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A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

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ARTIFICIAL FEEDING AND CARE OF INFANTS.

BY DR. JOHN W. S. M'CULLOUGH, ALLISTON, ONT.

The subject of artificial feeding of infants is a most important one, and is becoming more so every day we live, because the number of children requiring it is rapidly increasing.

While it is an unfortunate thing for a child at the very best of times to be deprived of nature's form of food, it is no less a fact that circumstances often necessitate partial or complete feeding by hand.

Our profession has not, I think, given this subject the practical attention it merits. Too much latitude has been allowed the commercial greed of the makers of the various patent foods with which the market is stocked. The matter of infant's food and all the little details pertaining thereto, are usually left to the discretion of the nurse, who may be the most incompetent party in the world to judge in such matters, or else to the mother, who often young and inexperienced, feeds her child on pure cow's milk or the same diluted with simple water or lime-water. Not satisfied with this, for her baby usually does not thrive well upon it, she may add a daily allowance of boiled bread and milk or boiled biscuit. As a result the child vomits or has diarrhœa. All the mothers of families in the neighborhood, with the most tender solicitude for the baby, assure the young mother that "vomiting in a baby is a healthy sign." The mother is soon frightened into consulting her doctor. He, often without a great deal of thought in the matter, though he may tell her that such vomiting means too much, or an improper quality of food; may prescribe Nestle's Food, which is as good as any of its class. It by no means nor often does well. It may suffice for a small child, but is never sufficient for a large one. If this evidence of simple indigestion were the worst result 'twere well, but the large infant mortality is directly traceable to improper feeding, and, worse than all, so frequently, is the miserable dyspeptic after-life.

These few reasons should amply suffice to lead us to inquire with the greatest care as to what should be the food of the infant, who must of necessity be fed on some substitute for the mother's milk. We should in such a case be at once able to recommend the best, and to give proper instructions regarding its preparation, proper quantity, times of feeding, etc.

The *best food* is that one which first of all is satisfactory as regards *quality*. Then to meet with favor it must be *simple of preparation, easily and cheaply procurable*. A complicated plan may do for some people, but with the majority it will suffer from neglect.

The patent foods, as I have already intimated, are not likely to be satisfactory as regards quality. They do not suit the varying ages of the child. They are expensive and not always to be depended upon.

The best food, and that which will continue to be most used, is one having for its basis cow's milk. Asses' and goats' milk approach the mother's more nearly in chemical composition, but they are not usually accessible. We must approximate the cow's milk by proper preparation to as near that of the mothers' as possible.

A comparison of the two shows that—

Cow's milk.			Mother's milk.
Acid.		Reaction.	Alkaline.
13.2 per cent.		Solids	12-13 per cent.
4	"	Fats	3-4 "
4	"	Albuminoids	1-2 "
4 5	"	Sugar	7. "
.7	"	Extractives.	0·1-·2 "

So we see the chief differences between the two are in that cow's milk is acid in reaction, contains a little more fat, considerably more albuminoids, and considerably less sugar.

The most important practical difference consists in the manner in which cow's milk coagulates in the stomach. It forms a tough curd unlike the flaky curd of mother's milk. This is indigestible and consequently ferments. It causes the painful flatulence, the vomiting and other well-known

troubles. Our success in treating cow's milk and feeding a child thereon will depend almost entirely on the manner in which we deal with the casein to prevent this tough curd from being formed.

Two methods are advised (Money):

(1) By mechanically preventing the particles of casein from running together.

(2) By chemically preventing coagulation by the use of lime-water or other alkalies. This latter plan is entirely wrong, because to accomplish its purpose would require a quantity equal to $\frac{1}{3}$ of the meal. In the former method various kinds of mucillaginous fluids are recommended, such as acacia, gelatine, isinglass or tragacanth.

The plan I have followed for some two or three years is to use for this purpose barley-water made from the common grain of the farmer, or preferably the same crushed. It serves to mechanically separate the particles of curd, and has some nutritious properties as well The mucilaginous material comes largely from the inner surface of the hull. In Scotch or pearl barley this is lost.

I give the mother written or printed instructions as to the plan of feeding. I have her use boiled water for dilution, also cream as the child grows older, for I have found that especially where the supply of milk is not first-class, fat instead of being in excess, is often deficient in quantity. The deficiency of sugar is made up by adding sugar of milk. The acidity has not, in my experience, been an important factor.

The plan of quantities and times of feeding according to the age of the child are as follows:

Age of Child.	Cow's Milk.	Barley Water.	Boiled Water.	Cream.	Sugar of Milk.	Intervals of Feeding.
1st. week	4 drams	4 drams	.....	.....	15 grs..	Every 2 hours night and day
Rest of 1st. mth.	6 "	5 "	.....	.....	15 "	Every 3 hours from 4 a.m. till 10 p.m.
2nd. mth.	9 "	6 "	3 drams	2 drams	20 "	Every 2½ hours from 3 a.m. till 10 p.m.
	12 "	6 "	6 "	3 "	30 "	Every 3 hours from 4 a.m. till 10 p m.
4th. "	16 "	6 "	8 "	4 "	45 "	" " "
5th. "	18 "	6 "	10 "	6 "	1 dram	" " "
6th. "	20 "	6 "	10 "	5 "	1 "	" " "
7th "	24 "	6 "	10 "	6 "	1 "	" " "
8th. "	26 "	8 "	10 "	6 "	1½ "	" " "
9th. "	28 "	10 "	10 "	7 "	1½ "	" " "
10th. "	30 "	10 "	10 "	8 "	1½ "	" " "
11th. "	32 "	10 "	10 "	8 "	1½ "	" " "
12th. "	34 "	10 "	10 "	9 "	1¾ "	" " "

This plan gives as you see six hours rest to the mother and child. Often the child will sleep longer in the morning. Regularity in feeding is a very important matter and should be rigidly insisted upon. At all times if you will, but especially when the external temperature reaches 60° F., it is best to sterilize the milk. Instruct the mother or nurse to do this by placing the bottles filled with milk in a large steamer over a pot of boiling water. From one-half to an hour's steaming will completely sterilize the milk. The bottles should then be tightly corked and set aside in a cool place ready for use. The barley-water is made by adding a cupful of barley whole or crushed to a quart of cold water. This is slowly boiled until reduced to about one pint, when it is strained and set aside.

Care is necessary in the selection of sugar of milk. The cheaper kinds contain a large amount of flour and chalk.

The most convenient feeding bottle is an ordinary 6 or 8 oz. R. S. P. one, of which several should be in use at once. They are easily kept clean.

Conical black rubber teats which fit nicely over the neck of the bottle are the best. *Never allow a tube of any kind to be used.* Both teats and bottles when not in use should after thorough cleansing in boiling water, be placed to soak in a solution of soda bicarb., or a weak solution of permanganate of potash. Never allow the child to suck the empty bottle, this fills the stomach with air.

A properly graduated glass measure which can be purchased cheaply in any drug-store, is both a necessity and a convenience. Measuring by means of a teaspoon is out of date and inaccurate. A wire bracket over a lamp or gas-jet is convenient whereby the food may be warmed at night. The temperature of the food when given to the child should be about 95° F. The quantities I have marked down are, of course, subject to variations according as the child is large or small.

The cream acts well in keeping the bowels regular. If not sufficient an occasional dose of fluid magnesia, P. D. & Co's. cascara cordial, or minute doses of calomel will do very well.

The usual bathing and due attention to cleanliness all help to a good result. Any excoriation of the buttocks should be prevented by careful toilet and the used of borated talcum. Unless the weather is extremely severe, the child, properly protected, of course, should be out one or two hours

a day, summer and winter. In summer when the weather is fine the child should be out most of the time. Good fresh air is essential to good sleep and good digestion.

I think this plan of feeding, meeting, as it does, the essentials of *good quality, simplicity and accessibility* which I laid down as the requisites of an artificial food, deserves a trial. It is not by any means new. It is within reach of everybody, is not complicated, and, in my hands at least, has given good results.

Addenda.—In the criticism which followed, the proprietary foods, consisting as they do, chiefly of starch, which a child under seven months cannot digest, were strongly condemned. I cordially agree with this and advise that they never be used or prescribed.

The question was asked if pot barley or Robinson's barley flour would not do better than grain barley. I do not believe so since they do not contain that which is essential to a good barley-water, viz. : The mucilaginous material which lies immediately inside the hull of the grain. This is *gluten*, which is not starcy but a nitrogenous material composed of *fibrin casein gliadin* and *mucedin* (Foster's Dictionary).

Objection was taken to the quantity of food during first week, viz. : 4 drams of milk + 4 drams of barley-water. I think this may be excessive in some cases where child is small. My quantities are, however, not absolute but more to serve as a guide than anything else. This is necessary. The physician ought to be a better judge as to quantities than any one else, and it would, to my mind, be foolish to give a child all it wants or more, and allow it, as was suggested, to vomit the excess.

One gentleman objected to sterilization at the temperature of steam (212° F.) and said that extensive experiments in New York, showed that babies fed on sterilized milk did not thrive. This is new to me, for sterilization has long been lauded to the skies. My only answer to this question is, that sterilization alone will not suffice. Often milk will, I believe, agree well when sterilization is not pursued, the more especially when the milk is produced at home and not, as city milk frequently is, carted over miles and miles of dusty roads or railway. In winter, I may say that I have not insisted on sterilization, and I have had good results. It has been suggested to me that the food and care of the cows should be looked after. This is an important point. The stable should be clean and airy and the food not too strong. Just as the variation of food or improper food taken by the mother may induce digestive troubles in the baby, it can be no less true with regard to the source of the milk wherewith we prepare the artificial nourishment. I may add that whether or not my plan is correct in theory I am amply satisfied that it is practically so. The best evidences of this is that babies thrive well on it ; have few digestive troubles and are sure to attract attention by their hearty, lusty appearance.

EMPYÆMA OF THE MAXILLARY SINUS OR ANTRUM—A CASE.

BY G. R. MCDONAGH, M.D., TORONTO.

The following case in practice presents some interesting features, which vary from the usual clinical history of the disease, and therefore make them worthy of record.

A. C., gardener, æt. 31, came to my office March 6th, 1894, and related the following history :

On the 12th July, 1891, on account of severe neuralgia and dental caries, had all the teeth of the upper jaw removed, and was told by the dentist that one of the molars removed from the left side was ulcerated at the root. The dentist passed a probe into the cavity, but did not find any opening upwards. The plate was fitted in almost immediately and left in place.

Two weeks later Mr. C. noticed that in stooping low some watery fluid dropped from the left nostril, ceasing when he resumed the erect position. This occurred twice only. Some neuralgic pains were also experienced on the same side just above the temporal fossa and the outer angle of the eye. A few days later there was a sudden sensation at the point just referred to, as of something breaking, and a discharge followed from the left nostril, purulent in character.

This has continued up to the present, with exacerbations as regards the quantity. The discharge is white, and like fine curds—with a pronounced odor at times.

Since the onset of the discharge the patient has never been able to lie for more than a few minutes at a time on the left side, as any attempt to do so

is followed by a blocking of the nostrils. On the other hand, when he turns on the right side, the nose remains quite clear and the discharge does not give any trouble.

There have been almost constantly pains of a neuralgic character outside the left temple, in the spot referred to before, sometimes very acute, and accompanied by tenderness, the latter extending well over the orbit. At no time during the trouble has there been pain or tenderness in the left cheek, nor any symptoms referable to the superior maxilla.

During the past three years Mr. C. has consulted several dentists and doctors, one of our foremost rhinologists, and a medical firm in Buffalo, only to be told he had catarrh, the treatment for which proved to be of no avail. Meanwhile the general health had been greatly affected by the discharge, the fetor, and the constant swallowing of the pus, together with the broken rest. On examination, no tenderness could be detected at any point in the upper maxilla, but there was some above the outer part of the left orbit, the test being made by a heavy metal handle struck forcibly against the bone in all directions. Rhinoscopically, the upper part of the nose was found blocked by discharges, which closely resembled casein floating in milk, and which reappeared as fast as removed with the cotton holder.

The formation of the nostril did not allow of a satisfactory view of the middle turbinated bone, but examination with the probe and cotton seemed to point to the middle meatus as the source of the discharge, which evidently proceeded from one of the accessory nasal cavities, probably either from the frontal sinus or the maxillary sinus.

Feeling that the symptoms pointed as clearly toward antrum disease as to that of the frontal sinus, I resolved to open the antrum as a first step.

This was done at my request by Dr. Cæsar, dentist, under gas, a drill being driven through the alveolus in the molar region, and this gave exit to a large quantity of stinking pus. Examination with the probe through the perforation revealed the presence of dead bone in various directions. The cavity was washed with weak bichloride solution by aid of a fountain syringe, and hydrogen peroxide thereafter injected; a silver canula was introduced and held in place by the plate, and the patient instructed to wash the cavity out regularly with a boracic solution, which was afterwards changed for equal parts of hydrogen peroxide and Seiler's solution.

When last seen, May 4th, two months after the operation, the discharge had practically ceased and no dead bone was discovered by the probe. The general health had improved wonderfully and all the head symptoms had completely disappeared, while the patient could sleep soundly on either side, indifferently.

The case is unusual, because *(a)* none of the usual signs of antrum disease, except a one-sided nasal discharge, were present.

(b) The pain and tenderness were confined to the frontal bone, outside and above the orbit.

(c) The patient was compelled to lie on the sound side, while the reverse is the rule in antrum disease.

(d) Discharge from the maxillary sinus is usually bright yellowish.

The locality of the pain complained of may be explained by the connection between the temporal branch of the orbital nerve which supplies the region above the temporal fossa and the posterior dental nerve lying in the outside wall of the sinus, both being derived from the second division of the fifth cranial.

As to the other points I have arrived at no conclusion.

CAUTERIZATION OF THE NARES, AND ACCIDENTS THAT MAY FOLLOW.

BY E. FLETCHER INGALS, A.M., M.D., CHICAGO.

Although from time to time articles have been written to show that serious accidents often follow cauterization of the nares, I think that, when properly done, this operation is quite as free from discomfort or danger as any other minor surgical procedure.

I have occasionally heard of serious results following these operations. but have never had one in my own practice, and I believe that as a rule they are due to carelessness or inexperience upon the operator's part which induce him to make extensive wounds or to repeat the burnings too frequently. By this I do not mean that all accidents after cauterization have resulted from care-

lessness or inexperience, for I well know that bad results after any operation, from various causes, may possibly happen to any one, even though the utmost caution is observed.

Looking over the records of my private patents, I find that hypertrophic rhinitis, intumescent rhinitis, and simple chronic rhinitis, cauterizations have been done about one and one-fifth times on the average in each patient. I find 1,450 patients with hypertrophic rhinitis who have been cauterized 1,950 times; 450 patients with rhinitis intumescens, cauterized 900 times; and 700 patients with simple chronic rhinitis, cauterized 150 times; making 2,600 patients cauterized 3,000 times. These figures are not strictly accurate, but are as near as can be computed without actually counting the cauterizations done in each and every case.

Excluding the cases of simple chronic rhinitis (which have not been frequently cauterized), I find 1,900 cases suffering from hypertrophic or intumescent rhinitis, that have been cauterized 2,850 times, making an average of about one and one-third for each patient, An examination of these records, which have been carefully kept, reveals no serious accident in any case. With comparative frequency, probably in about twenty per cent. of the cases, especially when the cauterization is done in cold weather, patients suffer considerable inconvenience for four or five days afterward from the reaction., and in a limited number of cases, perhaps five per cent., they feel for ten or twelve days afterward as though they had taken an intense cold in the head, In warm weather these very uncomfortable symptoms are not often experienced.

Frequently I have observed patients in whom a linear cauterization across the whole length of the inferior turbinated body would cause excessive swelling, obstruction of the nares, headache, and considerable fever which might last four or five days. In most, if not all, of the cases, if cauterization of half this extent were made, the uncomfortable symptoms would not follow.

