# DOMINION MEDICAL MONTHLY

#### AND ONTARIO MEDICAL JOURNAL

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## CONTENTS OF VOLUME XXV.

	Page		PAGE
Assistant, The Surgical	48	Epilepsy, Absence of Salt in	46
Anatomy, Atlas and Text-Book of Topo-		Examination, A Treatise on Diagnostic	
graphic and Applied	50	Methods	287
Appendicitis, A Freak Case of	98	Eye, Manual of Diseases	200
Assistant, The Surgical	172	•	
Address, President's, B. C. Med. Ass'n	201	Fractures, The Treatment of	173
Address, President's, Canadian Medical		•	
Association, 1905	250	Gynecology, A Text-Book on the Practice of	47
Association, British Medical	330	Goitre, The Medical Treatment of Exoph-	
Affections, Respiratory - Symptoms and		thalmie	76
Their Treatment	349	Gynecology, Some Neglected Symptoms of	
		Non-Surgical	121
Burns, A Report of Cases of Electrical, from			
Live Wires	81	Hippocrates, Invocation to	37
Bronchoscopy for the Removal of a Collar	. 01	Hyperchlorhydria, Nux Vomica in	46
Button from the	101	Hip, The Present Status of the Treatment of	
Binder, The Obstetrical		Congenital Dislocation of the	57
Bilharzia Hematobia	207	Hernia, Strangulated Femoral, in a Man of	
British Columbia Medical Association, 1905.	229	Seventy-five	
Blakiston's Physician's Visiting List for 1906		Hay Fever and its Treatment	110
Divinistration of high country was the four	001	Hypertrophy, The Management of a Case of	
		Prostatic, in an Enfeebled Man of Ad-	
Comment from Month to Month-Editorial		vanced Old Age	154
53, 113, 175, 237, 293		Hypnotism for Morphine, Users, Drunkards,	
Consumptives, The Selection of Cases for the		Hay Fever	223
Muskoka Free Hospital for	63	etc	228
Colitis, The Treatment of Ulcerative	105	Hydrocephalus, A Case of Acute Internal	276
Canadian Medical Association—Address in		•	
Medicine	125	Injuries, Some Remarks on Head, with Re-	
Colon, A Case of Tuberculous Ulceration of		port of Cases	156
the Ascending, Simulating Appendi-		International Clinics, Vol. II., 1905	173
citis	223	Intestinal Indigestion	230
Children, Manual of Diseases	233	Infants and Children, A Manual of Diseases	
Congress, International Medical	334	of	335
Cleft Palate and Hare Lip	338		
Childhood, Neurotic Disorders of	338	Kidney, Traumatism of the Right	94
		Key, The Era, to the U.S.P	287
Disease, The American; An Interpretation.	13	Kidney, Movable	337
Disease, The Diagnosis of Gall Stone	85		
Diseases, Infectious, and Their Remedial		Laparotomies, A Summary of Two Hundred	
Agents	215	and Seventy, with Remarks on the Tech-	
Diagnosis, A Text-Book of Clinical	232	niquo Adopted	73
Detective, Memoirs of a Great	234		
Diabetes, The Etiology and Elimination	268	Master Minds of Medicine; 1—William Har-	
Diseases of the Nose and Throat, A Manual		vey	27
of	288	Medicine; A Text-Book of the Practice of	231

#### CONTENTS OF VOLUME XXV.

	PAGE		PAGE
Meningitis, Treatment of Epidemic Cerebro-		Reminders, A Few	151
Spinal	285		
Massage, Practi in Twent Lessons	200	Stomach, Surgery of the; From the Stand-	
Medicine, Master Minds C. Thomas Syden-		point of the Clinician	1
ham	313	Saunders' Pocket Medical Formulary	48
Metabolism and Nutrition, Disorders of		Surgery, Address in-Canadian Medical	
Diabetes, Mellitus	339	Association, 1905	188
•		Surgical Suggestions	220
Nothnagel's Practice - Malaria, Influenza,		Saunders' Medical Hand Atlases- Atlas and	
and Dengue	50	Epitome of Diseases of the Skin	232
News <sup>4</sup> tems, 60, 118, 179, 240, 297,	346	Skin, Photographic Atlas of Diseases of the.	288
Neurasthenia, a Peculiar Case, perhaps.	96	Skin, A Treatise on Diseases of the	330
Nephro-Lithotomy, Two Cases of	140	<b>4, 1. 2</b>	
Nothnagel's Practice, American Edition of-		Months Dente Dade to the	45
Diseases of the Kirtney, Diseases of the		Traches, Foreign Body in the	46
Spleen, and Hemorrhagic Diseases	172	Tuberculosis	168
		Tabes Dorsalis	108
O'Reilly, Banquet to Dr. Charles	38	Tuberculosis, Observations on, in New Zea-	210
Ovary, A!Case of Hematoma of the, Simulat-		land	210
ing an Attack of Appendicitis	91	Therapy, Iron, with Report of Cases	00.
Obituary - Walter William Meacham	124	Tonsil, The Pharyngeal	26:
Operations, Abdominal	235	Therapeutics, A System of Physiologic	289
Dati . A. D		Therapeutics, A System of Physiologic	291
Patients, Remarks on Cutaneous Affections		Trachoma and Immigration-Our Detention	
Observed in Hysterical	144	Hospitals	303
Phlebosclerosis	230	Taylor's Phys cian's Pocket Account Book	338
Pharmacopeia, The, of the United States	231		
Physiology, Hand-Book of	234	Urethritis, Acute Anterior, of Gonorrheal	
Pancreatitis, Two Cases of Acute Hemorrh-		Origin	167
agie.	271	Ulcer, Saline Injections and Rectal Feeding	
Parotitis, A Case of Primary Suppurative	273	in,	169
Pregnancy, A Case of Abdominal, Undiag-		Uremia	226
nosed Until After,Operation	278		
Potassium Iodide, The Best Method of Ad-	_	Vaginalis, a Large Hydrocele of the Tunica	97
ministering	281	. ag, a mage injurection the funda	01
Physiology and Hygiene	289		
Physiology, A Text-Book of	335	Women, A Text-Book of Diseases of	233

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TORONTO, JULY, 1905

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## Dominion Medical Monthly

And Ontario Medical Journal

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### Original Articles.

