answer every time his professional advice or help is sought. The first question is, 'What is the disease or injury?' The second question is, 'What is the proper treatment?'" The book is practical, convenient and thoroughly up to date.

Klemperer's Clinical Diagnosisy, by DR. G. KLEMPERER, Professor at the University of Berlin; first American from the seventh and last German edition; authorized translation by NATHAN E. BRILL, A.M., M.D., Adjunct Attending Physician, Mt. Sinai Hospital, and SAMUEL M. BRICKNER, A.M., M.D., Assistant Gynæcologist, Mt. Sinia Hospital Dispensary, is announced for early publication by The Macmillan Company.

Dr. Klemperer's work on "Clinical Diagnosis" is widely known, and all English readers will be rejoiced to find within their reach this very comprehensive but condensed manual. Its chapters deal with the inspection and examination of the patient, the diagnosis of the acute infectious diseases, diseases of the nervous system, digestive diseases, each under its special symptomatology, diseases of the respiratory apparatus, the heart and circulation. Two chapters are devoted to urine analysis and to the diseases of the kidneys. The four concluding chapters deal with the disturbances of metabolism, the diseases of the blood, the Rontgen rays as diagnostic aids, and animal and vegetable parasites including such bacteria as are of clinical importance. No book so complete, short of a text-book of medicine, is before the American medical public. It has passed through seven editions in its original language (German) in as many years. The German school leads in clinical diagnosis and this little work is an exquisite example of its methods.

NEW BOOKS FOR '98.

We have received the following list from W. B. Saunders, of Philadelphia:

"An American Text-book of Diseases of the Eye, Ear, Nose and Throat." Edited by G. DE SCHWEINITZ, M.D., Professor of Ophthalmology in the Jefferson Medical College, Philadelphia; and B. ALEXANDER RANDALL, M.D., Professor of Diseases of the Ear in the University of Pennsylvania and in the Philadelphia Polyclinic.

"An American Text-Book of Pathology." Edited by JOHN GUITERAS, M.D., Professor of General Pathology and of Morbid Anatomy in the University of Pennsylvania; and DAVID RIESMAN, M.D., Demonstrator of Pathological Histology in the University of Pennsylvania.

"An American Text-Book of Legal Medicine and Toxicology." Edited by FREDERICK PETERSON, M.D., Clinical Professor of Mental Diseases in the Woman's Medical College, New York; Chief of Clinic, Nervous Department, College of Physicians and Surgeons, New York; and WALTER S. HAINES, M.D., Professor of Chemistry, Pharmacy and Toxicology in Rush Medical College, Chicago, Illinois.

"Stengel's Pathology." A Manual of Pathology. By ALFRED STENGEL, M.D., Instructor in Clinical Medicine, University of Pennsylvania; Physician to the Philadelphia Hospital; Professor of Clinical Medicine, Woman's Medical College; Physician to the Children's Hospital; late Pathologist to the German Hospital, Philadelphia, etc.

"Church and Peterson's Nervous and Mental Diseases." Nervous and Mental Diseases. By ARCHIBALD CHURCH, M.D., Professor of Mental Diseases and Mental Jurisprudence in the Northwestern University Medical School, Chicago; and FREDERICK PETERSON, M.D., Clinical Professor of Mental Diseases in the Woman's Medical College, New York; Chief of Clinic, Nervous Department, College of Physicians and Surgeons, New York.

"Kyle on the Nose and Throat." Diseases of the Nose and Throat. By D. BRADEN KYLE, M.D., Chief Laryngologist to St. Agnes' Hospital; Bacteriologist to the Orthopedic Hospital and Infirmary for Nervous Diseases; Instructor in Clinical Microscopy and Assistant Demonstrator of Pathology, Jefferson Medical College, Philadelphia.

"Hirst's Obstetrics." A Text-Book of Obstetrics. By BARTON COOKE HIRST, M.D., Professor of Obstetrics in the University of Pennsylvania.

"Heisler's Embryology." A Text-Book of Embryology. By JOHN C. HEISLER, M.D., Professor of Anatomy in the Medico-Chirurgical College, Philadelphia.

"West's Nursing." An American Text-Book of Nursing. By AMERICAN TEACHERS. Edited by ROBERTA M. WEST, Late Superintendent of Nurses in the Hospital of the University of Pennsylvania.