The inconvenience which patients suffer after cauterization, as a rule, depends largely upon the extent of the burn, the frequency of its repetition, and the care exercised to avoid taking cold.

I have frequently observed slight adhesions following cauterizations, especially where it has been done opposite a large spur from the septum, and where the patient has not been able to call upon me within the next four or five days after the operation. In none of these, however, has there been any difficulty in cutting the adhesion, or very great trouble in restoring the patulence of the naris.

In one case only do I find serious hæmorrhage to have followed cauterization, and when the patient returned to my office this was checked without great difficulty. In a case of superficial cauterization for hyperæsthetic rhinitis, not included in this series of cases, serious hæmorrhage followed; but I did not see the patient for several weeks after the operation, and think it could have been easily checked if he had been under my care. In no other cases do I find that excessive bleeding occurred.

It is not improbable that in this number of cases there are those who have had slight inflammation of the Eustachian tube extending toward the middle ear, but I am sure that in none of them has there occurred inflammation of any importance, and I am unable at present to find records even of slight inflammation of these parts after cauterization.

The cases of inflammation of the Eustachian tube or middle ear that have been reported as having followed cauterization of the nares, I believe have in most instances resulted either from carrying the electrode so far back that the Eustachian orifice has been burned, from making an extensive wound and thus causing undue inflammatory reaction, or from neglecting antiseptic precautions, though such a result might follow from exposure or from peculiar predisposition of the mucous membrane to take on inflammatory action.

Inflammation of the tonsils is said sometimes to follow within a few days after cauterization of the nares, possibly having some connection with the operation, but I have seen no cases of the kind in which any evidence of cause and effect could be obtained.

Erysipelatous inflammation has been the worst sequel of this treatment that I have ever observed among my own patients, but it has occurred in only four persons out of 2,600. In two of these it seemed to have been the direct result of the cauterization, and in both of them it followed cauterization in the naris whenever it was done. In the other two the dermatitis came on at irregular

intervals after the cauterization, and seemed to have been the result either of cold, or excessive inflammation resulting from some peculiar idiosyncrasy of the patient, either to the burn or to the remedies which were used subsequently.

In two of the four erysipelatous cases that I have seen, inflammation did not come on until from eight to ten days after the operation, and in one of these it recurred about a month after the cauterization, apparently in consequence of an oily spray which had been used in the nares. This appeared to me to be a case in which there was an idiosyncrasy either against the oil (liquid albolene), or the thymol or oleum carophylli which it contained in solution. In the other of these two cases, two cauterizations were done, one of which was followed by erysipelatous inflammation in about ten days, which appeared to me to be the result of an oily spray, similar to that used in the previous case. In this patient redness of the upper lip and cheek continued for a number of days, and was found to increase when the oily spray was used, and to diminish when the cleansing of the nares was accomplished by a spray of saturated solution of boric acid. I have seen several persons in whom the use of a spray containing only two or three grains of menthol to the ounce would cause inflammation of the nostril and upper lip within three or four days. Dr. A. H. Gilmore reports to me a case in which acute dermatitis always followed the use of a one-grain solution of menthol and carbolic acid each in an ounce of liquid albolene within twenty-four hours.

In the two remaining cases the trouble followed closely upon cauterization, the patient seeming to suffer from a peculiar idiosyncrasy in which inflammation of the skin covering the upper lip, the side of the nose, and the cheek would follow speedily after any cauterization within the nasal cavity. In one of these, a healthy young man, thirty-one years of age, suffering from rhinitis intumescents, who was cauterized four times, the erysipelatous inflammation succeeded the cauterization promptly within from twelve to forty-eight hours in every instance, but it was not very severe and only lasted from three to six days.

In the other of these cases cauterization was performed three times, and each time was speedily succeeded by erysipelatous inflammation. Once this came on the same night, the other times within a few days. These attacks gave the patient considerable inconvenience, but caused no danger.

In two instances I succeeded in reducing the inflammation speedily by the local application to the skin of pure guaiacol, recently recommended by L. Bard (*Lyons Medical*, lxxiv., 1893), in facial erysipelas.

I have heard of so many cases in which serious, or at least very disagreeable symptoms have followed cauterization of the nasal cavities, that I am led to believe that the comparative infrequence with which such accidents have happened in my practice is largely due to the care exercised at the time of cauterization, to the antiseptic precautions by which it is followed, and to the rule (from which I seldom vary) that the second cauterization should not be made within from ten to fourteen days after the first. This allows time for the healing process to become well advanced and for all inflammatory action to subside before a new inflammation is set up. In a few cases, where for special reasons I have allowed myself to be over-persuaded by the patient, and have made the succeeding operation in the opposite nostril within from five to eight days, I have nearly always found that the patient afterward suffered great inconvenience from the obstruction, headache and fever. In such cases both sides are likely to become occluded as in severe colds in the head.

My usual course in the treatment of hypertrophic and intumescent rhinitis is as follows:

Having determined that the patient is frequently annoyed, especially at night, by stopping up of one or both nasal cavities, which interferes with nasal respiration and causes a collection of more or less mucus in the nasopharynx, I recommend cauterization upon one side. Whatever subsequent cauterizations are needed should be made at intervals of not less than two weeks if upon the opposite side, or at longer intervals if upon the same side. Immediately after cauterization, the nasal cavity is sprayed with a solution of five minims of the oil of cloves to the ounce of liquid albolene, and this is followed by the insufflation of two or three grains of iodol. The nostril is then packed lightly with cotton, which the patient is directed to wear whenever he is out of doors for the succeeding four or five days in

winter, or for two or three days in summer, changing it as he may desire. The patient in most cases is also given a powder, one or two grains of which he is directed to use in the naris three or four times in twenty-four hours, providing the passage closes up by swelling—or not at all if this does not occur. This powder contains bicarbonate and biborate of soda, each one and one-half per cent., light carbonate of magnesia 3 per cent., and cocaine hydrochlorate four per cent., in sugar of milk sufficient to make ʒi; this gives in all not more than from one-twentieth to one-twelfth of a grain of cocaine daily.

This is applied by means of a glass tube about four inches in length, with a caliber of about one-eight of an inch, to which is attached a rubber tube, through which the patient blows the powder into his nose. The glass tube is disconnected from the rubber, its round end moved about in the powder until it is filled up about one-fourth of an inch; the same end is then reintroduced into the rubber tube, and the flattened end of the glass tube introduced into the nostril. The patient then places the other end of the rubber tube between his lips and gives a quick strong puff, which forces the powder far into the naris, some of it usually going through to the naso-pharynx. The patient is also given a solution of one-third of a grain of thymol with three or four minims of the oil of cloves to the ounce of liquid albolene, which he is to use in the nose thoroughly as a spray three times daily.

In many cases the cauterization is followed by immediate relief of the obstructed feeling in the nose, but in the majority the cavity is nearly closed much of the time for three or four days subsequently. The patient is directed when practicable to return to me in four or five days, in order that I may be sure no adhesions are taking place. At this time the powder just mentioned is reduced by the addition of twenty-five per cent. of iodol, and the patient is directed to use it for the next ten days, once a day only, if the naris does not stop up, or twice if it does. The spray is continued. Patients are never allowed to use any powder containing cocaine for more than three or four weeks continuously, and then only in small quantity, and they are not given prescriptions for it, which might be refilled and thus engender the cocaine habit.

I believe that the best results are obtained by making a linear cauterization the whole length of the inferior turbinated body, usually at the juncture of its middle with its upper or lower third. Commonly two cauterizations, occasionally three, and rarely more, are needed upon each side. In persons in whom the inflammatory reaction is severe after cauterization, a linear cauterization of only half this length should be recommended. Those who cannot tolerate the full cauterization constitute about five per cent. of all those needing the operation.

Before cauterizing, the parts are thoroughly anæsthetized with a four per cent. solution of cocaine, applied by means of a small pledget of cotton wrapped upon a flat applicator; this pledget is moistened in the solution and carried quickly to the back of the nasal cavity. In bringing it forward it is rubbed over all the surface to be anæsthetized, the application requiring about thirty seconds. At intervals of about a minute these applications are repeated, and usually two or three are sufficient to produce complete anæsthesia. A knife-like electrode, having at its end a No. 21 platinum-wire blade about three-fourths of an inch in length, is then introduced to the back part of the nasal cavity and turned against the tissue to be cauterized. The current is then turned on and the electrode is drawn slowly forward to the anterior end of the turbinated body, burning through the soft tissues so as to just graze the bone in two or three places. Sometimes when the tissues are thick, the electrode has to be moved slightly back and forth two or three times before the bone is felt. It is my desire in all these cases to touch the bone lightly in the posterior, middle, and anterior parts, in order that the soft tissues may be firmly bound down when cicatrization takes place. More extensive cauterization than this at one time is seldom justifiable, because it causes such intense inflammation. I am not at all in favor of the frequent cauterizations, daily or every three or four days, which some physicians practice in treating hypertrophic rhinitis; neither can I see any necessity for causing the patient to return to the office every day or two during the treatment. When patients come to see me from a distance of two to four hours ride, I usually make one cauterization and then direct them to follow out the after treatment

carefully at home, and return for cauterization upon the other side, any time that suits their convenience after three weeks; but I prefer, when it is practicable, to see the patient once at the end of four or five days after the cauterization, in order that I may be sure that all is going well. In a very few cases, either because of unusual pain or excessive inflammation and swelling, I find it desirable to see the patient within two or three days after the operation.

From a study of these private cases I conclude:

1. It is important that antiseptic applications be regularly employed after cauterization of the nasal mucous membrane; and that the nostril be closed by cotton for several days whenever the patient is out of doors, to prevent taking cold.

2. As a rule, at least two weeks should intervene between operations upon opposite sides, and three or four weeks between those on the same side.

3. No serious results are at all likely to follow cauterizations made in this way.

4. Practically all cases of hypertrophic or intumescent rhinitis may be cured by this treatment, though occasionally portions of the turbinated bones must be removed.

Selected Articles.

THE POSTURE OF THE HEAD IN ACCIDENTS WHEN THE PATIENT IS UNDER AN ANÆSTHETIC.

In the presence of an accident from an anæsthetic, the physician at once resorts to artificial respiration, after administering circulatory stimulants, and carries out his object by resorting to one of the several methods generally recommended for this purpose.

Be this method what it may, some studies which have been made with Dr. Edward Martin lead me to believe that it is of little value if the posture of the patient's head and neck is not correct, since the positions naturally assumed by the head of the patient at such times are generally capable of making all efforts at artificial respiration difficult or impossible.

As long ago as 1889, Howard, of London, published a very interesting paper on this topic, which has since been widely quoted. While recognizing the value of his studies, my own have led me to reach somewhat different conclusions in regard to the posture of the head and its influence on the patulousness of the windpire, and it is to these studies that I ask your attention. Howard's statements in regard to the rôle of the epiglottis in csses of arrested respiration in anæsthesia are as follows:

1. The epiglottis falls backward in apnœa and closes the glottis; therefore, the first thing in order and importance is the elevation of the epiglottis.

2. Traction upon the tongue, however, whatever the force employed, does not and cannot raise the epiglottis, as supposed.

3. The epiglottis can only be raised by extension of the head and neck.

The question which naturally arises first is, Is Howard correct in regarding the epiglottis as the cause of the obstruction? Personally, I believe he is wrong, because in the great majority of cases the air passages are at once cleared of obstruction simply by drawing the tongue forward, a method resorted to by all of us, yet one which, as Howard himself states, and as we have proved, has absolutely no effect on the epiglottis unless the traction is applied well back on the dorsum of the tongue by a tenaculum. We may conclude, therefore, that the epiglottis is not the chief cause of the obstruction, and that the tongue is more frequently at fault, but as any obstruction is undesirable, and as the epiglottis does sometimes certainly partially close the windpipe, what shall be done to govern its position? Howard states that this may be accomplished solely by the posture of the head. The method which he recommends is as follows:

"Having, by bringing the patient to the edge of the table or bed, or by elevation of the chest, provided that the head may swing quite free, with one hand under the chin and the other on the vertex, steadily but firmly carry the head backward and downward; the neck will share the motion, which must be continued till the utmost possible extension of both head and neck is obtained. Sometimes a slight elevation and extension of the chin will at once check stertor or irregularity of breathing; but understand, the extension, which can in no case do harm, should always be rather more than appears necessary. It should never be forgotten, however, that the full effects of extension as above described can be secured with certainty only by making the extension complete as directed."

Once more the studies which I have made of this subject have convinced me that Howard's advice is not practically valuable. Although there can be no doubt that the changes described are produced, so far as the position of the epiglottis is concerned, on the other hand, such a position of the head and neck as he directs has the effect of strapping the soft palate over the dorsum of the tongue, thereby cutting off the entrance of air through the mouth and renders

the nostrils the only path for its entrance. As the nasal cavities are in many persons obstructed by exostoses, hypertrophies or polyps, the nostrils do not afford a sufficiently certain entrance space for air, and removal of glottic closure by this posture may cut off the air higher up.

If, on the other hand, the head is extended and simultaneously projected forward, both the tongue and epiglottis are raised and the soft palate is so drawn as to permit of free breathing through the mouth as well as the nose. This is shown in the specimen which I now show you, in which the basilar process of the occipital bone is chipped away and the naso-pharynx exposed.

Returning to the question of the various modes of performing artificial respiration, such as Sylvester's or Marshall Hall's, let us see what accurate measurements of the volume of air pumped into the chest show as to their relative value. To determine this point, the respiratory tract was connected with an ordinary gas meter, properly adjusted by means of a two-way tube, through one valve of which the air entered readily, while it could only escape through the meter. Curare was used to prevent voluntary breathing. When the Sylvester method was used, the quantity of air passing out of the chest equalled 62; when that of Marshall Hall was employed the quantity was represented by 22. In another experiment the Sylvester method gave 18, while the Marshall Hall gave 8. It is evident, therefore, that the Sylvester is actually, as we have long believed it to be, by far the best method. In this connection it was found that in Sylvester's method it is vitally important to have an assistant grasp the feet and hold them motionless, since in this way the extension and upward traction of the arms above the head elevates and dilates the chest. This particularly is the case in children and persons of small weight, as the lower segment of the body readily follows the chest in its upward movement.

Very closely connected with the questions first considered is the condition of the respiration, so far as its nervous control is concerned, in accidents from chloroform and in shock and cerebral concussion. The position of the medical profession is at present uncertain in regard to the dominant action of chloroform, chiefly because of the contradictory views expressed by special students of its powers, and the teaching of certain leading therapeutists and surgeons whose opinions are radically different. Further than this, many experimental investigations have seemed to reach quite different results and have apparently left the subject more clouded than ever. Aside from the question, long since settled, that chloroform is the more dangerous anæsthetic in its immediate effects, we may without difficulty reconcile nearly all the contradictory results so far obtained if the individual researches are carefully studied, and as a result of such reconciliation reach the absolute conclusions so necessary in so important a subject. The conclusions are as follows, namely, that after its primary effect on the vaso-motor system, the dominant action of chloroform is certainly upon the respiratory centre in the medulla, and that this effect is the cause of death in most cases of chloroform accident. Not only does nearly all experimental work teach us this, but in a collective investigation made by me some time since as to the cause of death in man under chloroform, nearly every case reported was found to have suffered primarily from respiratory arrest. These statements are based first upon the report made by myself and my assistant, Dr. Thornton, to the Hyderabad government in India, and upon the confirmatory, but entirely independent, studies of Randall and Cerna recently completed in Texas, in which these investigators took up the study to prove that our studies were erroneous, and were forced to admit that death is due to respiratory failure.