## SURGERY OF THE STOMACH FROM THE STANDPOINT OF THE CLINICIAN.\*

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There are many reasons why surgery of the stomach should be more and more interesting to the clinician. Chief among these is the fact that with the increasing clinical experience in this field, it has become possible to perfect the diagnosis of conditions far beyond the degree to which this could be done only a few years ago, when it was possible o actually confirm diagnosis anatomically only in those patients who could be subjected to an autopsy. In the vast majority of cases the diagnosis was made upon theoretical grounds. The patient was treated and improved temporarily; during a subsequent attack some other physician made the same or a different diagnosis, which again could not be proven anatomically, the difficulty arising from the fact that no one could prove or disprove the diagnosis in either case. The moment a case becomes surgical, however, this difficulty is abolished, because the diagnosis can and must be proven to be right or wrong.

There is much ante-mortem pathology in diseases of the stomach, as well as in diseases of all the other intra-abdominal

<sup>\*</sup>Read before the Ontario Medical Association, June 6, 7 and 8, 1905.

organs, which can be studied properly, neither post-mortem nor ante-mortem, unless the organ is exposed to view; and no sooner has this been done in a large series of cases than the diagnosis of the condition becomes much simpler and easier and gains

greatly in certainty.

Gastric Ulcer.—The condition which primarily or secondarily leads to the greatest amount of stomach surgery is the ulcer. The operation may be indicated, I. Because of the painfulness of the ulcer; 2. In order to control (a) acute or (b) chronic hemorrhage; 3. In order to prevent secondary conditions such as (a) perforation; (b) peritoneal adhesions; (c) pyloric obstruction due to cicatrical contraction; (d) hour-glass stomach; (c) gastric dilation due to obstruction; (f) starvation; and last but not least, (g) implantation of carcinoma in the ulcer.

Diagnosis of Ulcer.—Since the presence of gastric ulcer primarily is the beginning of so many of the surgical conditions, it is important to recognize this lesion early in its development.

The most constant symptom in the presence of this lesion is pain. This is usually located below the tip of the sternum, is increased upon pressure, and upon taking food. The patient can usually tell which food will cause the pain to become severe. If the ulcer is on the posterior surface of the stomach the pain radiates into the back, usually to the left of the medium line and up as high as the lower end of the scapula.

Very commonly the pain accompanying the presence of gallstones is mistaken for the pain due to gastric ulcer, but it is usually not difficult to differentiate between these two, because the former is increased upon pressure at the point between the end of the ninth rib and the umbilicus, a point first located by Mayo Robson, while the latter is increased upon pressure in the median line.

Again, in case of gall-stones the pain in the back extends to the right at about the level of the tenth rib, while in gastric ulcer it is greatest in the median line or to the left of this and

higher up.

The stomach contents are usually exceedingly acid in the presence of gastric ulcer, and there is an abundance of free hydrochloric acid present unless the ulcer has become carcinomatous. It should, however, be stated here that the chemical examination of stomach contents must always be looked upon only as of value in corroborating diagnosis, made as a result of a study of the history and physical examination. Robson and Graham have demonstrated this fact conclusively in a large series of carefully studied cases.

The history usually states that the patient has felt distress upon eating for a considerable period of time; that there has been eructation of acid stomach contents; that this is much more severe when certain articles of food have been taken; that the patient is much less uncomfortable when carefully following some diet which experience has taught him to select.

Quite frequently the feces are observed to be black from the presence of partly digested blood from slight gastric hemor-

rhages.

So many of the patients have, however, received subnitrate of bismuth as a remdy, or some form of iron, that care must be taken not to confound the effect of these remedies upon the color of the stools with that of hemorrhage from a gastric ulcer.

Frequently these hemorrhages have not been observed, but still the loss of blood has been sufficient to cause a marked anemia, hence this condition must be considered in connection with the other symptoms and the history. In patients who are severely anemic and who are suffering from some form of gastric disturbance, one can usually demonstrate the loss of blood from chronic ulcer by a careful study of the case. Fuetter has demonstrated that by overcoming this anemia by careful dieting, many chronic ulcers will heal, which without especial attention to this feature seemed quite incurable under non-surgical treatment.

With careful internal and especially dietetic treatment, a vast majority of all cases of ulcer of the stomach which have been recognized early, can undoubtedly be healed permanently, if not only the immediate treatment, but also the after treatment is carried out carefully and conscientiously. That this can be actually expected in these cases has been shown in a large number of patients suffering from this condition.

But there are many of these cases which apparently recover only to relapse again and again. Many of these go from one physician to another, each time temporarily improving or recovering.

Robson has found that most cases which ultimately come to operation have been apparently cured a number of times and our observations fully confirm his report.

It is well to bear in mind this element of the history of any given case, because it should have a distinct bearing upon the choice of treatment in the future. Any case in which there has been a number of apparent cures with subsequent recurrence of the ulcer should properly receive surgical instead of medical treatment in the future.

Differential Diagnosis.—The most common condition which

is mistaken for gastric ulcer is disease of the gall-bladder, especially gall-stones or sand. Next in order comes chronic appendicitis with acute exacerbation during which the pain is usually referred to the region of the umbilicus. In this case the pain is lower down than in gastric ulcer, and it is increased upon pressure in the region of the appendix near McBurney's point.

Renal Calculus.—Has been mistaken for gastric ulcer. In this case the urinalysis will usually clear up the diagnosis, moreover, the pain is increased upon pressure over the kidney, and radiates downward and inward along the course of the ureter.

Duodenal Ulcer.—It is only the fact that ulcer of the duodenum is not very common, which makes the occurrence of mistaking this condition for gastric ulcer somewhat infrequent. This condition has almost exactly the same symptoms as gastric ulcer, but the point of tenderness upon pressure is over the middle of the right rectus abdominus muscle above a transverse line drawn through the umbilicus.

Volculus.—In rare cases volvulus of the jejunum may be mistaken for gastric ulcer, but the violent vomiting containing bile soon after intestinal contents, but no blood, makes the differential diagnosis relatively easy.

Neurasthenia.—It is often very difficult to make a differential diagnosis between gastric disturbances due to neurasthenia and those due to chronic ulcer. This is especially true, because not infrequently neurasthenia results from the suffering, anemia and inanition which is caused by the presence of a chronic ulcer.

It is quite likely that for several years to come, quite a number of patients suffering from neurasthenia due to other causes will be subjected to stomach operations as a result of erroneous diagnosis.

Any other severe intra-abdominal condition like intussusception, ruptured ectopic gestation, ovarian cyst with twisted pedicle, peritoneal adhesions either septic or tuberculous, may be mistaken for gastric ulcer. In a few cases I have seen an interesting condition which gave rise to a mistaken diagnosis of gastric ulcer. In these cases the great omentum had become attached by its free margin to some point in the lower portion of the abdominal cavity, the tubes, ovaries, uterus, bladder, the cecum or the abdominal wall. The tension of the omentum upon the stomach gave rise to symptoms which could not be distinguished from gastric ulcer.