We might say that he is also publishing in English that famous German work "Lehmann's Medicinshe Handallanten." The illustrations are of unexampled beauty and perfection of detail. The following are in process of publication. We understand the price is to be exceedingly low. Mr. Carveth, Toronto, is Canadian Agent.

"Atlas of Internal Medicine and Clinical Diagnosis." By Dr. CHR. JAKOB, of Erlangen. Edited by AUGUSTUS A. ESHNER, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic; Attending Physician to the Philadelphia Hospital. 68 colored plates, and 64 illustrations in the text.

"Atlas of Legal Medicine." By Dr. E. R. VON HOFMANN, of Vienna. Edited by FREDERICK PETERSON, M.D., Clinical Professor of Mental Diseases, Woman's Medical College, New York; Chief of Clinic, Nervous Dept., College of Physicians and Surgeons, New York. With 120 colored figures on 56 plates, and 193 beautiful half-tone illustrations.

"Atlas of Laryngology." By Dr. L. GRUNWALD, of Munich. With 107 colored figures on 44 plates; 25 black-and-white illustrations.

"Atlas of External Diseases of the Eye." By Dr. O. HAAB, of Zurich. Edited by G. E. DE SCHWEINITZ, M.D., Professor of Ophthalmology, Jefferson Medical College, Philadelphia. With 100 colored illustrations.

"Atlas of Operative Surgery." By Dr. O. ZUCKERKANDL of Vienna. Edited by J CHALMERS DACOSTA, M.D., Clinical Professor of Surgery, Jefferson Medical College, Philadelphia; Surgeon to the Philadelphia Hospital. With 24 colored plates, and 217 illustrations in the text.

"Atlas of Venereal Diseases." By Dr. KARL KOPP, of Munich. Edited by L. BOLTON BANGS, M.D., late Professor of Genito-Urinary and Venereal Diseases, New York Post-Graduate Medical School and Hospital. With 63 colored illustrations.

"Atlas of Skin Diseases." By Dr. KARL KOPP, of Munich. With 90 colored and 17 black-and-white illustrations.

Miscellaneous

PLACENTA PREVIA CENTRALIS.—A typical case is described by Von Weiss, in the *Cbl. f. Gyn.*, No. 22, in which the placenta was attached to a large proportion of the cervical wall, the cervix mucosa forming a part of the decidua serotina. After extraction of a dead child, delivery of the placenta was extremely difficult, owing to adhesions. Death followed four days later from sepsis.—*Wien. Klin. Woch.*, July 29.

MYCOSIS OF THE PHARYNX.—Castex removes with Duplay's forceps the small tenacious white patches as they develop, after the patient has gargled with a hot 1 per cent. aqueous solution of resorcin. Ten sittings will complete the cure in obstinate cases. The most diverse micro-organisms were found in some cases, and none in others. The etiology is very obscure. It seems to affect debilitated persons with previous throat inflammations, most frequently women between fifteen and thirty years of age.—*Journal de Méd. et de Chir.*, 68th year, No. 20.

AUTO-INTOXICATION AS A PREDISPOSING CAUSE OF INFECTION.—Poehl (*Wien. Med. Woch.*) gives as the main causes of auto-intoxication: Diminished alkalinity of the blood, due to acidity of the tissues from overexertion or other causes; insufficient supply of oxygen; abnormal fermentation processes in the intestine; poisoning from without by bacterial or other agencies; retention of metabolic processes. Many of these conditions, he says, can be detected by an examination of the urine, and in support of his views relies upon elementary proportions. He holds that the resisting power of the organism depends very largely upon the manner in which its internal or tissue respiration is carried on and avers that he has never examined a case of infectious disease in which this has been normal.—*Journal of the American Medical Association.*

Obituary.

ERNEST HART,

Editor of the *British Medical Journal*, died at London, Jan. 7th. He was for several years editor of the *Lancet*; was born in June, 1836. He was educated at the city of London School and the School of Medicine attached to St. George's Hospital. His reports on criminal baby farming in 1868 led to the passing of the Infant Life Protection Act, and he was instrumental in promoting the movement that resulted in the establishment of the so-called coffee taverns in London some twenty years ago. For the last fifteen years he has been conspicuous for his devotion to social and sanitary progress in London.