Believing, then, that death is generally due to this cause when chloroform is given, it is incumbent upon the anæsthetizer to watch the respirations, both because death creeps on in this way, and also because the rapidity and depth of breathing governs the dose of the drug, for the dose is not the amount poured on the inhaler but the amount taken in vapor into the chest. Lawrie's assertion that chloroform should be given only while the respirations are regular, and withdrawn as soon as they are stormy, is most wise.

While I believe the respiratory action to be the dominant one in producing death as a rule, no one who has studied the effects of chloroform can deny that death may occur under its influence, in cases which are diseased, by its cardiac effect Any shock may kill a case of cardiac disease, and it is natural, therefore, that any drug which possesses the peculiar influence of chloroform over the heart may be prone to cause death in this way.

In other words, supposing that the amount of depression from very full doses of chloroform equals 25 units, this amounts to little in the normal heart; but if the heart be depressed 25 additional units by disease, the depression of 50 units may be fatal, particularly if to this 50 is added 25 units more of depression through fright and cardiac engorgement, through disordered respiration or struggling. That true depression of the heart-muscle may take place under chloroform seems to us most undoubted, as we think that the tracings in every research that we have seen support this view. There is always a decrease in cardiac power manifested by the decrease in the force of the individual pulse-beat, and this passes away only if chloroform is removed

early enough. We also agree with McWilliams that from the very first inhalation of chloroform there is a constant tendency to cardiac dilatation.

Closely associated with influence of chloroform on the vital functions, is its influence upon the blood-vessels, which, as already stated, is its primary and dominant effect. This influence I believe to be very much more worthy of attention than is generally recognized. Every physiologist knows that the action of the heart and respiration is greatly influenced by vaso-motor relaxation. The gasping respiration of sudden faintness is probably due more to sudden vascular dilatation than to direct failure of the heart, and the exceedingly rapid pulse of shock is seen in conjunction with the relaxed blood-vessels so characteristic of this state. The integrity of the vaso-motor system is as necessary to life as the integrity of the heart, since it is under the government of this system that the cardiac mechanism is active and the vital interchanges take place throughout the body. Acting upon this belief I have found both in the laboratory and at the bedside that atropine enables more chloroform to be given without circulatory depression than can be used if no atropine is administered, and there is good reason to believe that the use of atropine by surgeons for the purpose of stimulating the respiratory function, or preventing cardiac inhibition by irritation of the vagus, in reality prevents dangerous symptoms chiefly by its vaso-motor influence.

For some months I have been interested in studying the condition of the respiration in cases of traumatic shock, and it is surprising to note how death comes from failure of this function in distinction from failing circulation. Further than this, the employment of artificial respiration in these cases will often save life.

Very recently, in cerebral concussion, Horsley has called attention to these facts and has practiced artificial respiration with good results in apparently hopeless cases.

DISCUSSION.

Dr. Kelly.—We give chloroform frequently in the Gynæcological Department, and, although in a very dangerous atmosphere, I also gave it in Philadelphia a great many times, before coming to Baltimore, but always in dread, because Dr. Wood, of the University of Pennsylvania, had said that any surgeon having a death from chloroform should be indicted for murder. The main reason why Philadelphia surgeons are afraid of chloroform is because they do not know how to give it. In abdominal surgery, chloroform is better than ether, as it gives a quiet anæsthesia, rapidly produced, and its after-effects are not so disagreeable. My personal preference, save in cases of grave cardiac complications, as a dilated heart, or where there is failure in compensation, is always for chloroform. As I leave the choice of the anæsthetic, however, to my anæsthetizers, I find that in a large majority of cases they select ether. I never ask an assistant to give chloroform who is averse to it, especially if he has not been accustomed to its administration. The man who administers chloroform should be afraid of his anæsthetic. He should watch his patient closely, and constant attention should be given to respiration, pulse and general appearance. Since the results of Dr. Hare's researches have been published, in which he proves that the respiration is the important factor, and fails first before the heart, we pay more attention to the respiration than before.

Regarding methods of resuscitation, I have found a method of my own exceedingly satisfactory. I have treated about fifteen cases with uniform success by this method, which I believe to be the best for keeping up artificial respiration. I find, too, that I have been following the principle laid down by Dr. Hare—that of the extended and slightly flexed head. On the first indication of failing respiration the administration of the anæsthetic is instantly suspended, and the wound protected; if abdominal, a broad piece of gauze is laid over the intestines under the incision. An assistant steps upon the table and takes one of the patient's knees under each arm, and thus raises the body from the table until it rests upon the shoulders. The anæsthetizer, in the meanwhile, has brought the head to the edge of the table, where it hangs extended and slightly inclined forward. This position is similar to that described by Dr. Hare, and resembles that taken by the runner when he is breathing hard. The patient's clothing is pulled down under her arm-pits, completely baring the abdomen and chest. The operator, standing at the head, institutes respiratory movements as follows: inspiration by placing the open hands on each side of the chest posteriorly over the lower ribs, and drawing the chest well forwards and outwards, holding it thus for about two seconds; expiration, reversing the movement by replacing the hands on the front of the chest over the lower ribs and pushing backwards and inwards, at the same time compressing the chest. The success of the manœuvre will be demonstrated by the audible rush of air in and out of the chest.

The heart and pulse should be constantly watched. As respiratory movements are continued, a little flickering pulse-wave will be observed at the wrist, which shortly becomes faint and regular, and gradually increases in strength. From ten to thirty of these acts of induced respirations will usually suffice to excite voluntary respiratory movements, which begin with short, jerky, gasping breaths, becoming louder and then regular. The movements must

then be timed to suit the natural efforts. As the depth of inspiration increases, the color slowly returns, the pupils contract, and the danger is past. In women with contracted, fusiform chests (tight lacers), this procedure is not available; in such cases respiration should be induced by direct antero-posterior compression of the chest by placing one hand on the lower third of sternum, and the other on the back opposite the first, and alternately squeezing the chest and relaxing the pressure, when air will be audibly forced in and out, and the patient revived as by the previous method; it also fails in a rigid old chest.

The suggestion which Dr. Osler once made concerning the use of external heat during the administration of an anæsthetic in a prolonged or a severe operation, is a very important one. Dr. Osler especially impressed me with this fact two years ago on his return from London, where he had seen Horsley conduct his experiments in brain surgery on monkeys which were kept on a warm table during the operations. Horsley lays especial stress on keeping up the body temperature, to prevent shock. Following this suggestion, I have recently had narrow hot water bags made, three feet long, which we keep in the operating room, and in case the operation is to be prolonged, or the patient is feeble, we place one on either side of her body and an ordinary water bag at the feet. I am indebted to Dr. Hare for several important hints, especially concerning the use of atropine in cases of disturbed respiration. I am also glad that he has placed the principle of the proper position of the head upon a scientific basis.

Dr. Osler.—With reference to the position which Dr. Kelly puts the patient into, I will mention the very interesting experiments made in Dr. Sanderson's laboratory in Oxford by one of his assistants upon the influence of position on blood pressure. With a very carefully adjusted turn-table, the blood pressure was found to rise immediately as the lower extremities of the animal were raised.

Dr. Halsted.—I am pleased to hear what Dr. Hare has said, and I am sure that the position of the head which he advocates is the correct one. It is the position which we always use. We have learned to use it from experience. Dr. Hare said, "Now you have got the position," when I was testing on the cadaver our position in order to see whether or not it opened the glottis. In pulling the jaw forward as we do it, one necessarily extends the head. In anæsthetizing a patient we always catch the jaw close to the condyle and press it as strongly forward as possible, and so keep the glottis open. If this is properly done it will never be necessary to pull the tongue forward with an instrument. It is not, therefore, the extending of the head which opens the glottis. If we were to extend the head by pulling the ears we should not open the glottis. The extension of the head is simply incidental to the drawing forward of the jaw. I agree with Dr. Hare when he suggests that we might make use of atropia oftener than we do. It is a drug upon which we can rely to increase arterial tension. But morphia is a vaso-motor depressant and lowers arterial tension; hence I do not use it in conjunction with ether. I am afraid of chloroform, and do not use it. In Germany, where they certainly ought to know how to give it, where they use it almost exclusively, and write a great deal about the proper method of administering it—giving it drop by drop, a drop with each inspiration—they have had more deaths this year than ever before from chloroform, 1 to 1,600 or 1,700, according to Gurlt's statistics. For the last ten or twelve years, Gurlt has, as you know, gathered statistics from the different German universities. The usual mortality is 1 to 2,200 or 2,300. This year from every university in Germany, almost without exception, the mortality from chloroform has been greater than for many years. This is very remarkable unless the manufacturers of chloroform are to blame. One death should be enough to deter a man from ever using it again. Dr. Lange took Dr. Kelly's attitude for a good many years, then he had a death on the table and said that he would never give chloroform again. It is perhaps possible to give morphia in so small a dose that it may for a few moments act as a vaso-motor stimulant and increase the arterial pressure, but in moderate, and particularly in large, doses it lowers arterial tension most pronouncedly. These statements are supported by the highest authorities, and I take pleasure in calling Dr. Hare's attention to them.

Dr. Hare.—A characteristic symptom of the first stage of opium poisoning is a slow, full and strong pulse, and, therefore, the arterial pressure must be high.

There are one or two points raised in the discussion that I would like to speak of.

I thoroughly agree with Dr. Kelly, although I am one of the much maligned Philadelphians in this instance, when he says that many persons don't know how to give chloroform in Philadelphia. In two of the cases in which I have seen accidents occur, the chloroform was given very much more as if it was ether than if it were chloroform; and in the last case I saw, after the woman was once resuscitated, the resident physician two minutes later pulled the napkin over the patient's mouth and poured on about ½ ounce of chloroform, so that her pulse was lost at the wrist and her breathing stopped a second time.

In regard to atropine, I think we do not use large enough doses of this drug. When I was a student, a proper dose of atropine was 1-250 gr., and of strychnine 1-160. Now some surgeons

give as much as $\frac{1}{6}$ gr. of strychnia, and atropine in the dose of 1-100 to 1-500. Atropine is a better drug than we think it is, and does not get the credit it ought to have, simply because we do not give it in large enough doses. One one-hundredth of a grain would be a very proper dose, and I have given myself, in cases in which I had reason to believe there was a condition of vaso-motor relaxation, very much larger doses, proportionately, than this. In a child of eight months, I have given 1-150 gr. of atropine twice in eight minutes, and I believe that it saved the child's life

This leads me to emphasize one other point which I am almost afraid to speak of, because I have emphasized it so often, particularly to the students of Jefferson College; I am confident that we let many cases die on account of vaso-motor relaxation. When you see the diagrams in the books on physiology, of the enormous area of the vascular system when relaxed, and the capacity of it as compared with the arteries and veins, and when you read of the influence of vaso-motor relaxation in producing tachycardia and cardiac exhaustion, then you can appreciate the importance of the vaso-motor system in maintaining life. In pneumonia, when you have a very feeble and very rapid heart, don't think that because the htart is rapid digitalis should be given. It is extraordinary the way the action of the heart will improve just as soon as you develop the normal resistance of the vascular system. The heart working against a relaxed vascular system is in a worse condition than when working against a vascular spasm, such as we have in chronic nephritis.

(To be continued.)

MEDICAL TREATMENT OF THE DISEASES OF THE STOMACH.

(Concluded from March Number)

Excess of acid, however, is more frequent. Its over-secretion may be due to chronic gastritis, ulceration or neurosis. In some instances it is due to a chronic dyspepsia, depending on the abuse of tobacco or of alcohol, or both. With the exception of the cases of over-acidity from ulcer which yield a local pain, that excess is characterized by a more extensive pain than is attributable to a local lesion. Whatever excites the gastric secretion must be avoided. Instead of choride or bicarbonate of sodium, of aromatics, of acids, give nitrate of silver 1 to 3,000 to 6,000, in tablespoonful doses, also some opium. If a purgative be required, give sulphate of sodium. Not infrequently the over-secretion of hydrochloric acid accompanying the first stage of a subacute gastric catarrh gives way, in the further stage, to under-secretion. In that case the treatment of the catarrh, including irrigations, is indicated.

The treatment of ulceration will be referred to later.

The neurotic cases require slow eating to avoid suddenness of secretion, more animal food but no fat, no carbonic acid, and the treatment of the neurosis of the stomach, which will be detailed later on.

In all cases antacids are indicated, such as prepared chalk, bismuth, or magnesia, but they are liable not to have the same favorable effect as when they are given when the secretion is not of hydrochloric but of butyric acid, which is the principal and most objectionable result of undue fermentation. The presence of this acid is an obstacle to digestion and ought to be neutralized before food is taken. Magnesia must be given ten minutes before a meal in sufficient doses. Quite often the presence of this acid accompanies a chronic catarrh with insufficient gastric juice. Thus I frequently, after giving the antacid before every meal, administer pepsin and dilute hydrochloric acid toward the end of, or after it.

Round ulcer of the stomach requires, theoretically speaking, absolute rest of the stomach until the ulceration can heal. That indication cannot be filled. But the only food endured and permissible is milk, not to be drunk, but eaten with a teaspoon. It ought to be boiled or sterilized, and the stomach kept alkaline. Magnesia can be taken in daily doses of two or three grammes for some time without giving rise to diarrhœa. If larger doses of alkali than the above be required, and diarrhœa be feared, bismuth may be added from two to four grammes a day, or prepared chalk, or phosphate of lime. It is desirable to take no carbonate, not even the sodium salt, in order not to inflate the stomach. The total daily amount must be given in eight or ten doses. They may be so arranged as to precede by a few minutes the meals, which ought to be small but frequent. Opiates will enforce rest, and are, in the beginning of the treatment, in doses of from 10 to 15 milligr. every two or four hours, almost indispensable. Irrigation ought to be avoided as a rule. I have, many years ago, irrigated with a high dilution of nitrate of silver. Bismuth subnitrate has been thus used, but instruments are dangerous inside an ulcerated stomach, and bismuth taken internally will probably cover the sore surface as well as if throwh in when suspended in water.

The vomiting and neuralgia of neurotic persons are frequently the despair of the physician. They are as curable and incurable as other symptoms of hysteria. By attending to the person you may conquer the organ. So the medicinal and hygienic armamentarium will be in pressing demand. Opiates ought to be avoided if barely possible. Cocaine

has been recommended very highly; I cannot say that I have seen it do much good. It has been customary to employ cerium oxalate, mainly, in the vomiting of pregnancy; nitrate of silver has failed me entirely in these cases. Three remedies have often aided me. One is the tincture of iodine, in half to one drop doses every one, two or three hours, the other is arsenious acid, in doses of one-third or one-fifth of a milligramme every two or three hours, and zinc, either the valerianate from seventy-five to one hundred and twenty-five centigrammes daily in divided doses, with or without bismuth, or the oxide in four or six daily doses of from two to 5 centigrammes each. Menthol and alcohol (1 to 10) applications to the præcordia have sometimes proved successful. In the vomiting of pregnancy, wine of ipecac, one drop every hour, has given satisfaction. One of the symptoms of stomach neurosis is rumination, regurgitation of part of the food taken. Though the symptom be by no means rare, I do not remember a case, in adults or children, but exhibited quite an array of neurotic symptoms. Thus general tonics, sea-bathing, cold ablutions and frictions, strychnia, zinc, ferri carbonas, are the remedies required. Electricity—the interrupted current—will sometimes prove effective, one electrode over the neck, the other over the epigastrium. Often the metal brush, short applications, works better than the wet sponge.

There are other cases of vomiting having their origin in distant parts. Chronic peritonitis with adhesions will result in obstinate constipation. Now constipation, from whatever cause, is liable to give rise to obstinate vomiting, extending over many weeks, even months. I have seen them relieved by purgatives and rectal irrigations. *Qui bene purgat bene curat.*

When vomiting attends acute gastric catarrh, and is so persistent as to render both feeding and medication impossible, calomel, given in sufficient doses, will be absorbed in the mouth, and have its full effect as a purgative. Now and then leeches, ice, hot fomentations, dry cupping, may relieve the gastric congestion or irritability. When food is thrown up after being taken, a small dose of morphia on the tongue, in solution or in tablet form, five or ten minutes before eating, will make it endurable. In this way even anæmic vomiting can be moderated.