In a number of patients in whom we had made a diagnosis of gastric ulcer with pyloric obstruction and consequent dilatation of the stomach, we found the pylorus unusually open and th:

duodenum dilated to from 2 to 4 times its normal diameter down to a point below the entrance of the common duct. Upon exposing the jejunum this was found strongly contracted in these cases.

The lymph nodes near the duodenum in these cases were usually enlarged, indicating lesions of the mucous membranes lining the duodenum. In these the pancreas is usually also enlarged, and the gall-bladder is distended with bile, together with mucus, sand or gall-stones, and frequently all of these substances are found in the same gall-bladder.

It seems reasonable to suppose that the obstruction at the point of entrance of the common duct into the duodenum or below the point must be primarily physiological in character, due to the irritation caused by the mucus, sand or small stones in the gall-bladder and duct.

The observations of Cannon and Blake which show that there is a physiological mixing process which takes place in the duodenum is extremely interesting in connection with this particular class of cases. Continued attention to these cases is likely to develop facts which will have great interest for the clinician.

Another condition of clinical interest has been observed in a considerable number of cases. It has been found that many cases of gastric ulcer have previously suffered from chronic, recurrent, or catarrhal appendicitis, usually with peritoneal adhesions to the appendix, or the cecum, or both, or with fecal concretions in the appendix; but always with some form of obstruction to the passage of gas. This pathological obstruction has resulted in a physiological obstruction to the passage of gastro-intestinal contents through the pylorus, and this in turn had been the exciting cause of the gastric ulcer.

Clinically one can usually follow a very interesting sequence in cases of gastric ulcer which do not end abruptly by perforation or fatal hemorrhage, or by what is probably less frequent in cases in which the ulcer is at all advanced, by permanent healing.

At this point, however, I believe that it is proper to express the opinion that it seems most likely that a very large number of small ulcers heal so perfectly that it is quite impossible to demonstrate their existence either ante-mortem or post-mortem, and that there are few cases which go beyond this initial stage without healing which will later heal permanently.

Vicious Circle in the Development of Gastric Ulcer.—It is not uncommon to observe the following history in the development of gastric ulcer:

1. There is severe pain two to four cm. below the ensiform

cartilage in the median line. This may be more severe directly after eating, or only after eating certain things, or it may be most severe when the stomach is empty, and may be relieved by taking food, but its location is quite constant and the pain is increased upon pressure at this point. There is at this point no dilatation present.

- 2. In attempting to protect the ulcerated surface against traumatism there is a physiological obstruction of the pyloric sphincter. This obstruction may be increased in two ways: (a) There may be developed an indurated edematous area due to the extension of the ulcer, or (b) as a result of the healing of the ulcer there may be formed a certain degree of cicatrical contraction which in itself will constitute an obstruction.
- 3. In order to overcome this obstruction the remaining portion of the stomach musculature will become hypertrophied.
- 4. This is certain to be followed by muscular exhaustation and relaxation, and this will result in gastric dilatation.
- 5. No sooner has this occurred than the pyloric obstruction is still further increased by the fact that the lower margin of the greater curvature is depressed far below the level of the pylorus, and all of the food must not only be forced through the already obstructed pylorus, but it must also be elevated to the level of the latter aperture.

The fact that in the normal stomach every portion is drawn to a higher level than the pylorus, as the organ is forcing its contents into the intestine, has been shown very beautifully by Bettman, and more recently by Cannon.

- 6. In the meantime, another condition has arisen which will prevent healing. The obstruction, together with the sacculation, gives rise to the accumulation of residual food in the dilated stomach, which undergoes decomposition in place of digestion. In this manner, all of the fresh food is vitiated by being mixed with the decomposed residual food remnants in the stomach. In this manner, each successive condition makes the previous state of things more grave. In the meantime, two other conditions have arisen which will serve to prevent the tendency of healing in the ulcer.
- 7. Almost immediately after the beginning of a gastric ulcer, a great amount of mucus is secreted, apparently to protect the diseased surface. This, however, causes the food to become coated, and this in turn interferes with gastric digestion. This condition is followed gradually by the secretion of an increased amount of hydrochloric acid, which is undoubtedly the physical remedy for facilitating the digestion of food covered

With the increasing acidity of the stomach conwith mucus. tents, the chances of healing of the ulcer are greatly reduced, and its extension is practically certain, hence each one of the conditions in turn becomes more and more exaggerated, and conditions go from bad to worse, unless a radical change is established whether by internal treatment, or it this prove ineffective. by surgical operation. I have had an opportunity to verify these clinical observations in a very large number of patients suffering from gastric ulcer, and they are in keeping with observations of most clinicians, who have studied such cases extensively. These facts would indicate the importance of careful treatment at the very beginning of gastric ulcer in order to secure complete healing before any of the secondary conditions have arisen, and also the necessity of eliminating all of the primary causes of the lesion in every individual case after healing has taken place, in order to prevent a possible recurrence.

This is especially important, because each successive attack is more difficult to relieve permanently. The chances for permanent relief are more and more reduced, because each time some lesion will remain, which must lessen the resistance of the tissues, or increase, at least, to a slight extent, the difficulty of emptying the stomach.

It is likely, that with proper after treatment, especially as regards diet and general hygiene, it would be possible to reduce the number of cases of recurrence to a great extent. This would reduce the number of cases, which now properly fall into the domain of the surgeon.

Fuetterer has written most effectively upon this phase of the subject, and I am confident it is worthy of our most serious attention. This is true, primarily, because it would permanently eliminate all of the many serious sequelæ, which are now so common.

All of this would indicate that surgery of the stomach begins where internal and dietetic treatment of disease of this organ fails to-give permanent relief. It also indicates that surgery, in order to be of value, must result in local rest and in the drainage of irritating contents of the stomach, in all non-malignant cases, and in the early removal of the growth in malignant cases. It seems reasonable to suppose that the most careful attention to diagnosis of non-malignant cases, and the surgical treatment of that portion of those which cannot be relieved permanently by internal treatment, must result in a vast reduction of the number of malignant cases.

At the present time some form of gastro-enterostomy seems

to have given the most satisfactory results. Robson pointed out the fact, most emphatically, that the anastomosis must be located actually, and not only theoretically, at the lowest point in the stomach, in order to be safe and effective, and leave the patient free from regurgitant vomiting "vicious circle."