In cases of protracted fermentation in the stomach, attention must be paid to the foods and other ingesta; among the latter too the swallowed secretion of the nose and pharnyx. Many a case of putrid dyspepsia can be effectually cured in the nose and mouth, Irrigation of the stomach with water, salt water, salicylic acid 1 to 1,000, thymol 1 to 2 to 3,000, or hypermanganate of potassium 1 to 2,000 will find their indications. But they cannot be employed forever, and in most cases the powers of the stomach will not be restored by them. Among the anti-fermentatives I mostly use is dilute hydrochloric acid. Thirty or forty drops in a quart of water, will form an appropriate drink through twenty-four hours. Bismuth and its phenol combinations act very well, but not by themselves alone. Creosote in daily doses of from eight to twenty-five drops, creolin in similar doses, plentifully diluted, act very well. So does hypermanganate of potassium, 1 to 2,000, in frequent teaspoon or half tablespoonful doses. Resorcin, from seventy-five to one hundred and fifty centigrammes a day, divided into four or six doses, one to be given fifteen minutes after meals, and now and then between, mixed or not with bismuth; bicarbonate of sodium acts very well. Calomel acts better on the intestine than on the stomach. Chlorine, iodoform, and napthaline have been given for the disinfection of the stomach. But stomachs which require disinfection are generally too irritated and irritable to tolerate just these three. Aromatics may be given. Fennel and mints have been added to the "National Formulary." They are pleasant and efficient additions to bismuth, calomel etc., in children's ailments.

HÆMORRHAGE.—No sounding, no irrigation. Seldom will the stomach as much as tolerate chloride of iron or acetate of lead. Besides, in the doses which can possibly be introduced, they do as little good in hæmorrhages from the surface of the stomach as another integument. Avoid the internal use of alcohol or carbonated waters; avoid even water. Ice internally may do good by contracting the stomach; its direct influence on the bleeding vessels can be but trifling. Ergot preparations may be employed under the skin. It is desirable to keep the stomach contracted by a heavy ice-bag, which acts both by its weight and its temperature. The body must be kept at rest, recumbent; if any food be permitted, that will be iced milk in small quantities. Bismuth subnitrate is probably the only thing which is both tolerated and useful. Rest can be procured both to mind and circulation through the hypodermic use of morphia.

Cancer of the stomach, both near the pylorus and on the wall of the organ, has more indications than successes. We shall hear to-night of what surgery feels like doing, and in quite a number of instances has succeeded in doing, for cases the nature of which could be exactly diagnosticated by the presence of a perceptible tumor, by decrease of strength and weight, scantiness of urine, etc. May be we shall even be told that ulceration and severe hæmorrhages demand and permit surgical interference. Before that, however, there will be other indications. Loss of appetite may be benefited by bitters, nux, calumba, and, best of all, condurango. Anæmia requires mild preparations of iron; constipation, a vegetable purgative, but no saline;

pain, morphia internally or subcutaneously, but no chloral hydrate, which must be avoided in all conditions of irritability; eructatation, charcoal or creosote; vomiting, morphia, creosote, hydrochloric acid.

Can we do more than simply treat the secondary symptoms? To a certain extent we can. A hundred cases of carcinoma which have come under my observation within these five years convince me of the efficiency of methylene blue. There are but very few patients but, if we commence giving small doses, say one to two grains daily, tolerate it well, and very few but are relieved and improved by it. I am not the only observer who has seen large tumors in any part of the body reduced in size by it, and smaller ones rendered almost imperceptible. If we cannot preserve life to threescore and ten, we can prolong it.—A. Jacobi, M.D., in *Med. Rec.*

NEURALGIÆ.

It is quite astonishing how many women suffer from various neuralgiæ, how severely they suffer, and how difficult it is, without understanding the apparently unlikely causes of the complaint, to cure them. Here is a case which is, in its way, very typical of many. She complains of violent neuralgic attacks which either affect, she tells us, the right breast or the right eyebrow and eye. Sometimes the pain is in one position, sometimes in the other. But, she says, that she is hardly ever free from it in one or the other position, though she rarely has pain in both sites at the same time; and at present, she has the forehead neuralgia. You see, upon examination, that her teeth are fairly sound, that there seems to be no marked caries of any tooth, and she assures us that she has been sent by several doctors to the Dental Hospital, and has always been told, there, that her teeth are not at fault. You are doubtless aware that in many women this neuralgic pain over the forehead is associated with some defect in the ocular muscles, and I have seen a good many cases in which a persistent pain in the forehead, even over one eye, has been cured by the use of appropriate spectacles. As a matter of fact, when the eye accommodation is at fault, I believe the headache is more commonly of a dull, aching character, and is referred to the whole forehead. But in this patient there appears to be no disturbance of sight at all. To prevent the chance, however, of any error, I will send her to an eye hospital and ascertain if there is any local reason for this neuralgia. There appears to be no disease in the right nostril, and, as you know, neuralgia sometimes arises from such a cause. Her ears are perfectly normal, her hearing is unaltered; in other words, there appears to be no local cause for this neuralgic pain. Now, in the breast there is a small adenoma, but it is in the left breast, not the right; she complains of no pain from it, and it is quite small and harmless. In the right breast, there is absolutely nothing abnormal. So far as her chest goes, there is no evidence of any pressure from an aneurism or an intra-thoracic growth, which, of course, are well recognized causes of nerve pains. The breath sounds are perfectly normal, the heart sounds are clear and healthy, the apex beats in its normal position, the action is perfectly regular. Now, it would hardly at first sight, perhaps, occur to you that there could be any uterine cause for the trouble, but if you remember the intimate connection which exists between the uterus and the breast, and I would add, which appears also to exist between the ovary and the eye, you will, in such cases as these, make a careful vaginal examination. It is by no means uncommon to find in women suffering from some chronic disease of the ovaries, neuralgic pain referred to the eye of the affected side, just as it is equally common to find breast pains associated with chronic uterine mischief.

Examination of the pelvic organs of this patient shows that she has a large sub-involuted uterus, and an enlarged, hard, prolapsed, and very tender ovary, and further inquiries elicit the fact that ever since her last confinement, four years ago—during which time, we now learn, she has suffered from this neuralgia—she has had a more or less constant throbbing and dragging pain above the right groin; in other words, she is suffering from chronic ovaritis. It is quite likely that she has had one or more abscesses in the ovarian tissue, and that these have set up more or less inflammatory thickening in the gland. Certainly the prolapsed condition of the organ, and the consequent interference with its blood supply, must have tended to produce a chronic congestive condition of the ovary, and this has doubtless been intensified by recurring attacks of pain and irritation from pressure in coitus on the prolapsed organ. The treatment, therefore, which I propose to adopt for the relief of her neuralgia is twofold. We must improve her general health, which is evidently considerably deteriorated, and we must treat, and endeavor to remove, the local condition and cause of pain. Now, for the first indication, there is nothing equal to cod liver oil combined with hypophosphites, and an occasional dose of bromide of ammonium and antipyrin if the pain is excessive. The tonic will have to be taken regularly for some time, and you hear from her that we have probably been in this matter already forestalled, because she says she has received a syrupy tonic from one hospital—perhaps the syrup of the hypophosphites—and at another was ordered to take cod liver oil; and she tells us

that neither treatment did her any good. Still, the principle is correct, and we will ask her to persevere with these combined medicinal measures. Meanwhile, what can we do towards improving the local condition? Now, in order, first of all, to remove the ovary from harm's way, and to restore it as far as possible to its right position, nothing is so useful as a thick ring pessary large enough to encircle the cervix well, and at the same time to lift the ovary up, without so far encroaching on the vaginal wall as to cause pressure thereupon. The immediate relief which this appliance affords in many of these cases is very great, and here you observe that a No. 2½ ring is sufficient for the purpose, and that with this in position, the ovary cannot be felt. The next item of treatment is the use of frequent injections of Condy's fluid and hot water, which will soothe and greatly relieve the ovarian congestion. I have also found blisters frequently repeated above the groin of the affected side give very often good results in some of these cases; and we will tell her to paint such blisters for herself, each about the size of a half crown, to be repeated twice a week, each time, of course, over a different surface. In many of these cases, the improvement which follows this line of treatment is speedy and very marked, and the curious connection between the local cause and the far-off pain is sometimes shown by the disappearance of the distant neuralgia, and the onset of pain at the site of the actual causative disease. So I have known patients lose their neuralgia in the breast or eye and complain of a dull aching pain over the affected ovary.*

Here is another case, which is very similar to the one we have just seen. She came here about three months ago complaining of neuralgic pains in the breast. There was nothing abnormal in the gland, but she was suffering from an ovarian tumor. She was taken into the hospital, and the cyst was removed, and now she has merely come to report herself. She is much stouter and stronger than she was, and has had no pain since the operation—in fact, she appears to be, as she expresses it, "quite cured."

Last summer, I saw a lady who had for some months been suffering from violent intercostal neuralgia. She had been placed under the care of an eminent specialist, on the supposition that there was some deep-seated thoracic mischief. The pain in the intercostal space became so excruciating when she stood up, that for some time she had been confined to her couch. She improved under perfect rest and tonic treatment, and it was quite an accidental circumstance which led to my being asked to see her. When I examined her, however, I found that the left ovary was greatly enlarged, cystic, and tender. She was suffering, in fact, from a quickly growing ovarian cyst. Leeches over the left groin relieved the intercostal neuralgia almost at once, and hot injections and glycerine plugs, with a continuance of the same tonic she was previously taking, were sufficient to relieve the pain, and she only suffered from occasional attacks. The cyst, unfortunately, continued to develop, and about three weeks ago it was removed, and since then she has been entirely free from the pain in the chest. I do not offer any explanation as to the reason for this pain, or as to the precise connection which exists between ovarian disease and intercostal neuralgia; but it is a practical point of very great importance, to which I would direct your earnest attention, that in a large number of cases of ovarian disease this intercostal neuralgia is a troublesome symptom. It is a matter which, so far as I know, is not referred to in the text-books at any length, but of which you will, doubtless, find cases in your practice amongst women. As a general rule, I believe these patients are out of health, and in one instance at least which I can recall to mind, the neuralgia occurred on the right side after a blow, although it persisted for weeks after the resulting bruise had disappeared, and, indeed, was not cured until measures had been taken to relieve the ovarian trouble which had been previously in existence, but which had not until then caused the neuralgic pain.

Finally, while on this subject of intercostal neuralgia in women, I would narrate a case which is typical of many. A well-known literary lady, who had been working against time in order to produce a book demanded by her pub lishers at a certain date, who had had comparatively little sleep owing to her anxiety to accomplish her task, and whose health and nervous system had in consequence suffered considerably, was, just as she passed her final proofs for press, seized with a violent attack of intercostal pain. It was one of the worst cases that I have seen. It kept her awake at night, and it gave her no rest by day. Injections of morphia, which her doctor had employed, while lulling the pain for a short period, seemed, as she expressed it, to make it return each time even worse than before. There was no uterine disease in this case at all, but when I saw her I was struck with the distended condition of the abdomen, and found the rectum and the colon enormously loaded. It required large injections of olive oil and soap and water, and, next, repeated doses of castor oil, before the colon could be cleared; and then the pain immediately disappeared. In this case, and in others of a similar nature, one is sometimes put off one's guard by the statement that there is no constipation, and by the fact that the rec-

* This patient rapidly improved under treatment, and the neuralgia quite disappeared in about three weeks.

tum appears to be quite empty. But, in women of sedentary habits, especially if over-busied with brain work, with the inevitable deterioration of the general health and physical strength from which such women suffer, it is by no means unusual to find the colon to contain hard, dry, black masses of fæces, which have evidently lodged therein and remained stationary, even although the intestine appears to have maintained, to some extent at least, its normal peristaltic action. And, in these cases, intercostal or abdominal neuralgia is of frequent occurrence, and nothing will cure this until repeated small doses of castor oil and repeated large enemas of soap and water have cleared the colon, which was supposed to have been previously empty, of hard, black scybalous masses. But this simple measure will often permanently remove most severe neuralgic pains which may have lasted, without relief, for days or weeks, and which may have been intensified, as one can easily understand, by morphia injections, or by the routine administration of antipyrin or nerve tonics. In fact, without going further into this matter today, I would ask you to remember this fresh illustration of a practical fact of the first importance, to which I have frequently called your attention, that the condition of the colon in women is very frequently the clue to some of the most obscure pains and to some of the most troublesome, but most common, complaints to which the sex is liable.—Bedford Fenwick, M.D., in *Hosp. Gaz.*

THE EARLY SIGNS OF LOCOMOTOR ATAXIA.—According to Professor Fournier, the first symptoms of locomotor ataxy may be classed as follows: (1) Sign of Westphal; (2) sign of Romberg; (3) the "stairs" sign; (4) crossing of the legs; (5) walking at the word of command; (6) standing on one leg.

(1) Westphal's sign is well known; it consists in the abolition of the patellar tendon reflex, and is present in two-thirds of the cases.

(2) Romberg's sign can be thus appreciated: The eye is an indirect regulator of motion; it helps to correct deviations in walking and maintains the equilibrium. When a patient is suspected of incipient ataxy, it will often suffice to make him close his eyes when in the erect position to verify the diagnosis. In a few instances his body will oscillate, and if the malady is somewhat advanced he will be in danger of falling.

(3) The "stairs" symptom. One of the first and most constant symptoms of incipient locomotor ataxy is the difficulty with which the patient will descend stairs. If questioned closely on the subject, he will say that at the very outset of his malady he was always afraid of falling when coming down stairs.

(4) The manner in which a patient crosses his legs is often significant. In the normal state a man when performing that act lifts one leg simply to the height necessary to pass it over the other, whereas in the affection under consideration he lifts it much higher than necessary, describing a large segment of a circle.

(5) Walking at the word of command. The patient seated is told to get up and walk instantly. After rising he will hesitate, as if he wanted to find his equilibrium before starting off. If while in motion he is told to stop short, his body, obeying the impulsion, inclines forward as if about to salute, or, on the contrary, he jerks himself backward in order to resist the impulsion forward.

(6) The patient is asked to stand on one leg, at first with his eyes open, afterwards closed. Although man is not made for this position, yet he can balance himself pretty firmly for a little while. The ataxic will experience a great deal of difficulty, and will instinctively call to his aid his other foot so as not to fall. If his eyes are closed he will not be able to stand one instant, and if not held he would fall heavily to the ground. Such are the symptoms of incipient locomotor ataxy. They will not be all present frequently, but they should be all sought for in order to avoid an error which might have grave consequences.—*Practitioner.*

TREATMENT OF ACUTE INFANTILE ARTHRITIS OF THE HIP.—The treatment of acute artritis resolves itself into two things: (1) that directed against the general septicæmia; feeding and stimulating, including both alcohol and cardiac stimulants; and (2) the local treatment, rest, free incisions, disinfection, and drainage of any and all pus cavities. The acute general sepsis is generally present before it is possible to know that there is pus in the joint. At this stage, feeding at absolutely regular and proper intervals must be insisted on, the mother's milk being, of course, the best food for small babies. I have given brandy, ten drops every two hours, and one drop of tinct. digitalis in the alternate doses to babies as young as two months, after an operation; and there is every reason to push both the food and stimulants from the very beginning in these cases. The local treatment must include rest of the painful hip before as well as after the operation; the Cabot frame affords good fixation, and allows inspection of the limbs, which a plaster bandage does not do, although the latter method has been used, as also extension in bed on an inclined plane. The Cabot frame, if properly guarded with rubber tubing and rubber cloth or oiled silk, is also preferable after operation, on account of the frequent soaking of a plaster spica with urine. The limb should in the early days be put up in a comfortable position, usually semi-flexed. As soon as cellulitis or great tender-

ness in the tissues about the joint gives rise to a fair presumption that there is pus, a free incision should be made (preferably following one of the lines for excision of the hip) and the capsule opened; and should no pus be found, it does no harm to look for it by deep incisions into the cartilaginous epiphysis. If, however, large abscesses are found, the cavities, according to Gibney, should be carefully curetted and disinfected; and this should always be done unless the baby's condition is bad enough to make great haste necessary.

After reducing a dislocation of the hip, the leg should be dressed on a straight Cabot frame, or a long plaster, spica bandage may be applied. A moderate amount of extension is advisable, as it assists in keeping a baby's hip at rest.

Stimulants, I believe, are usually required, but no rule can be definitely laid down for their use. Every precaution should be taken during the operation to avoid shock.—Thorndike in *Boston Med. Jour.*

KEEP YOUR MOUTH SHUT.—Dr. A. W. Davis thus writes in *The Healthy Home:* "Four or five hundred years ago," says *Science Siftings*, "there was a superstition common to Europe that the devil was always lying in wait to enter a man's body and take possession of him. Satan generally went in by the mouth, but when he had waited a reasonable length of time and the man did not open his mouth, the devil made him yawn, and when his mouth was open jumped down his throat. So many cases of this kind occurred that the people learned to make the sign of the cross over their mouths whenever they yawned, in order to scare away the devil.

"The peasantry in Italy and Spain still adhere to this method, but most other people have dispensed with the cross sign, and keep out the devil by simply placing the hand before the lips. It is a remarkable survival of a practice after the significance has perished."

As we pass people in the street, watch them at their work in church, and in society, probably half of them have their mouths open. The old superstition was probably well grounded—the devil of ill-health is very likely to enter at the mouth. Particularly is this true when the season advances towards winter, and the difference between the outside air and the bodily temperature becomes steadily greater.

The sinuous nose passage, with its fringe of hair, is meant to warm and strain the air before it enters the sensitive lungs, No wonder the mouth-breathers are liable to colds and pneumonia, especially when they keep up the practice, as a rule, both day and night. In fact, many who are innocent during their waking hours are determined sinners against good taste and good health by defiantly opening the mouth in sleep. It is more than an annoyance to be a snorer; it is a serious misfortune.—*Ann. of Hyg.*

EFFECT OF THE LOCAL APPLICATION OF GUAIACOL IN THE REDUCTION OF THE TEMPERATURE IN TYPHOID FEVER.—Dr. H. G. McCormick (*Medical News*, Jan. 19, 1895), had it applied 273 times under his direction. The method was as follows: The right iliac region was thoroughly cleansed with soap and water, and, after being dried, the guaiacol was slowly dropped upon the part and thoroughly rubbed in for from ten to fifteen minutes. The part was then covered with oiled silk. The preparation used was that of Merck., and it did not fail in a single instance. He concludes: 1. That guaiacol when locally applied is certain to reduce temperature. 2. That with the care that a physician should always use in the administration of drugs, it is absolutely safe. 3. That chills will not occur if the temperature is not reduced below 100 degrees Fahr. 4. That no deleterious effect is produced upon any of the organs by its use. 5. That it is easy to apply, and can be used by any one competent to nurse a typhoid-fever case. 6. There are no depressing effects following an intelligent use of the drug. 7. That by continued use the dose can be gradually lessened. 8. That it is far superior to the cold bath; that it can be used by one person; that no appliances are necessary for its use; that it is much more pleasant for the patient; that it is fully as effective; that patients are not subjected to the danger of moving, and they offer no resistance to its use. He says he has obtained good results from baths and cold packs, but, after his experience with guaiacol, has no desire to return to either of them. A tabulated report of several cases, giving the temperature, pulse and respiration, as affected by the application, is given. The largest dose used was 25 drops; the smallest, 2 drops; dose was usually 10, 15, or 20 drops; the 20 drop dose appearing most frequently in the table.—*South. Cal. Prac.*

INTESTINAL ANTISEPSIS.—Dr. H. Huchard, of Paris, in a recent lecture recommended the administration of the following powders to secure intestinal antisepsis, *Med. Rec.*: ℞ Benzonaphthol, ʒ vjss.; powdered charcoal, ʒ ss.; pancreatin, grs. lxxx. Mix and divide into fifty powders. Sig.: Take from four to six powders a day.

DID the Indiana preacher libel all womankind, or has his experience with Indiana women been such as to justify him in making the following assertion in a sermon? "God made the earth in six days, and then rested; then he made man, and rested again; then he made woman, and since that time neither God nor man has had a rest."—*Med. World.*

THE INTRA-NASAL USE OF COCAINE.

To the surgeons who are old enough to have had some experience in minor surgery previous to the use of cocaine as a local anæsthetic, some of the cases of cocaine poisoning frequently reported in medical journals must assume somewhat the character of the ludicrous. The author has been unfortunate enough to have observed all the symptoms of cocaine poisoning follow an operation in which cocaine had not been employed.

Certainly in his experience before the advent of of cocaine as a local anæsthetic, syncope sometimes followed the simple incision of a boil or an abscess or even vaccinating a patient; and in the case of a male or female, a hysteric, several hours sometimes elapsed before the heart-beat assumed its normal character, and days before the patients were willing to admit that they were as well as usual.

The absence of pain during an operation does not in all instances prevent syncope. Most fainters when questionad say that it was not pain, but rather thoughts about the operation or the sight of blood that caused the attack. Indeed, my personal experience would seem to indicate that syncope was equally liable to occur with or without local anæsthesia during a minor operation. and that the absence of pain would not always prevent surgical shock.

The hysterical element in this connection should receive due consideration. Prof. A. H Cleveland, of the Medico-Chirurgical College, who, like myself, has used cocaine anæsthetics extensively without having observed a single case of cocaine poisoning, informed me that the nearest approach to anything of the kind occurred in a hysterical woman who after the application of a solution of cocaine to her nasal mucous membrane suddenly became unconscious. Her pupils were widely dilated, her extremities cold, the heart's action rapid and feeble and respiration so shallow and slow that for a time she seemed to have ceased breathing entirely. In fact, the woman presented to an alarming degree for some length of time all the symptoms of acute cocaine poisoning and the case might have been reported as such were it not for the fact that at a subsequent date she was referred to a neurologist and developed identical symptoms during his examination. Precisely simliar symptoms also occurred whilst her eyes were being examined by an oculist.

It would seem the part of wisdom, before reporting a case of cocaine poisoning, to assure one's self hat the untoward symptoms were not *post hoc* rather than *propter hoc* cocaine, and could not more reasonably be ascribed to shock hysteria or a combination of the two, rather than cocaine idiosyncrasy. Of course in cases where a *poisonous* dose of the drug has been administered, there can be little doubt as to the cause of the symptoms of collapse, and some of the cases reported are undoubtedly of this character; and are valuable as a reminder to the reader that cocaine, like other poisonous drugs, should not be employed in poisonous doses.

Great individual susceptibility to cocaine must be somewhat rare, because as the result of inquiry among among men who as rhinologists, oculists or aurists almost daily use cocaine for purposes of diagnosis or operation, I find that the majority of them, like myself, never saw a case in which alarming symptoms had been caused by the judicious use of cocaine for either purpose. It should be borne in mind that the large venous sinuses underlying the thin mucous membrane of the nose, deep urethra and rectum absorb *weak* (2 per cent. to 4 per cent.) cocaine solutions almost as rapidly as if the drug were administered hypodermatically, and hence the minimum fatal dose is probably smaller if a weak solution be sprayed or injected into these organs than if the drug were given by the stomach. The surgeon who sprays the whole interior of the nose by means of a swab, will certainly see cases of cocaine poisoning if the whole amount so used exceeds the three-fourths of a grain for an adult. An equal amount of cocaine applied to the nose in a strong solution will be less likely to produce disagreeable constitutional symptoms because the absorption of solutions of cocaine through the nose, is to a certain degree a self-limited process. When a strong solution is applied, a small quantity is absorbed and produces an immediate contraction of the vessels, so that the mucous membrane becomes almost ensanguinated; after which absorption goes on very slowly, A weaker solution of cocaine produces contraction of the blood vessels more slowly, so that a larger amount of it is absorbed and penetrates the tissues to a greater depth. Hence the application of a dossil of absorbent cotton saturated with a twenty per cent. solution of cocaine within the nose, will produce a more rapid but less deep and profound local anæsthesia than when a four per cent. solution is used in a similar manner.

When applied to the nasal mucous membrane, a solution of cocaine not only produces local anæsthesia, but also diminishes the secretion of mucous, contracts the blood vessels and causes shrinking of the so-called erectile tissues. Therefore it has a therapeutic value in the treatment of nasal disease as well as a use in nasal surgery for purpose of diagnosis or local anæsthesia. In acute rhinitis the discharge and the occlusion the nasal chambers as the result of swelling of the erectile tissue is quickly relieved by placing within the anterior nares dossils of absorbent cotton saturated with a four per cent. solution of cocaine. After the removal of the pledgets of absorbent cotton, the effects of the cocaine application disappear within

an hour and are followed by a decided reaction; so that nasal stenosis and discharge are greater than if cocaine had not been used. Fortunately, however, if immediately after dilating the nasal fossæ in this manner with pledgets of cotton saturated with a cocaine solution, they are covered with the spray from an atomizer containing a four per cent. solution of antipyrine, diminution of discharge and potency of the nasal chambers will be maintained for five or six hours and the application of the cocaine will be followed by no reaction whatsoever. The effectiveness of the application of cocaine and antipyrine to the nasal chambers in acute rhinitis may be further increased by spraying the nasal fossæ with an atomizer containing menthol dissolved in alboline, five or ten grains to the ounce.

At first sight, it would seem desirable to combine the cocaine and antipyrine together in one prescription. As a matter of experience, however, this is not the case, as it is impossible to obtain as good results by spraying the nasal chambers with an atomizer containing both antipyrine and cocaine in solution, although the mixture has decided sedative properties. Unless guarded by cocaine, solutions of antipyrine stronger than one per cent. are decidedly irritating to an inflamed nasal mucous membrane and do not manifest the analgesic effect that they are capable of producing when applied to inflamed mucous membranes in other parts of the body.

In hay fever, cocaine is useful simply as a palliative, and unless its intra-nasal effects be continuously maintained by frequent applications, its employment increases rather than diminishes the patient's suffering because of the reaction that follows its use; while solutions of antipyrine used after cocaine as described above are frequently simply irritating.

In nasal hydrorrhœa, while applications of cocaine check the discharge for a time, spraying the nose at sufficiently frequent intervals with a weak solution of atropia yields far better results. Care must be taken, of course, that a poisonous dose of the drug is not administered in this manner.

The following facts should be borne in mind when cocaine is used within the nose:

1. Local anæsthesia is best and most safely obtained, not by spraying the entire Schneiderian mucous membrane with a solution of cocaine, but by applying the solution on absorbent cotton simply to the field of operation.

2. Within certain limits, weak solutions of cocaine produce deeper and more profound anæsthesia than the stronger, but require a longer time to manifest their full effects, a four per cent. solution being probably the most satisfactory strength for obtaining local anæsthesia within the nose.

3. Solutions of cocaine, when applied to inflamed mucous membranes, do not manifest their effects as quickly and completely as when no inflammation is present.

4. Unless the effects of cocaine are maintained for a considerable time by repeated applications of the drug, its use locally is followed by increased congestion and inflammation when inflammation is already present.

5. When cocaine is used to produce a sedative effect and diminish the discharge in acute rhinitis but more especially in hay fever and nasal hydrorrhœa, it should be employed in solution rather than as a "snuff" made from cocaine crystals powdered with other substances, because the mechanical irritation of a powder tends to increase the existing inflammation and discharge and to counteract to that extent the effects of the cocaine.

6. When a solution of cocaine is used within the nasal chambers, care should be exercised to prevent its reaching the pharynx, where it quickly suppresses the secretions and produces a most annoying sensation of dryness which the patient vainly tries to relieve by frequently swallowing saliva. Except as an application to the tonsils, cocaine is not well adapted for a therapeutic use within the pharynx.

7. When it is necessay to prescribe a solution for the patient to use himself within the nose, some precautions should be used to prevent him forming the cocaine habit. It is well not to inform him of the name and nature of the drug. The morphine habit has been acquired by frequently sniffing a solution of that drug into the nose for the relief of pain, catarrh, etc, and in such cases a solution of cocaine gives so much greater relief from the local symptoms and a great a feeling of buoyancy that the habit of applying cocaine solutions inside the nose is soon established and only with great difficulty abandoned.—E. B. Gleason, M. D., in *Atlantic Med. Week.*

Intestinal Anastomosis by Murphy's Button.—Wiggin (reprint from the *New York Med. Jour.*), in his comments on a complicated case of intestinal obstruction, points out that Murphy's button should be used by surgeons with a proper understanding of its dangers, which are held to be numerous. In the author's opinion, it is somewhat unsurgical. It has been proven by experience that the button may be retained in the intestine, act there as a foreign body, and necessitate a secondary laparotomy for its removal. Murphy's method renders the patient dependent on the craft of the cutter rather than upon the skill of the surgeon, the spring of the button being made at times too strong, and at other times too weak. It is not always possible for the surgeon to lay his hand on a button of the proper size. A case has been reported in which perforation followed the use of a button a little too large for the

portion of intestine united. There is a danger in the weight of the button which may act as an anchor to hold the bowel in a flexed position, and so cause obstruction. There is also a danger of the lumen of the button becoming plugged with hard fæcal matter, thereby causing fatal obstruction. The holes placed at the ends of the buttons for the purpose of drainage may cause perforation, if care be not taken in pressing the segments together. On the other hand, the statistics collected by Wiggin are much in favor of Murphy's method. In 84 cases of intestinal anastomoses of gastro-enterostomy and of operations on the gall bladder, the mortality was 14%, which compares favorably with that of intestinal anastomoses by other methods, which, according to von Baerez, is 24 5 per cent.—In a consideration of Wiggin's objections which is published in this reprint, Murphy states that of the numerous cases in which ais method has been practiced, not a single instance has been reported to him of obstruction due to retention of the button, and he has heard of only two in which the button had been retained. In this case on which Wiggin bases this special objection, the button, it is held, might have been removed by an operation which no surgeon would consider of grave importance. In answer to the objection that in practising Murphy's method the surgeon depends mainly on the craft of the cutter, it is pointed out that he depends also on the silk manufacturer for the silk he uses, and as he tests his silk, he should test also his button. Murphy has sent models to all manufacturers who have requested them, and asserts that he would gladly inspect, and does inspect all buttons sent to him. The fact that defective buttons have been manufactured cannot, he believes, be brought forward as a valid argument against the utility of his method.—*Brit. Med. Jour.*

THE STUDY OF HEREDITY.—In his address before the Abernethian Society, Sir James Paget drew attention to the great gaps which exist in our knowledge of the laws of heredity. Some of the broad facts of heredity are familiar enough, and are indeed too palpable to be overlooked even by careless observers. That gout, cancer, rheumatism, tuberculosis, and insanity, to take a few examples out of many, are often inherited is a well recognized and certain fact, but, says Sir Jas. Paget, "it has never been studied carefully what may be the result when one parent has one transmissible disease and another has another; what comes if one parent is a member of a cancerous family and another a member of a tuberculous family. Do these two diseases in any respect disturb one another? Are they mutually exclusive, or do they mingle together? We know that acute tuberculosis and acute cancer never make rapid progress together; they seem in so far as that to be antagonistic. But what comes of it when they are mingled together by inheritance? Of that I think we certainly know nothing." This is only a specimen of numerous questions which might be put in connection with the subject of heredity, but are for the present without any certain answer. Is heredity more usually through the male or the female? If a son or daughter strongly resembles the male or female parent, will he or she be likely to develop the diseases occurring in the corresponding stock? Why does disease sometimes "skip a generation" only to re-appear with increased virulence? Why does the epilepsy of the parent become insanity in the child, or *vice versa?* How comes it that the female transmits the tendency to hæmophilia, but is herself exempt, while the male who suffers does not usually propagate the disease? We might multiply these queries a hundredfold, but they are sufficient to show how much darkness still envelops so patent and all-important a fact as the inheritance of disease.