Theoretically, there seems to be many arguments in favor of a posterior gastro-enterostomy, but practically the results seem equally satisfactory, provided the opening is sufficiently large, and is in fact at the lowest point of the stomcah.

A method has not yet been found, which completely satisfies all reasonable demands for performing gastro-enterostomy. I have had the time to look up only those of my cases of stomach surgery, which I have treated in the Augustana Hospital, hence I will speak only of these in this paper. But the methods and the results have been the same in the cases I have treated in other hospitals, hence this is of no material importance. The following table will give a convenient idea of these operations:

		Total.	Recovery.	Died.
1.	Incomplete Gastrectomy	5	4	1
2.	Pylorectomy	9	8	I
3. (	Gastro-enterostomy, Murphy Button-	•		
	Malignant Cases	24	16	8
	Non-malignant	10	9	1
4. (	Gastro-enterostomy, McGraw Ligature—			
	Malignant Cases	22	16	6
	Non-malignant	65	59	6
5. (	Gastro-enterostomy, other methods	12	10	2
6. ]	Perforated Gastric Úlcer	10	2	8
7. (	Gastrostomy	4	2	2
S. 1	Exploratory Laparotomy for Carcinoma of Stomach	32	24	S
		<del></del>		
	Total	193		
	Ulcer of Stomach, not operated	66	60	6
10. (	Carcinoma of Stomach, not operated	49		15
Patients returned to their homes unimproved, 34.				

It will be seen from this that most of the operations were performed for the purpose of securing rest for the pyloric end of the stomach, and drainage for its cavity; also that gastroenterostomy was performed oftener by means of the McGraw ligature than by any other means. This method has been more satisfactory in my hands than any other up to the present time. I still follow the original direction of the author of the method, which I published in the Journal of the American Medical Association, June 6th, 1903. It seems likely that all of the methods now in use will be displaced by some new method which will be more nearly ideal than any now in use.

So far nothing has been said concerning the treatment of any of the sequelæ, or the complications of gastric ulcer, because it is to be hoped that these will be eliminated to a great extent in the future, by the cure of the ulcer itself.

Complications.—The most common complications are perforation and hemorrhage.

Sequelae.—The sequelæ are: (1) Chronic ulcer, (2) stricture of the pylorus, (3) gastric dilatation, (4) hour-glass stomach, (5) peritoneal adhesions, (6) inanition, (7) anemia, (8) neurasthenia resulting from the constant suffering, the malnutrition and the anemia, (9) carcinoma, and (10) jejunal ulcer following gastro-enterostomy.

Perforation.—The diagnosis of perforation is relatively simple. There is a history corresponding to that given for gastric ulcer above. During some exertion, the patient suddenly experiences severe pain in the region of the stomach. This is frequently attributed to the eating of a large meal, and may consequently be mistaken for acute gastritis. The pain becomes diffuse very suddenly. The patient is nauseated, and sometimes vomits blood or bile. The abdominal muscles become rigid; the patient is in a severely shocked condition.

The greatest point of tenderness is in the region in which tenderness existed previously. In many cases the liver dulness is obliterated to a greater or less extent, but it is not safe to place too much weight upon this symptom, because it frequently is present only after the perforation has existed for several hours, and if operation is postponed until this diagnosis can be confirmed by this symptom, the extent of the infection is usually so great that the operation cannot save the patient.

With two exceptions, all of my cases in this class were in this hopeless condition when they were admitted. The important point in connection with these cases is an early diagnosis and an immediate operation. The latter should consist in a free abdominal incision, careful sponging out of stomach contents that have escaped into the peritoneal cavity, closure of the wound in the stomach with Lembert sutures, preferably of silk or Pagenstecher thread. Drainage should always be used.

In cases in which the diagnosis is not made for 24 hours or longer after the perforation has taken place, it is difficult to state which course is the worst to pursue. In my own experience, all of the cases which came under my care in this advanced stage, which were operated on, died within a few days, while a few which were not operated on, recovered, the opening in the stomach

being closed by a plug of omentum. In some of these cases a subphrenic abscess developed, later requiring an operation.

I am confident, however, that these cases were all somewhat less serious from the beginning than those which were operated and died; and it would consequently not be proper to attribute the recovery of the former to non-operative treatment, and the death of the latter to the operation.

It seems proper to advise an immediate operation in all cases of perforated gastric ulcer, in which an early diagnosis is made, and to use one's judgment in each individual case of perforation, in which the diagnosis is not made early.

Gastric Hemorrhage.—A few years ago there was quite a marked tendency toward the immediate operation for gastric hemorrhage. Mayo Robson's experience in this direction was so encouraging, that quite a number of surgeons favored operative treatment for this condition. It seems, however, that this is quite unnecessary, because in almost every case the hemorrhage will cease, and if the patient is carefully treated, her general condition can be greatly improved, so that the risk of the operation itself will be much less than when performed during a hemorrhage.

The treatment should consist in exclusive rectal feeding. It may be well to administer from two to four ounces of castor oil early in the treatment, and then to place nothing whatever in the stomach, until there has been no blood in the evacuations for several days. Feeding by mouth should be begun with great caution, and as soon as the patient's general condition is good, the operation should be performed.

Sequelue.—In the treatment of the first three in the above list, (1) chronic ulcer, (2) stricture of pylorus, and (3) gastric dilatation, the method must be the same. It must consist of drainage of the stomach cavity by gastro-enterostomy, or in rare cases by Finney's pyloroplasty. The one point of greatest importance which must not be overlooked, is the choice of location for the opening in the stomach at its very lowest point.

Rodman's suggestion, advising the excision of the ulcerbearing area in these cases, is undoubtedly worthy of consideration. In my own experience the results have been more satisfactory in cases in which I have excised the pylorus in connection with making a gastro-enterostomy, but as this adds another element of danger to the operation, it may be well to continue our observations, before making this a routine treatment in these cases.

In cases in which a pylorectomy is not made at the same time, the gastro-enterostomy opening is likely to become partly or completely obstructed by contraction, and this may be followed by a recurrence of the ulcer. In cases in which a pylorectomy has been made, this has never occurred in my experience.

At the present time the choice of operation must lie between the methods introduced by McGraw, that employed by Mikulicz, Moynihan's method, or the method developed by Robson, Murphy's oblong button; or Connel's suture method can be employed in connection with the methods of Mikuicz or Robson, but it seems likely that the button will continue to lose more and more of its old advocates while it is not likely to gain many new ones. This is true, especially, because with it the size of the opening is virtually limited, and there is a distinct objection in the minds of most surgeons against a non-absorbable foreign body.

The one great point in favor of the button is its ability to punch out an opening, and to leave the union between the stomach and the intestine with the slightest possible amount of connective tissue.