Some of the laws of heredity are approximately known, although often their *raison d'être* is inexplicable—as, for example, the law that disease often skips a whole generation and re-appears in the generation that follows. This fact has long been observed, and is known as "the law of atavism." It seems to involve the assumption that an individual apparently quite healthy may contain in his organism the seeds of disease, for example, tuberculosis or cancer, and transmit the tendency to such diseases to his offspring although he has never presented any symptom of them himself. This may be so, but if such a theory be correct it intensifies our conception of the mystery of pathological processes. If it could be shown in such cases that the "latent" seeds of disease (we are compelled to use figurative language in this connection for want of better) remain latent until certain favoring conditions combine to bring them to maturity, the mystery would be materially lessened, but in many cases we have no evidence that such is really the true explanation. It may, however, be regarded as often a probable hypothesis. . . . .

A great deal of work still remains to be done in connection with the heredity of phthisis. It is generally asserted that from thirty to forty per cent. of the cases arising in practice occur in infected families, but it is striking how various are the figures given by different observers. Owing to the great frequency of the disease and the probability of infection, it is evident that many cases of apparent inheritance might be otherwise explained. It would be a great gain to practical medicine if we had decisive evidence as to the influence of heredity upon phthisis on the one hand and the frequency of infection on the other. We are still without any quite satisfactory theory to harmonize the apparently certain facts that

pulmonary tuberculosis is due to a specific bacillus and that it is frequently transmitted by inheritance. Some French observers published a few years ago, evidence tending to show that the actual bacillus of tubercle was conveyed to the offspring through the ovum, but this view has not been generally accepted. Many believe it to be more probable that the patient transmits simply a constitutional delicacy or some peculiarity of the pulmonary tissue which renders the individual more liable to become the subject of bacilliary infection; but it can not be said that we have any certain information on the subject.—*London Lancet.*

AUTO-INFECTION FROM THE BOWEL.—The cause of the so-called spontaneous suppurations have always been a puzzle to medical men and it is only within the last decade that their origin appears to become more intelligible, although the knowledge of their production is still far from being exact. That a furnuncle, or any other inflammatory focus may be the starting point of an abcess far removed from the initial, and often insignificant, inflammation has been demonstrated by well-known observers, and it is plain that such a point of entrance of the infectious material is easily overlooked and often even impossible to determine as it may have escaped the patients' notice and entirely disappeared at the time of examination by a physician.

The present trend of investigation with reference to determining the cause of spontaneous suppurations seems to be based upon the supposition that the absorption of infective material from the bowel is the cause of many otherwise unexplainable metastatic inflammations and it is particularly the bacterium coli whose absorption into the circulation and dissemination throughout the tissues of the body is made responsible for these metastatic foci. The strumitis following typhoid fever and other intestinal affections was, years ago, suspected by Kocher and others to be due to an absorption of bacteria from the bowel, in fact, such bacteria have been demonstrated in the strumitis, and according to Brunner, this absorption of bacteria may even occur from the healthy bowel. It has been shown that bacteria may pass through the intestinal wall and infect the peritoneum when only slight pathological changes are present in the bowel and, in case of the presence of conditions favorable to the development of an inflammatory process, as, for instance, a blood-extravasation, a peritonitis may be the result. Ordinarily the peritoneum rapidly absorbs the bacteria, which are then carried by the circulation to all parts of the body. Well-known observers now claim that some forms of purulent nephritis, pyelitis and cystitis are to be explained by the absorption of bacteria from the bowel, while formerly all such suppurations were attributed to catheterization. Posner and Lewin have lately made experiments having a bearing upon this subject, by tying the rectum of rabbits, after which they were able to demonstrate the bacterium coli in the peritoneum, heart's blood, kidneys and urine. These observers have also succeeded in proving that the bacteria do not directly pass into the bladder and thence into the kidneys, by tying one ureter and showing that the bacterium coli was also found in the corresponding kidney after clamping the rectum. Also upon the injection of the bacillus prodigiosus, which had been selected for this purpose on account of its characteristic color production, this bacillus was found in all the organs of the body.

Although it must be admitted that there may be other sources of so-called spontaneous suppurations, the probability that some of them occur in consequence of the absorption of infectious material from the bowel is, with our present information on the subject, highly probable and many otherwise unexplainable cases of suppuration become comprehensible by this process.—Ed., *Med. Rev.*

INSOMNIA OF CHILDREN AND TRIONAL.—Dr. A. Claus reports his experiences with trional in the insomnia of children, in the *Internat. Klin. Rundschau*, Nov. 11, 1894.

In a case of chorea of three weeks' duration, occurring in a girl six years old, the movements were very lively, and the nights restless and disturbed by dreams. Fifteen grains of trional given ten minutes before sleeping-time secured quiet nights. This dose was continued for eight days, and then for three weeks longer in doses of 7½ grains. In two less pronounced cases of chorea the same result was obtained.

Claus also reports a severe case of nocturnal terrors in which trional had a very favorable effect, and says he has had seven or eight similar cases. The child was two years old. Trional was given in doses of 7½ grains. During the first four or five nights the effect of the trional was not entirely complete. After the sixth day the insomnia disappeared. The trional was continued in the same dose for three weeks, without injurious result. In the following four weeks, a powder of trional was required only twice.

In a case of epilepsy in a child eight years old, with obstinate insomnia, 15 grains of trional secured restful nights, but the epilepsy was not improved.

The writer does not think it necessary to speak of the value of trional in insomnia as the result of disturbance of digestion, respiration or circulation, nor in infectious or toxic insomnias. He has employed it in several cases of gastritis, in dentition and in two cases of insomnia following measles.

As to disagreeable effects, Claus noticed a certain degree of ataxia when ten grains of trional had been given to a child five years old, with

insomnia following broncho-pneumonia. In a case of abscess of the neck, in an infant six months old, 7½ grains produced excitement.

In three cases of incontinence of urine, no result was obtained, but a fourth case seemed to be favorably influenced. Trional should be given a half-hour after the evening meal, or, at latest, fifteen minutes before bedtime. It may be given in hot milk or in a confection, or in honey.

Claus's conclusions are as follows :

1. Trional, in the dose of ⅓ to 22 grains, according to the age of the child, is a brilliant hypnotic. On the following morning, neither headache nor heaviness of the head was noticed. Physiological sleep was favored. Patients do not become accustomed to it. Sleep occurred in ten or fifteen minutes after its administration.

2. Trional has no very pronounced effect upon insomnia, the result of pain.

3. Trional leaves the intellectual, respiratory and circulatory functions untouched, and it has a favorable effect upon digestion.

4. In toxic insomnia, particularly that caused by alcohol, chloral seems to be more active.—*Therap. Gazette.*

SALOPHEN IN RHEUMATIC AFFECTIONS.—It was Dr. Guttmann, of Berlin, who first called attention to the value of salophen in rheumatic affections, and during the three years which have elapsed since the publication of his observations, his experience has been confirmed by a large number of clinicians, both in Europe and in this country. In acute articular rheumatism, salophen has proved as efficient as salicylate of sodium and salol, while superior to them, on account of its complete freedom from toxic effects or irritating action on the gastro-intestinal tract. The other qualities which commend it to the practitioner are its tastelessness and odorlessness, and consequent ease of administration. In chronic rheumatic affections, salophen accomplishes as much as the salicylates, and is better adapted than the latter for continuous use, by reason of its innocuous, non-irritating character. The fermentative processes in the gastro-intestinal canal which occur in subjects having a rheumatic tendency are also promptly arrested by salophen, which is an excellent intestinal antiseptic. Drs. Ciullini and Viti, who have recently experimented with the remedy at Prof. Raimondi's Clinic, conclude : 1. That it is an active anti-rheumatic, better tolerated than salicylic acid and salicylate of sodium, and more innocuous than salol. 2. That it is especially indicated in the initial stages of acute articular rheumatism, and in mild or sub-acute cases. 3. That in obstinate or chronic cases it is advantageous to follow its administration with that of iodide of potossium. 4. That salophen acts as an antifermentative in the intestines and destroys the reaction of indican in the urine. 5. That doses as high as 4.0 to 6.0 gm. pro die, given for several days, do not produce disturbances of any kind. In the treatment of neuralgias, especially those of rheumatic origin, salophen has proved an effective analgesic, and, if desirable, may be associated with phenacetine.—*N. Y. Med. Times.*

HOW TO FIND OUT IF A CASE OF GONORRHŒA IS ACTUALLY CURED.—Dr. Kraft *(La Semaine Medicale,* No. 49, 1894), of Utrecht, Holland, has a very ingenious and at the same time efficacious method of testing whether in a given case of gonorrhœa an actual cure has been obtained. As is known, nothing is more difficult than to be able to say whether a gonorrhœa which has ceased to discharge has really and definitely been cured. The cessation of discharge, the absence of gleet and the agglutination of the lips of the meatus are easily absent while the disease is present, though latent, and still virulent enough to be transmitted by coitus. In such cases the absence of these signs may be the means of placing the physician in an embarrassing position. For example, a patient, who has had a gonorrhœa and is about to marry, asks his physician whether he is completely freed from his disease and without danger of contaminating his wife. In such cases the writer has the patient drink a quart and a-half of beer, while he injects into the patient's urethra a 2 per cent. solution of sublimate. If he is actually cured no reaction follows ; if the contrary is true a discharge will be set up, which sometimes does not appear for forty-eight hours.—*Exchange.*

THE TREATMENT OF NEPHRITIS.—In a lecture reported in the *Medical News*, Dr Costa speaks on this subject. He thinks that the salts of strontium are valuable as diuretics in renal affections, and they are particularly valuable in the acute forms, but do less good in the chronic forms. They do not, according to the writer's experience, act so much upon the structure or tissues of the kidneys as upon its secreting function ; they are admirable diuretics. The claim that has been made by some French clinicians that strontium salts markedly reduce the amount of albumin in the urine, has not been fully confirmed in the author's experience, except that the relative proportion of albumin is greatly reduced by the great increase in the quantity of the urine secreted. There is, however, some light diminution in the amount of albumin, as well as increase in the quantity of urine, especially in the acute forms. Whether in the parenchymatous and interstitial renal diseases these salts act beneficially upon the diseased or degenerated structures, or simply act as diuretics, has not been finally settled ; but they certainly

accomplish more good in the acute than in the chronic forms of nephritis.

To return to our patient. In treating this case we need pay less attention to restricting the diet than in the other cases. This man may have meat and vegetables and a nourishing diet, avoiding indigestible and highly-seasoned articles of food. For his treatment now he shall take bichloride of mercury, $\frac{1}{30}$ grain, in a wineglassful of water three times a day, as a tonic to improve his tissues. This will be the treatment in this case, except that we will see, with the aid of the lactate of strontium, that the urinary secretion is kept free.—*Ther. Gazette.*

A Remedy for Whooping-Cough.—Dr. R. E. Hinman, Atlanta, Ga. (*N. Y. Med. Times*), reports twenty-eight cases. Thirteen cases in the Crittenden Home in all stages were placed in a closed room, and a 1 per cent. solution of formalin was sprayed from an ordinary hand bulb atomizer for ten minutes three times a day, the spray being thrown above the heads of the patients, saturating the air and inhaled by them. A marked improvement was noted in two days, and in two weeks all were well, and no new cases developed. Fifteen cases were treated afterward at the Inman Orphanage. Here the steam atomizer was used for twenty minutes three times a day in a closed room as before. The result was marked. Recent cases were cured within a week, and all in ten days. The attendant, a woman of 50, reported great relief from the spray, of a troublesome bronchitis of years' standing. In five cases of scarlatina its modifying influence was immediate and marked, one comfort to the patients being the absence of flies and mosquitoes from the apartment after its use.—*South. Cal. Prac.*

The Formation of an Artificial Anus.—Lauenstein (*Centralblatt für Chirurgie*) treated a patient suffering from obstruction of the bowel due to ovarian tumor. On cœliotomy, the tumor was found to be carcinomatous and extensively infiltrating, so that the ileum was compressed just before it passed into the colon. The ileum was divided above the stenosis between two rubber ligatures; the distal end was closed and dropped back into the belly cavity; the proximal end was separated from its mesentery for about seven inches, drawn out as far as possible, and secured at its base by a circular suture to the parietal peritoneum, thus leaving, as it were, a long spout projecting from the belly cavity. By removing the rubber ligature the contents of the gut were evacuated without any danger of soiling the peritoneal cavity.

Resection of the Entire Left Lobe of the Liver.—Prof. E. Tricomi reports the case of a man, aged 27, in which he extirpated the entire left lobe of the liver for adenoma originating in the bile ducts. After resection of the ensiform appendix, and division of the ligament. coronar. and triangular., as well as of the rectus, that portion of the viscus containing the tumor was drawn without the abdominal wound which was sutured. The neoplasm was compressed by means of elastic tubing and metal loop, and necrosis brought about. On the eighteenth day, after application of a segmented suture above the ligature, the tumor was separated with the knife; cicatrization occurred on the ninety-sixth day.—*Wien. Med. Presse.*

A most able and exhaustive paper opposing the "Anti-toxine" treatment of diphtheria has just been published by Dr. Hansemann, in a number of the *Berlin klin. Woch.*

His conclusions are:

1. There are no scientific, theoretical or experimental grounds for assuming that the so-called "diphtheria anti-toxine" is a specific remedy in diphtheria.

2. Proof of the specific action of the serum in man, has not as yet been obtained from practical experience.

3. Under certain conditions "anti-toxine" may act injuriously, for it exerts a disintegrating influence upon the blood, and produces serious changes in the kidneys.—*Post Graduate.*

The Danger of Anæsthetizing Diabetics.—Baxer calls attention to the danger of narcotizing diabetics. He has reported three of his own cases and nine collected from medical literature. Even in slight cases of diabetes the patients became comatose and died. Coma did not develop until the chloroform narcosis has passed off, in twenty-four to forty-eight hours. The patients then became indifferent, stupid and confused, finally lost consciousness, urine and feces were passed involuntarily, and they perished in coma. This communication is important, since it shows that the administration of chloroform is dangerous even when there is a slight degree of diabetes, it being impossible to predict whether or not coma will develop.—*Deut. Med. Woch.*

Extirpation of Voluminous Aneurism.—M. Quenu presented a man, æt. 36, on whom he operated a year ago for a voluminous aneurism of the external iliac artery on the right side, and a fortnight later for an inguinal aneurism on the left side; these two aneurisms were treated by the method of extirpation with complete success. The patient, a clown by profession, was able to resume his work in October last. The debut of these tumors dated two years back; the right was of the size of a child's head, and occupied the iliac

fossa and portion of the lower outlet. The left was smaller and situated across the Fallopian ligament. Collateral circulation was quickly established in both limbs, and no bad symptoms were observed, although the saphena vein on one side had to be sacrificed.—*Med. Press.*

CHRONIC RHINITIS.—In the remedial treatment, the following has proven of service, used with the atomizer twice or thrice daily. If used as a douche, dilute with two or three parts water. Note: The iodine is decolorized in preparation, a clear solution of light amber color resulting:

℞—Sodii boras, ... ℥ss.
Sodii bicarb, ... ℥i.
Aquæ puræ, ... ℥ii.
Dissolve and add
Acid carbol., ... grs. xv.
Tr. iodi, ... ℥iii.
Listerine, ... q.s. ft. ℥vi.—M.