In order to be of any practical value this paper must point out some of the dangers to be avoided in surgery of the stomach.

Unnecessary Traumatism should be Avoided.—There is great danger in unnecessary manipulation, because this increases the shock and the tendency to infection.

In all of these cases much can be done to prevent this by making an ample abdominal incision. Much time is frequently occupied in finding the jejunum, resulting in useless handling of viscera. By simply lifting out the transverse colon, and following its mesentery to a point a little to the left of the median line, one can always find the beginning of the jejunum in a few moments.

In gastrectomy and pylorectomy it is possible to reduce the manipulations to a minimum by simply grasping the four main arteries, and also the greater and lesser omen a between these four points, and then excising the intervening portion, which has been grasped by long-jawed forceps, in order to prevent leakage.

There is danger of necrosis of the stomach, if the gastric artery is injured, and of the transverse colon, if the middle colic artery is grasped in clamping the greater omentum.

In making a posterior gastro-enterostomy, there is danger of contraction of the opening in the mesocolon, unless the edges of this are sutured to the stomach.

There is always danger of angulation of the jejunum at its point of attachment to the stomach.

In all stomach operations it is well to have the patient placed in the sitting or semi-sitting posture, within a few hours after the operation, in order to prevent hypostatic pneumonia, and to facilitate drainage of the stomach by gravitation.

The greatest danger after operation comes from acute gastric dilatation, but this can be remedied readily by introducing the stomach tube. If gastric lavage is employed, it is, however, important not to introduce a sufficient amount of solution to do harm by pressure. Half a pint at a time is quite enough water to introduce. It is a rule with us to make use of gastric lavage, whenever any patient is distressed after an operation upon the stomach.

In three cases in which gastro-enterostomy had been performed for the relief of pyloric obstruction in my series of cases the progress was perfectly normal for 3, 5 and 8 days, when the patients suddenly began to suffer from dyspnea: This continued for 6 to 12 hours, when the patients died. In the first two, an autopsy was not permitted. In the third it demonstrated the fact that the patient had died as the result of acute gastric dilatation.

We had previously had a number of similar experiences less severe in character, in which the dyspnea had subsided at once upon the use of gastric lavage, but it had not occurred to us that the distress was really due to acute gastric dilatation.

One would think it almost impossible for this condition to escape recognition, but the presence of the dressing over the abdomen, and the fact that the distress is referred to the chest, is almost certain to lead one astray, unless one's attention has been directed especially to the possibility of the occurrence of this condition. We have since observed this acute gastric dilatation to a greater or less degree in a number of cases, and have always been able to obtain prompt relief by the use of the stomach tube. Aside from the gas one always finds decomposing mucus and usually some old blood.

It is well to bear this possible condition constantly in mind in the after treatment of these cases.

Feeding.—These patients should be given one ounce of one of the various predigested foods in three ounces of normal salt solution as a nutritive enema every four hours.

After the third day some of these predigested foods may be diluted in water and given by mouth, but the rectal feeding should be continued.

Later, broths and thin gruels may be given, but milk should not be given until quite late, as it is rather more likely to decompose than these predigested foods.

The patients may be permitted to chew steak, and to swallow the juice within a week after the operation.

#### THE AMERICAN DISEASE: AN INTERPRETATION,\*

BY WILLIAM BROADDUS PRITCHARD, M.D., NEW YORK.

Medical nomenclature, certainly as regards names for many diseases, stands to-day the most neglected, the most incongruous. the least rational, and the least progressive of all the minor divisions of the subject. Many of those most familiar justify a continued existence solely through the fallacious law of traditional custom. In some instances, both name and disease being inelastic-typhoid fever or epilepsy, for example-no special harm is done. In others, as hysteria and chorea, we continue to insult intelligence apparently without either consciousness of shame or hope or desire for reform. There is something of promise in the tuberculosis of to-day rather than the consumption of our fathers, but much remains to be done, the work having scarcely begun. The field of neurology, perhaps more than any other, needs the scythe and pruning hook. The latter instrument could, in my judgment, be used with particularly beneficial effect if employed vigorously and with discriminating judgment in neurological nosology. Its first work, if in my hands, would be to clip and trim and shape into at least some semblance of definite form and substance that phantom, once a tree, now a forest and rapidly becoming a wilderness, so rank and riotous is its growth, neurasthenia. No shorter road to neryous prostration exists than along the route of present interpretation and mental comprehension of the term as generally understood or misunderstood. I confess to an antipathy—I think rational though amounting almost to an obsession-for the word. Originally intended to possess a definite significance, its field of application has been so elaborated and broadened and abused that to-day it means almost anything and with equal truth almost nothing. The inspiration which gave it birth marked the genius, but the child has grown a monster, fattening upon the flesh of hundreds of brothers and sisters, and even its cousins. It is still from custom classed among the neuroses or psycho-neuroses, and thus the special property of the neurologist, but like its twin sister—the only sister left, by the way—hysteria, it has wandered afar with an omnivorous appetite and is known to-day and claimed in some one of its hydra-headed forms

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in every field of medicine. To the stomach specialists belong the gastric and lithemic types, to the surgeon the post-operative and some of the traumatic cases. The sexual neurasthenic is the property of the genito-urinary specialists, the reflex cases are almost equally distributed to those who know the eye, the ear, the nose and throat, while the neurologists divide the remainder with the gynecologists, or play battledore or shuttlecock with all. The general practitioner alone is counted an invader in this field, and he, wise man that he is, with appreciative philosophy, rarely feels himself aggrieved.

My criticism is not of the term etymologically. On the contrary, properly restricted in interpretation, it is an excellent example of word-making. It should stand, however, for either fish, flesh or fowl—for a definite entity or syndrome—if retained in our nosology. If discarded in this field, by all means keep it, but restrict it to the broad, descriptive significance of a generic term alone. I am not yet willing to accept the dictum embodied in the recent paper of an eminent American writer who, with a stroke of the pen, announces the passing of neurasthenia, for which he would substitute a group of pure psychoses, if for no other reason than that he leaves us none the better off for such a begging of the question; and yet one is almost tempted to let it pass away into final oblivion and without a protest on reading a serious thesis by another recent writer upon neurasthenia in If it is to continue a neurological and general medical waste-basket into which we are to dump all forms and degrees of illness associated with irritable, nervous weakness to which we cannot attach a standard label, then it cannot be lost too quickly. It means to-day to the student mind mystery, confusion, chaos and correllated aversion, curiously mixed with a contradictory fascination; to the patient it has become a term full of suspicion; to the medical teacher it is a term of reproach. No observation or experience during my fifteen years of postgraduate teaching has been more emphasized than this attitude or mind of the student body. Year after year and many times a year, the cry has been the same from all my classes: "What is neurasthenia?" I think you will agree with me that something should be done. The solution of the problem to me seems relatively simple. Let us stop running after strange gods and the making of false idols and return to the worship of our fathers and to one faith. There is a nervous affection—the very same which originally inspired Dr. Beard to coin the word, with a broadly constant symptom picture, a more constant etiology, a conjectural pathology, a fairly certain prognosis and a definite