ENURESIS NOCTURNA.—Dr. F. Clark, of Boston, Mass., writing, says: "I have used Sanmetto with good results in bladder, kidney and urinary troubles. I had a man come to me from Philadelphia, Penn., who had been troubled from an infant up to the age of 24 years with nocturnal incontinence of urine—wetting the bed almost every night. I used three bottles of sanmetto on him, and found it made a thorough cure. He can go to bed at 8 o'clock and sleep until 8 the next morning without urinating. I recommend with all honesty, to the suffering, and to the profession, the great cure—Sanmetto."

STRYCHNIA IN UTERINE HÆMORRHAGE.—Recently very extensive claims have been made for strychnine as a specific against all forms of uterine hæmorrhage. In gestation where there has been a previous history of flooding, it is advised to administer in one-sixtieth-grain doses three times daily for a period of from four to six weeks before expected labor. It is also declared to be of value where previous parturitions have been tardy owing to irregular and feeble uterine contractions.—*Med. Age.*

PLEURAL EFFUSION.—Dr. Cassarories (Roumania), has used and highly recommends the application of guaiacol in pleural effusions. He uses this combination:

℞.—Guaiacol, ... 3 grms.
Tr. iodini, ... 30 "
Glycerini, āā . . . . . 30 "

The antithermic action commences at the end of about four hours. The effusion is absorbed after some few daily applications, and does away with the dangers of thoracentesis. He was also successful in the anasarca, by using the application over the loins. The test for the purity of guaiacol is its perfect solubility in any proportion of glycerine. The crystalized guaiacol is to be preferred.—*Prog. Med.*

CATARRHAL AFFECTIONS.—An excellent cleansing and disinfecting solution for free use in the nasal cavities, by means of the spray apparatus, douche or syringe, is prepared as follows:

℞—Acidi boracici, ... ℥i.
Sodii boras, ... ℥i.
Sodii chloridi, ... ℥ss.
Listerine, ... ℥ii.
Aquæ puræ, ... ℥vi.—M.

DYSMENORRHŒA.—

℞—Potass bromidi, ... gr. xv.
Ext. viburnii prunifolii, . . . ℥ ss.
Antipyrin, ... gr. xv.
Antifebrin, ... gr. j.
Spts. frumenti, ... ad. ℥ j.

M. Sig.—Every three, four or six hours, according to the severity of the pain.—*Post-Grad.*

USE OF ANTIPYRIN IN CYSTITIS.—Vigneron, *Ann. des Malad. des Org. Genito-Urin.*, has found that in many cases of cystitis no local treatment can be carried out on account of the intense pain produced by such manipulations. The author now injects a solution of antipyrin into the bladder, and continues with the local treatment. If the bladder be not dilated, ten to twenty grammes of a 4 per cent. solution of antipyrin should be injected into the bladder at least ten minutes before the local treatment is carried out. In dilated bladders the local treatment may be carried out first, and then from sixty to one hundred and twenty grammes of a ½ or a 1 per cent. solution of the drug may be injected into the bladder and allowed to remain.

THE TREATMENT OF DIPHTHERIC ANGINA BY SUBLIMATE.—Dr. Moizard, *Jour. Mde ed*,, recommends the use of sublimate in glyceria in the proportion of one to twenty or to thirty, which forms a syrupy, transparent liquid, which is not caustic. The affected parts are cleansed, the solution applied on cotton from which the excess of liquid has been removed, and the surrounding tissue being protected from the action of the solution by absorbent cotton held in forceps; this also prevents the swallowing of the solution. Of 261 cases treated, the proportion of cases cured varied rom 95 to 81 per cent.

THE CANADA LANCET

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TORONTO, APRIL 1895.

Editorial.

CANADIAN COPYRIGHT.

There can be no doubt that all loyal Canadians will heartily sympathize with the persistent and laudable efforts of the Canadian Copyright Association to obtain from the Imperial Government what is manifestly our due in the matter of copyright.

The question has been argued *pro* and *con* by the officers of our Association on the one side, and authors and various civil servants in England on the other, with, as yet, no relief to either Canadian authors or publishers. It is held by the Canadian Government that they have the right, under the British North America Act of 1867, to legislate fully on copyright, and with that view the Canadian Copyright Act was passed unanimously in 1889 by our Parliament, was assented to by the Governor-General, but has not, as yet, been proclaimed by him, which last step is necessary before it shall become operative.

In England, the publishers and authors seem to dread that the home market and that of the United States would be flooded with cheap Canadian editions; but this dread seems idle, when the Acts of both these countries prohibit the importation and sale of unauthorized editions, and impose a heavy penalty for the violation of the law. As matters now stand, Canadians are sometimes *forced* to buy books from publishers in the United States, for it has happened that orders sent to London for books have been returned, marked "Cannot supply." This seems an intolerable hardship, but it is only one of many which the Canadian dealer has to suffer, and, in consequence, the Canadian reader.

The Canadian Act permits no "piracy," for should the author of a work neglect to secure copyright in Canada, no Canadian publisher could reprint the work in Canada without paying the author ten per cent. royalty. This is not the case in either Britain or the United States, where, if copyright be not secured, any publisher may reprint the work without paying the author.

We, in Canada, as a British colony are unfortunately placed side by side with a great country, with an immense reading population. Our Act is more favorable to authors, but owing to our smaller market, no authors consider Canadian copyrights as at all valuable, while things stand as they now do. Look at the facts:

To secure copyright in the United States, the British author must print his book there from type set within the limits of the United States, or from plates made from type set within the limits of the United States. The Canadian Act provides for no such restriction, but allows both British and United States authors to set the type in Canada, or print from plates, as they may think best. In anticipation of the Canadian Act coming into force, the Canadian Government passed a special enactment allowing plates for books to be imported into Canada free of duty. This concession was made thinking that it would be appreciated, but those opposing the Act seem determined to ignore the concession. Yet the concession is there, and it proves that Canada grants Britsh authors copyright on far more liberal terms than they can secure copyright in the United States; and that Canada grants United States authors copyright in Canada on far easier terms than Canadians are granted copyright in the United States.

Thus Canada has not only lost the printing of works by foreign authors, but is fast losing the printing of works by Canadian authors, *not because the books can be printed cheaper or better abroad, but because they have to be manufactured in the United States in order to secure copyright there.* When that is done, there is no necessity for issuing a Canadian edition, as the Canadian market can be supplied by the United States edition.

British authors are now able to secure copy-

right in the United States, and United States authors are now able to secure copyright in Great Britain (which covers Canada). Therefore the copyright owners now refuse to print in Canada. They supply this market with editions printed either in the United States or Great Britain. This is considered a great injury to the printing, paper and allied industries in Canada. It is, moreover, a source of trouble and annoyance to the people of Canada, as the British market is so far away that, after the supply on hand of a book is exhausted, some weeks must elapse before a new supply can be procured.

Recently a circular has been issued in England, containing objections to the Canadian Act. Space will not permit us to deal with the whole list, but the more important of them are that Canada has asked the British Government to sanction arrangements to take copyright in Canada away from all British authors except such as are Canadians. Such is not the case. Canada does not propose to take away copyright in Canada from British authors. The British author and the United States author may, under the Canadian Act, secure copyright in Canada on exactly the same terms as the Canadian author.

Also it is objected that the Canadian Act will injure the value of the British edition, because the Canadian edition could be imported into the United Kingdom and the other colonies, and compete with it. But from the report of Lord Knutsford's Copyright Commission of 1892, it appears that, at the instance of the British copyright owners, *the law of Great Britain was framed so that the importation of Canadian reprints of British works into Great Britain is prohibited.*

Most of the other objections are based on the supposition that the author loses control over his work under the Canadian Act. Nothing could be further from the fact, since, by complying with the terms of the Act, authors and copyright owners retain entire control of their works and may suppress old editions, or issue new ones as desired

As Canadians, interested in the development of our printing and kindred industries, we should all, and on every occasion endeavor to keep alive the sentiment that our Parliament has full and undoubted rights to enact legislation on copyright as necessary from time to time, just as it has power in all other subjects entrusted to it by the British North America Act of 1867.

DIABETES MELLITIS.

A very fertile field for the scientific investigator is to find the exact pathological conditions underlying the group of objective and subjective symptoms met with in diabetes mellitus. The morbid anatomy is most varied, and has caused much discussion. This disease has no peculiar lesion or series of lesions. It is not a distinct disorder in the usual sense of the term, that is, a disease having a common cause. It has no distinct characteristic symptomatalogy or pathology; and its principal clinical manifestation, viz., sugar in the urine, depends upon various morbid processes.

It is apparent that cause and effect have frequently been confounded; that at autopsies we are generally dealing with effects and not with causes.

Laboratory experiments have not enlightened us much as to the pathogenesis of the disease. The chemical theories advanced thus far have proved untenable. What lesions are found at post-mortems? Theoretically we expect to find changes in the fourth ventricle, but practically they are conspicuous by their absence. Various lesions are found in the brain, such as hæmorrhages, tubercular meningitis, etc., but they have no causal relation to the malady in question. Dr. William Mosher, of Brooklyn, in an excellent paper agrees that all these results or changes may be found at autopsies, but does not consider them causative. The lungs are frequently tuberculous, and at times œdematous. Hamilton and Sanders regard diabetic coma as dependent upon fat emboli in the pulmonary capillaries, with consequent slow carbonic-acid poisoning.

Of course this is theory. That fat embali do occur in some cases is beyond dispute. Frerichs ascribes the coma to acetonæmia. The kidneys, too, frequently show deep seated changes. The epithelial cells lining the looped tubes of Henle undergo glycogenic degeneration. The lesions in the liver are protean. In some cases the organ is found in a condition of passive hyperæmia, in others fatty, in still others slightly cirrhotic.

In short there is nothing from which to draw

any ætiological conclusions, as many have done. The liver cells, too, give the reaction with iodine. Dr. Mosher found nothing in the heart, spleen, or intestinal tract, of pathological interest. Most writers refer to the fatty condition of the blood in this disease. While this is not constant, it has been so great as to give the blood a milky appearance, so lipæmic that when placed in a glass, and left standing, a thick layer of fat formed on the surface. The presence of fat emboli in these cases is apparent. Is this lipæmic condition of the blood dependent on lesions or interference with the functions of the pancreas? That such is a fact in a certain number of cases, is apparent from the pancreatic changes found at autopsies.

"Facts bearing upon the relation of pancreatic disease upon diabetes have been accumulating since Cowley first discovered calculi in the pancreas of a diabetic, and Bright's pancreatic cancer in a similar case" (Tyson). In a case seen by Dr. Mosher in the Berlin Pathological Institute, an aneurism of the arteria pancreatica was found. Atrophy of the pancreas is not infrequent; hypertrophy and fatty degeneration of the gland cells are sometimes seen. It must be admitted, however, that these cases (atrophy, hypertrophy, and fatty degeneration) are not so clear as those mentioned above; that the factors which bring about these changes, as well as the pathology of those cases in which the organ remains unchanged, are problems yet to be solved.

WRONG TO A MANUFACTURING FIRM.

It is to be regretted that our contemporary, *The Toronto World*, allowed its columns to be used to the injury of the well-known and reliable firm of Parke, Davis & Co., of Walkerville. The statement was published that the above firm was seeking to introduce a low-grade alcohol into their Canadian laboratory for the manufacture of patent medicines. Following this was the statement, that the low grade alcohol was desired "for the manufacture of pharmaceutical preparations to be used for the making up of prescriptions."

The statements published in *The World* were mistakes, and that journal retracted them, on learning the true inwardness of the case. In justice to Parke, Davis & Co., it should be known to the profession that what they wanted was simply permission to introduce pure, standard, rectified spirits in bond, for the manufacture of pharmaceuticals, designed for export on a large scale to foreign countries. Such standard spirit can be imported in bond at the price of 25 cents per Imperial gallon. At present they are greatly hampered by the high market price of alcohol in the Dominion—$1.17 per Imperial gallon in bond; and to this must be added the excise duty of $1.50 per proof gallon. Their proposition to the excise authorities was cheerfully complied with, and will enable them to compete with European manufacturers in the markets of the world outside the Dominion; and will not involve in any degree the sacrifice of quality or potency in the finished preparations.

We believe that there is practically no such thing on the market as "low-grade alcohol,' unless this term be applied to dilute alcohol. Inasmuch as every manfacturer is perfectly free to purchase pure spirit (94%) and dilute it in accordance with the needs of the product manufactured., it would be absurd to talk of low-grade alcohol in this connection. The only other form of "low-grade alcohol," is a certain crude product supplied exclusively to establisments manufacturing vinegar under bond. The well-known "wood alcohol" could not possibly be used in the manufacture of pharmaceuticals, owing to its obnoxious odor.

Of course every physician knows that Parke, Davis & Co., do not manufacture patent medicines, and it is in justice to a firm doing a large volume of business in the Dominion, as well as carrying on a manufacturing establishment within our borders, that the above remarks are made.

THE BILL TO AMEND THE ONTARIO MEDICAL ACT.

We have before us the proposed Bill to amend our Ontario Act. No doubt our readers have been kept posted as to the main provisions of the Bill, by the public press. We have not time, as we go to press this morning, to do more than mention the utter absurdity of the proposed *amendments*. There seems to be no possibility, however remote, of this unspeakable attempt to

throw back medical education in Ontario half a century passing the Legislature; and it need only be mentioned to show how grotesque are the attempts of persons attempting to legislate on subjects of which they are utterly ignorant. If ever there was an utter fiasco in the matter of politics, surely the picture of our Ontario Patrons who were to have leavened the whole body of our legislators with a distinct portion of the yeast of honesty, shows such fiasco.

LETTER FROM HEIDELBERG.

One of the numerous interesting operations performed by Geheime Rat Czerny, in the Krankenhaus of the University this winter, merits, on account of its rarity, a short description.

The patient was one of those unfortunate individuals with violent persistent trigeminal neuralgia. He had been presented to the class previously by Prof. Erb. Several operations had been performed in other hospitals with but slight, or temporary, success. The affection was limited to the second and third division of the right nerve. Violent attacks of pain would come on every few minutes, accompanied by reflex spasms of the muscles of the face and vaso-motor disturbances—flushing and perspiration. The attacks would last one or two minutes, then a pause of five or ten minutes before a repetition occurred. During the night he suffered less, but still his sleep was very much disturbed. All the usual remedies having been proved useless in this case, he was given over to the care of the surgeons.

The man was brought into the operating theatre with the right half of his head shaved and placed on the table with head resting on a firm pillow. Chloroform was administered, during which the head was thoroughly cleansed and prepared for operation.

An incision was made, commencing just behind the external angular process of the frontal bone, upwards, backwards parallel with and a little below the parietal eminence, then curving downwards to a point just above the root of the ear, by which all the soft parts including the periosteum were divided. The flap thus formed was quickly separated from the bone for about half an inch along the whole extent of its border; all vessels caught and ligated with fine silk. A small circular saw one inch in diameter, attached to a dentist's drill, was now brought into use, and in a few minutes the bone corresponding to the incision was divided. The operator with chisel and mallet broke a few undivided portions of the inner table of the skull, the chisel being held at an angle of about 45° with the surface of bone. The whole osteoplastic flap was now pried up, the dura mater separated from its inner surface, and then forcibly turned outwards, breaking its base. The projecting spiculæ of bone were clipped off with bone forceps, the brain being retracted by an assistant. The dura mater was next carefully detached from the bone forming the middle fossa till the second and third branches of the 5th nerve were exposed. These branches were separated from their surroundings with some difficulty, owing to the confined space, and during the manœuvres the small meningeal artery, which enters the cranial cavity through the same foramen (ovale) that the third branch makes its exit, was divided. This caused some hæmorrhage, and it was fully half an hour before all oozing could be checked.

It was to me a surprise to see with what impunity they compressed the brain in order to enlarge the field of operation.