plan, in principles at least, of treatment, the chief and essential symptomatic manifestation of which is an irritable, quick exhaustion of nervous function in many or all directions. has become almost lost, it has suffered degradation, it has fallen from the genus to the species in the literature of the subject. not so much through intrinsic conditions, but because of the confusion and chaos of interpretation. The dignity and importance of this subtype, its rapid and progressive increase, the charm and fascination of its study and of its remedial and curative treatment are such as justify and, indeed, demand that it be taken from this chaotic mass and be given a distinct identity. Let this be neurasthenia. We shall simply give back to Casar what was his, lost property to the original owner. It is but the restoration of the birthright. How the thief will cover his nakedness is his problem, not ours.

I have but borowed for a purpose my title, and having explained my motive, I discard it. And yet it is not altogether That it has the ring of cheap sensationalism is a just criticism, though nothing was further from my mind, a disavowal which I hope has been anticipated and is accepted. In much that the condition that I have in mind represents, in much that is peculiar to this affection—to neurasthenia—the term, the American disease, is both accurate and appropriate. As I conceive it, it is an American disease indigenous to this soil and essentially a product of causative conditions peculiar to this coun-That it now exists elsewhere, and probably always did in sporadic form I do not doubt, but this is its home, this its soil, this the atmosphere in which it luxuriates. What is this disease? What are its symptoms? How differentiate it? What is its etiology and prognosis, and how is it to be treated? limit of time will permit me to create the scheme of the picture only, but if the viewpoint be the proper one and the perspective liberal in breadth, any one of my audience will, I am sure, be able to do the filling in. I would count my work well done and a good end accomplished if I did no more than infect you with the enthusiastic interest with which the subject inspires me. In the effort to do so I shall create part of the perspective referred to. First as to your material: Neurasthenia never occurs in fools. The idea constitutes a paradox. Neurasthenia may make a fool, but you cannot make a fool a neurasthenic. It is a disease of bright intellects, its victims are leaders and masters of men, each one a captain of industry. Each case is unique as a study if you are to study helpfully. There are no arbitrary limits to the horizon of studious effort. The political

history of the world has been made largely by paranoiacs. Mahomet, Peter the Hermit, and Oliver Cromwell are examples in point, to go back no farther. In each there was an imperative and an impelling monomania. The world of literature, of art and of science, of fruitful endeavor in all higher fields, is indebted in an analogous degree to the neurasthenic, analogously endowed with an imperative and an impelling energy. Gould's list includes such names as Carlyle, Wagner, Huxley, Spencer, and many others. The confidence, the faith of patients of this type, is to be classed as an inspiring stimulus in itself and is well worth the struggle to grasp understandingly this subject. That yours is the helping hand depended upon by such men—such giants—whom you may lead as little children; the knowledge that you, and sometimes you alone, may bring back into the world's arena of action and into the old supremacy, such factors in the world's work, represents to my mind an objective, a purpose, a sphere of usefulness second to none of the many laudable ambitions along the highest planes of medicine.

In painting the clinical picture it would mar my scheme to paint an individual likeness. I shall give you first the basis for a composite photograph, made up of the case histories of fifty selected patients from private practice. Forty-two of these were American born, the remainder, 8, with two exceptions, had been residents more than fifteen years; 22 were from New York City, 4 from Connecticut, 3 from Massachusetts, 5 from Pennsylvania, 2 from New Jersey, 5 from as many different Southern States, 1 from Canada, and the remaniing 8 from as many different sections. Forty-three were from cities of more than 100,000 inhabitants, although only 21 were city born. The average age was 37, the oldest 62, the youngest 26. Without a single exception all were brain workers. Sixteen of these fifty had been makers of history in different spheres, some large, some small; mercantile, literary, religious, scientific, political or economic. Two of the number were among the hundred captains of industry assembled in a list made to commemorate a national function celebrated a few years ago. By occupation 13 were financiers, in multiple mercantile lines, really better described as promoters; 6 were lawyers, 3 clergymen, 2 merchants, 5 physicians, 5 brokers, 4 school teachers. Of the remaining twelve, 2 were professional politicians, 2 corporation officials, and 4 managers of large industrial plants. Four of the fifty were men of independent, selfacquired means, who described themselves as having no occupation at the time of record. They have been included in the groups mentioned according to previous occupation. Four of

this series were women, I a journalist, I an actress, and 2 of them teachers. Fourteen of the fifty were unmarried, the age average of this series of fourteen being relatively high, forty-four. The four females were all childless, though two of them were married.

Instead of an analytical elaboration of individual symptoms, let me give you a standard clinical history selected from the series of fifty as a type portrait.

M., aged 33, male, born of healthy good stock, American parentage, the only handicap being parental poverty. Driven by necessity and by that subtle factor, temperament, to early effort in extraordinary degree, he acquired the strenuous, ambitious, high tension, keenly sensitive habit. He could not afford a liberal or broadening education, because his own dollars paid for it. At 10 he was in business as apprentice in a large establishment manufacturing mechanical engineering appliances. At 26, with a capital of \$500, he organized a company, had it incorporated, was president, secretary, treasurer, superintendent, salesman and chief stockholder, entering into competition with established and lavishly capitalized rival corporations. Awake at 7, he hurried through breakfast a few minutes later, mixing an omelet with an order or a countermand, assimilable sometimes with the former, always incompatible with the latter, taking in with his coffee the London market or the Paris bourse, dividing the steam supply between brain and stomach when it should have been all turned on at the point of physiological A hurried walk to the train, possibly a delusional demand. constitutional in this very walk, the steam being still turned on to the top floor. In the office a pile of mail, interviews with clerks, orders, directions, instructions, detail work in every department. Just here en passant is laid the immediate foundation of the breakdown. It is the man of detail, the man great in everything except the qualities which make the general, who becomes the neurasthenic. It is the crime of attending to minutiæ which makes the nervous derelict. The general is never a neurasthenic. It is the one flaw in the statue of true greatness. That quality, the highest, which helps us to select our lieutenants, is always lacking. The neurasthenic is the archtype of the pooh-bah. He is not only general, but also colonel, major, captain and private. The penalty is inevitable. No man can do the work of four along higher lines without paying for it.

After four hours in the office this man goes to lunch, tired, nervous and with preoccupied mind. He takes his secretary or

manager, and again the attempt is made to mix a steak or an omelet with a business problem. The steam is still turned on at the top, our patient eats fast and drinks a lot of water or other fluid, prematurely flushing the contents of the stomach into the intestine. Already by nervous inhibition he has interfered with biliary and other secretions. The intestine, the duodenum, cannot take care of the albumenoids—the proteids—properly. It cannot take care of its own. The alkaline reaction of duodenal secretion has been upset by the flushed overflow of acid gastric juice. the secretion of bile has been inhibited by the state of mental tension and the diversion of energizing agencies from digestive viscera to brain. Fermentative decomposition with resulting ptomaine and toxine formation follows, deficient nutritional assimilaton plus chemical irritation are added to cell fatigue along a routine line without rotation. Notices of protest begin to come into first subconscious recognition, but are disregarded. They may come from any one of many sources. Headache of the cincture or helmet type, vertigo, a sense of irritable weakness, mental and physical follows; vague, mysterious messages in a strange language never heard before, are received but not understood. This patient has always been well and has had no training along the lines of familiarity with symptoms. messages at first ignored, sometimes hushed with a cocktail or a highball, or many of both, become more and more continuous and imperative. The habit of almost mechanical activity of mind projects itself into the hours for sleep. Insomnia develops, at first as dreamful, anxious sleep, then with fitful, broken sleep, and later with an allowance cut by more than half from the normal. He wakes tired, irritable. The pneumogastric is one of the first and often the most emphatic of the aggrieved Palpitations, overaction, an irregularity partly toxic, lay the foundation for what later has become an obsession of fear of sudden death—heart anguish. He fears to be alone, to walk alone, to sleep alone. To this other fears have been added. A perfectly legitimate dizziness has laid the foundation for an almost hallucinatory persistence of this impression. Rapid motion, as in the cars or a carriage, high places, sudden changes in the visual perspective, originate as many phobiæ. Every nerve gets on edge and this hyperesthesia of auditory, or visual, or olfactory, or gustatory, or pneumogastric nerve, varying, as it necessarily does, in degree, gives explanation for the protean system picture. It is the mystery of it all which leads to introspection in attempts at explanation, and finally to an exquisite exaltation of subject consciousness, a veritable delirium of anguish.

Neurasthenia is essentially a recoverable affection. In a majority the recovery is complete and final. In a few, usually neglected or mismanaged cases, the recovery is imperfect, relapses are common and the neurasthenic habit becomes almost a part of the individual. Even in these cases a steadily progressive tendency to recovery and to a normal poise as the final fixed habit may be established by persistent effort based upon an intelligent understanding of the general principles of treatment plus an appropriate application of such principles to the personal equation of the particular patient. Neurasthenia carries with it no penalty to succeeding generations. This statement is contrary to a priori reasoning, and also contrary to routine teaching and unthinking or ignorant belief. It is a statement based, however, upon careful observations in an extended experience, and I believe it to be absolutely true. The victim pays the whole penalty; the disease is free from the law of entail. The high average standard of good health and nervous poise in the children of neurasthenic fathers has been a frequent personal observation.

I do not believe that any individual case of neurasthenia ever originated in a single cause. The very essence of the affection makes such an hypothesis a paradox. Equally true is it that no single agency is sufficient to explain the prolonged maintenance of this condition. Any one of many causes may appear to dominate in a given case and for a given time, but the carefully studied etiology will prove a complex one in every instance. The list of stereotyped and empirically accepted causes is a long one and undergoes a progressive expansion from year to year. Overwork, worry, prolonged mental tension and anxiety, malnutrition from deprivation of food, sleep and rest, toxemia of autogenous and heterogenous sources, shock, trauma, reflex irritation, and as many more are on the list. Most of these are contributory factors only, and some are effects which are essentially secondary, being part of a vicious cycle, vicious in fact and even more so in interpretation. The insufficiency alone of any of these factors is tacitly admitted in the usual statement that an hereditary predisposition is fundamentally necessary, a proposition not sustained in my own experience, though carefully investigated always. Neurasthenia is, I believe, essentially an acquired state and heredity, except of temperament and a high grade cortex, is an almost negligible equation. My chief criticism of the ordinary etiology as outlined is the narrow viewpoint with resulting technical limitation in treatment. What is the cause of these causes? The factor in neurasthenia in the American

disease—the factor common to all cases—is, broadly, that of atmosphere—the atmosphere peculiar to this country, the atmosphere of limitiess possibilities, not in one field, but in all; in commerce, in art, in literature, in every field of intellectual accomplishment. It is this ether of limitless possibilities which stimulates the individual to a degree of effort, of tension, of strain, of superstrenuous endeavor, impossible and unknown, except by the infectiousness of example elsewhere. There is no limit to the game, and everybody may sit in. America is the only country in which you can go in with one white chip and have a chance to quit the biggest winner. It is this atmosphere which is the incentive to overwork. It is the anxiety, the tension, the strain of the game, which brings worry, loss of sleep and all the rest; and even here the penalty comes indirectly. The intoxication of endeavor, the delirium of effort, is at the expense of all conservatism. The laws of nature—inexorable as fate—fate itself in fact, are violated not daily, but every hour. The hygiene of life is set aside. All kinds and degrees of insult are offered to brain, stomach, heart and every other organ. Day after day the steam is kept turned on and at full pressure to the one floor, and, worse still, often to the one room. Is it any wonder that all the rest of the house grows cold, or that, the power being insufficient, the machinery of the lower floors works poorly and makes poor goods? Every function suffers sooner or later. One after another, and sometimes several together, they protest, then openly rebel and finally go on strike. Indigestion, toxin and promaine formation, torpor of sewerage function and resultant, defective elimination add the element of chemical irritation, or autoxemia, or lithemia, to the situation. The tired brain cell gives way under this added handicap and goes out on sympathetic strike.

The accident of dominating symptoms in a given case is but rarely of any value in determining the etiology. Gastric and lithemic and other types may be recognized and distinguished symptomatically with some minor advantage, but no more serious error of interpretation exists than to conceive of them as primary etiological types with a correlated therapeusis. Antilithemic drugging will not cure a lithemic neurasthenia nor will lavage make well your so-called gastric cases.