The two nerves were divided, the distal portions freed from their surroundings at the foramina of exit and each end of the severed nerves burnt with the thermo-cautery. The parts were then wiped out with gauze saturated with a weak antiseptic lotion. A small strip of iodoform gauze extending to the base of skull and emerging from the anterior end of skin incision was left for draining and the osteoplastic flap replaced, two other short pieces of the same gauze placed in the wound, one at the upper and the other at the posterior extremity, then interrupted silk sutures completed the operation. The knots of all the sutures were drawn to one side of the incision. A dressing consisting of strips of iodoform gauze, two inches wide, over the wound sterilized gauze, absorbent cotton and bandage was applied.

The patient made a good recovery. He complained of headache and some pain in the side of the face, but this soon passed off. The pain was evidently due to some irritation of the distal extremities of the stumps, as after an amputation. Strange to say there was very little

paralysis. This was probably due to new channels, for the nervous impulses having been formed after previous operations. A small area of anæsthesia remained at the upper part of the cheek. During the operation one could not help remarking the coolness with which Prof. Czerny took matters. He described each step as he proceeded, and on one or two occasions he joked with his assistants.

INGERSOLL OLMSTED, M.B.

Heidelberg, March 4th, 1895.

The following shows the growth of the assets of the Mutual Life Insurance Company during the past ten years:

Jan. 1st.	
1886	$108,908,967
1887	114,181,953
1888	118,806,651
1889	126,082,153
1890	136,40,1328
1891	147,154,961
1892	159,507,138
1893	175,084,157
1894	186,707,680
1895	204,638,783

The distribution of benefits to the Mutual Life Insurance Company of New York, in 1894, was wide and vast. The record of no other Company in the world can equal it. The payments on account of matured death claims, endowments, annuities, etc., amounts to $21,089,258.08. This represents the savings of many thousands of prudent people multiplied in the hands of the Company and repaid to the insured and their heirs. The average daily payments made by the Company during the last week of the year 1894, amounted to $64,486.17, or over $2,686.92 per hour for every hour of the twenty-four each day, and $44.78 per minute.

VARICOSE VEINS.—Ernst La Place, M.D., Philadelphia, *Med. Standard.* The author advocates the ligation of the long saphenous vein at the saphenous opening, and the short saphenous vein between the heads of the gastrocnemius as the best means of curing this condition. The œdema and blood stasis are overcome by elevation of the limb and gentle compresion with raw cotton, and flannel bandage. Rest in bed is absolutely necessary. Of the sixteen cases reported, six had the operation performed on both limbs in immediate succession, and in ten only one limb was operated upon. Five were females and eleven males. A four per cent. solution of cocaine was the only anæsthetic employed.

The advantages claimed for this method, therefore, are: (1) That it is applicable to all sorts of varicose veins. (2) The operation aseptically conducted is harmless, easy, and, under cocaine, painless. (3) It secures the result underlying the cure of all aneurismal and varicose states; obliteration of the affected vessel which results from blood coagulation, subsequent absorption of the coagulum, and fibrous tissue formation from leucocytes exuded, which contracts. (4) Relapses have as yet not been reported. (5) Recovery occurs in from two to three weeks.

ACNE ROSACEA.—Dr. Marr gives the following, *Med. World:*

℞—Liq. arsenicalis, ... ℥ iss.
Tinct. nucis vomicis, ... ℥ iij.
Tinct. ferri mur., ... ℥ v.
Tinct. gent. co., ... ℥ iij.
Pot. acetatis, ... ℥ vj.
Aquæ, ad. . . . . ℥ viij.—M.

Sig.—℥ij. t. i. d. p. c. ex aqua. Wash mouth after each dose.

Et.
℞—Zinci oxidi, ... , gr. 160.
Hydrarg. bichlor., ... gr. iv.
Vaselini, ad. . . . . ℥ ij.—M.

Sig.—Apply t. i. d. for first week.

Et.
℞—Ac. hydrocyan. dil., . . . ♏ xvj.
Bismuth. subnit., ... ℥ iss.
Zinci oxidi, ... ℥ j.
Vaselini, ad. . . . . ℥ ij.—M.

Sig.—Apply night and morning for second and third week.

OUR INCREASING NERVOUSNESS.—Professor Erb has delivered an address, *Phys. and Surgs.*, in which he states his view that there has been a clear loss of tone in the nerves of the highly civilized nations. This disorder is something more than hypochondriasis or hysteria, and is marked

by increased sensitiveness, weariness, lack of power of endurance, and defective recuperative power. The later development of neurasthenia, however, is not more symptomatic than was the hysteria of a past generarion. The race has survived one and probably will the other. Increased insanity and nervous disorder is not a necessary correlation of an increasing complexity of society. Better regulation of life will ensue, and by experience of what is inimical, to sustained life, we shall probably before it is too late, learn what is needful to conserve it.

PLASMA TABLETS.—Dr. M. McFarlane of this city has compounded a tablet, which we understand is to be put on the market by Parke, Davis & Co. It will be noticed that the composition is as nearly as possible identical with that of blood plasma.

The following is the formula for plasma nasal tablets (Murray McFarlane):

℞—Sod. chlorid.,	gr. 5.250
Sod. sulph.,	gr. 1.340.
Sod. phosphat.,	gr. .860.
Pot. chlorid.,	gr. .950.
Pot. sulph.,	gr. .480.
Pot. phosph.,	gr. .360.
Menthol,	gr. 1-15.

1 in ℥ij. of water.

IPECAC AS AN OXYTOCIC.—A writer in the *Br. Med. Jour.* says: In the course of general practice extending over many years I invariably carried a bottle of wine of ipecac in my midwifery bag, and rarely, if ever, gave a dose of ergot in the first stage of labor. Time after time on coming to a confinement case where the pains had been feeble and inefficient, or had totally ceased, two or three ten or fifteen-minim doses of the wine at intervals of ten minutes, have been followed in a surprisingly short time by energetic uterine action, with a rapid termination of the labor. It never produces the quasi-tetanic contraction so often met with as the result of ergot, the pains continuing to recur regularly, just as they do in natural labor, but with greater force and at shorter intervals.

DANGERS OF INTERNAL ANTISEPTIC MEDICATION.—P. Dignat, *Journal de Médecin de Paris*, in a timely article, writes of the dangers accruing from the internal administration of antiseptic remedies. He describes in detail two cases in which the ingestion, respectively, of salol and guaiacol, in comparatively feeble doses, produced a series of untoward symptoms. After careful observation and study, these symptoms could only be ascribed to the action of the remedies alluded to. The author believes that antiseptic internal medication renders good service, but insists that the fact that such medication is apt to do more harm than good in many instances, should not be lost sight of in modern therapeutics.

THROAT.—The correctness of the position taken by Professor J. Solis-Cohen, Sir Morell Mackenzie and other authors, as to the existence of membranous sore throat not diphtheric in character, has come to be universally admitted, and the claims advanced for certain methods of treatment in diphtheria proved to be based upon erroneous diagnosis, *Phila. Polyclin.* A recent illustration of this fact has come under notice at the Laboratory of Bacteriology, where cultures from three cases of membranous sore throat, much resembling diphtheria in appearance, in two of which there was high fever accompanied with constitutional depression, proved to be free from Klebs-Loeffler bacilli.

THE SONG OF THE GIRDNER TELEPHONE BULLET PROBE.—S. Morris Conant, in the *Medical Record*, perpetrates the following:

"After the 'shootin's' over,
After the scrap is done,
After the 'Dago's' punctured,
After the Cowboy's fun (?)
Many's the gun 'not loaded,'
I can attend to all;
Merrily I will meander
After the Ball."

COLOGNE TIPPLING.—According to *L'Union Médicale* this habit is increasing. Alcoholics, especially women, begin by taking a few drops of *eau de cologne* and finally drink it by the glass. The writer seems to think this form of alcoholism may replace or cure the cocaine and morphine habits. The habit is exceedingly injurious, for in addition to the poorly rectified alcohols, are the natural or artificial essential oils which are equally toxic. The practice is found among the upper classes principally.

TREATMENT OF PRURITUS ANI. — Dr. A. Berger states, *Internat. Jour. of Surg.*, that the following method immediately relieves the itching and causes a rapid disappearance of the eczema of the perineum and scrotum which frequently exists in these cases: A cotton pledget 2 or 3 cm. ($\frac{3}{4}$ to $1\frac{1}{4}$ inches) in length and steeped in a 2 per cent. solution of hydrochlorate of lime is introduced into the anus. This pledget is allowed to remain until there is a slightly smarting sensation, when it is immediately withdrawn and the anal region washed with the same solution, taking care not to wipe it off afterward.

AT this season of the year, when radical and sudden thermal changes are the rule, it becomes of vital interest to the busy practitioner to have in compact, ready form, such approved medicaments as meet the analgesic and antithermic requirements of the bulk of his patients. As pertinent we call attention to the following combination tablets: "Antikamnia and Codeine," each containing $4\frac{3}{4}$ gr. antikamnia and $\frac{1}{4}$ gr. codeine, "Antikamnia and Quinine," each containing $2\frac{1}{2}$ gr. antikamnia and $2\frac{1}{2}$ gr. quinine, "Antikamnia and Salol," each containing $2\frac{1}{2}$ gr. antikamnia and $2\frac{1}{2}$ gr. salol, and "Antikamnia, Quinine and Salol," each containing 2 gr. antikamnia, 2 gr. quinine and 1 gr. salol. These, together with the well-known "Antikamnia Tablets," of varied sizes, and "Antikamnia Powdered," constitute indispensable factors in the armamentarium of the physician, and are more than ordinarily indicated in present climatic conditions.

HINTS FOR PRACTITIONERS.—The following "tips" are suggested by Dr. Cocksedge of Wales, in the *Medical Record*: If you have a fatiguingly deaf patient to talk to, place the ear-pieces of your binaural stethoscope in the patient's ears, and talk into the chest-piece, and you have an excellent ear-trumpet. If you leave your spectacles at home, being old and presbyopic, make a hole with a pin in the corner of your visiting card, and you can read your clinical thermometer or anything else.

DIGITALIS IN GOITRE.—The most efficacious medical treatment of goitre consists in the internal administration of digitalis and the local application of an iodide ointment. *Med. Week.* The goitre diminishes in size, and even disappears, with astonishing rapidity. The favorable action of digitalis in hypertrophy of the thyroid is explainable by its influence on arterial tension; but this employment of the drug is not new, as it originated with Doctor Murray in 1776.

CARCINOMA.—There is no more important and sure sign of cancer than the adhesion of the skin over it; with the exception of tuberculous abscess there is no swelling in the breast that causes this early adhesion or dimpling of the skin. It may be a very early sign. It has been found well-marked over a small deep nodule, noted only five days before, and so freely movable that it could hardly be held steady to cut into it before removing the breast.

ASAFŒTIDA FOR INSOMNIA.—A five-grain pill of asafœtida, exhibited after supper and repeated at bed-time, will often bring refreshing sleep. *Louisville Med. Monthly.* In mild delirium, and especially during the period of unrest that precedes an attack of delirium tremens, the injection, by rectum, of two ounces of mixture of assafœtida will, in many cases, produce the much-needed sleep, without recourse to the more dangerous narcotics.

A USEFUL THING TO KNOW.—To restore hardened rubber goods, all that is necessary is to soak them in a mixture of one part of ammonia with two parts of water. This does not injure the rubber in any way, and restores the elasticity. Usually, soaking from ten minutes to half an hour is quite sufficient. After drying, the whiteness may be restored by dusting well with chalk or kaolin.

AN ANTISEPTIC TOOTH-POWDER, as recommended by Le Gendre, is composed as follows:

℞—Finely-powdered boric acid, . .	40 grs.
Chlorate of potassium, . . .	32 grs.
Powder of guaiac, ...	24 grs.
Prepared chalk, ...	64 grs.
Powdered carbonate of magnesium,	64 gas.
Essence of rose or mint, . . .	1 drop.

STRYCHNIA IN OBSTETRICAL PRACTICE.—Duff, *Jour. of the Am. Med. Assoc.*, advises the use of strychnia in doses of one-sixtieth to one-thirtieth of a grain three times daily during the lattsr part of pregnancy, and believes by following this prac-

tice that the indications for instrumental delivery are less frequent, and ergot will only occasionally be called for during or after the third stage of labor. He does not offer this as a routine treatment, but as indicated in a large number of cases.

TO MAKE STEEL INSTRUMENTS AS BRIGHT AS NEW.—Clean by rubbing with wood ashes and soft water, *N. Y. Med. Times.* Then soak in a weak solution of hydrochloric acid in water (about ten to fifteen drops to the fluid ounce) for a few hours, to remove the remaining rust and grease. Wash well in pure soft water, and place in a bath consisting of a *saturated* solution of tin chloride, letting them remain there ten to twenty-four hours, according to the coating desired. When removed from the bath, wash clean in pure water, and dry well. When the job is well done, the steel will appear as if nickle plated.

NEW TREATMENT FOR NASAL HÆMORRHAGE.—Trichloracetic acid in strength of three per cent. solution is applied to the nasal septum, *Rev. de Thérap.* It is advisable to add some drops of a solution of cocaine, 1 to 20 to mitigate the burning sensation caused by the acid.

PROF. DE SCHWEINITZ, in cases of corneal ulcer, says, *Ibid*, to always search for the presence of a foreign body.

Books and Pamphlets.

A TEXT BOOK OF HUMAN ANATOMY, SYSTEMATIC AND TOPOGRAPHICAL; including the Embryology, Histology and Morphology of man, with special reference to the requirements of practical surgery and medicine, by Alexander Macalister, M.A., M.D., F.K.S., F.S.A., Professor of Anatomy in the University of Cambridge. 816 illustrations. Philadelphia: P. Blakiston, Son. & Co. Toronto: Carveth & Co.

This work which is so well and favorably known in the old country is one of great merit. It is a comprehensive account of the anatomy of man, studied from a morphological standpoint. The author's long experience as a teacher gives him the facility of arranging and presenting his matter in a most attractive form, so far as that can be done with a subject which deals essentially with facts, as does anatomy.

He gives first a brief sketch of the evolution of form; then a short account of the nature and arrangements of the tissues. The remainder of the work takes the order in which the body should be dissected by the student.

The book is profusely illustrated, and we think it worthy of careful study, not only by students but by practitioners of surgery and medicine.

THE PHYSICIANS' VADE MECUM; being a Handbook of Medical and Surgical reference, with other useful information and tables. By Sebastian J. Wimmer, M.D., with additions by Frank S. Parsons, M.D. Philadelphia: The Medical Publishing Co. Toronto: Carveth & Co. $1.

The work is a useful compilation of recorded points of interest. It is up to date and will be found a handy companion for the student and young practitioner.

RELATIONS OF DISEASES OF THE EYE TO GENERAL DISEASES. By Max Knies, Professor Extraordinary at the University of Freiburg. Forming a Supplementary Volume to every Manual and Text-book of Practical Medicine and Opthalmology. Edited by Henry D. Noyes, A.M., M.D., Professor of Ophthalmology and Otology in Bellevue Hospital Medical College, etc. Octavo, 470 pages, illustrated, extra muslin, price, $4.25.

This work tells us in a clear concise manner how diseases of the eye often possess important significance in relation to the diagnosis and correct understanding of diseases of other organs. As the author explains in his preface, his aim has been "in the first place to speak of diseases from a general stand-point, setting forth, in separate sections, their common and familiar features, and in the second place, not merely to catalogue a more or less numerous array of dry facts, but to learn their meaning in the broadest and most complete sense."

"Throughout the book the alliance between the eye and the rest of the body are so admirably traced that it will be hard to decide upon whom the larger debt of obligation to the painstaking author will rest, whether upon the general physician or upon the ophthalmologist."

The book is really a cross-index between the general field of medicine and the specialty, ophthalmology.