I have again and again noted a urine with specific gravity above 1,030 with 14, 16, 18 and even 20 grains of urea per ounce with lime oxalate and urates in abundance, all these conditions giving way to the normal under direct treatment, the neurasthenia remaining essentially unchanged. I never knew a sexual

neurasthenia, so-called, to be cured by any plan of direct genitourinary treatment, and this statement applies with equal truth and force to all efforts (and I have seen many) to cure the reflex cases by removal of a supposed cause in any peripheral irritant.

I know of no condition in medicine which demands more exactingly of the physician all the diagnostic resources of the profession, and yet mistakes in diagnosis should be rare. symptomatic semblance of neurasthenia—the pseudo forms which may sometimes present much of the picture, but will always show a radical omission or addition somewhere, should always be in mind and should be excluded carefully seriatim. More than one patient referred to me as a neurasthenic has been found to be the real victim of tuberculosis, of malaria, of Bright's disease, of gastric ulcer, or some other similar affection. Anomalous forms of Basedow's disease in women and various toxic states among men have represented especially common mistakes in diagnosis. Faretic dementia in its incipient stages and some forms of melancholia, particularly the affective types. demand special mention. A guarantee of escape from the opprobrium of error as to the pseudo types is possible only through an exhaustive recourse to all measures and methods of accurate information. Elaborate urinalysis, blood examinations and often examinations of the sputum is a routine procedure with me. In any case in which the dominant symptoms are referable to a particular function or organ persistently, I am proportionately suspicious of a local disease at least complicating the general state. It should not be forgotten that a neurasthenic may have a coexistent Bright's. In Basedow's disease which, as we know, may utterly lack the spectacular symptoms, the absence of goitre and of exophthalmos may easily lead us to interpret the nervous irritability, the quick exhaustion, the fears, the digestive and other functional disturbances, the loss of sleep and the widespread vasomotor symptoms as due to a neurasthenia, but the habitual quick pulse, the shallow respiratory action, the diarrhea and the tout ensemble of constancy in the picture will always give rise to doubts which will be converted into negative certainty when the etiology is considered. From paretic dementia we can distinguish neurasthenia by the presence in the former and the absence in the latter of organic signs. No matter what the degree of incipiency, if the disease has advanced to the point of inducing symptoms, we shall find in paresis somewhere some of the physical signs. Special care should be observed in the melancholic (by the way, the majority type) forms

of paresis. In melancholia we have, no matter what the subtype, a constant syndrome; a characteristic facies, a post-cervical ache, a shortened sleep, an irrational melancholy and a tendency to suicide. In neurasthenia this facies is absent and the tendency to suicide is rare. Melancholiacs get to sleep as a rule with but little difficulty, but wake too soon, at 2, or 3, or 4, and sleep no more. In neurasthenia they sleep lightly, dream much and wake often. The post-cervical ache may belong to both, but in neurasthenia it is often a cincture or helmet headache, quickly dissipated by mental diversion. The neurasthenic can laugh, the melancholiac cannot. For a melancholiac to laugh is to refute the diagnosis. From myasthenia gravis it is to be distinguished chiefly by the absence of dominant bulbar symptoms.

What is the pathology of neurasthenia? The answer is almost anyone's guess, and yet to know the lines of experimental research and investigation already established is a long step in the direction of what will finally prove the correct guess. The work of Hodge, familiar to you all, was a far call in the right direction, and while it has given us no final solution, it probably paved the way to the yet to be demonstrated pathological explanation of these cases. The effects of fatigue, of worry, of irritation, upon the brain cell structure was proven to be actual and demonstrably so, by his work. Barrows has added observations which demonstrate with equal positiveness, the structural and sometimes actually organic changes and results which follow to the cell from malnutrition. All neurasthenics, it should be remembered, are examples of malnutrition from faulty assimilation and metabolism, usually secondary. The work along chemical lines with a final explanation in states of auto-intoxication promises much, but that which appeals most strongly, even though as yet it offers least in a tangible, material way, is a combination of the others with an imaginative elaboration of the ion theory. The analogy of the highest governing nervous system with a telephone service in a large city has occurred to many, appeals to most of us and is familiar to you all. We have all been able to grasp mentally some conception of the power plant, the conducting wires, the receiving and transmitting station of the subscriber and a central, but the plan of a central switchboard is where we stop. The hello girl of the central station will not do. She is too unreliable; she goes to sleep on post; she talks distracting gossip; she has no sense of duty at times. Her sole stimulus to duty well done is often the approval of the inspector only and the \$10 per week. Neurasthenics don't gossip, they don't go to sleep-more's the pity-and yet the

switch gets out of gear and you cannot get a connection, or if you do there is a buzz and you can't understand which stands for the weakness; to which we might add in carrying out the analogy, the usual profanity, to represent the irritability. Mendelssohn, Frankhouser and others, in attempts to give a tangible, graspable explanation of electrical action upon nervous function, have advanced and elaborated what might be called the theory of wandering ions. You will recall that when first announced, the neuron theory, in addition to facts proven, claimed, but did not prove a distinct individuality for each neuron, with no anastomosis anatomically with our neurons. This undemonstrated claim was unaccepted for the reason that it left less explained than before the observed and familiar facts of concert of action and synergistic relationship of nervous function which seemed to demand some anatomical connection. Imagine bodies endowed with autogenous mobile life, which stretch an arm from I to 5, or A to G, wandering about with a restless usefulness, connecting two separate souls who want to get in touch in the same way, but with infinitely more of reliability, as the central hello girl connects you up with the number you send in from the transmitting phone. Imagine these little bodies goaded day after day to extraordinary effort, allowed no rest, no sleep, whipped by alcohol, or tobacco, or coffee, suffering from deprivation and irritation in every way, rations served foul, working for a thoughtless, selfish, utterly inconsiderate master. Do you wonder that they get discouraged, tired, exhausted and confused, taking messages wrong, turning in a fire alarm here, calling in the police there, doing many things which they should not do and leaving undone those things which they should do? Very pretty, you will say, but fanciful. I admit it, but I deny any more of fact in any other theory.

The first step—the essential foundation of any plan of successful treatment in neurasthenia—is the establishment of a proper relation between physician and patient. The status of the physician should be firmly established before the question of treatment is considered at all. He will have laid the foundation of any plan of successful treatment well in a direct ratio with the thoroughness, the exhaustiveness of his diagnostic examination of the patient. Nathing should be taken for granted—no second-hand information should be accepted. At the risk of being tedious, examine for yourself. Five minutes or less is often more than sufficient time for a final diagnosis in paresis or tabes—two hours is often time well spent in the first examination of a neurasthenic, and this is true even in the instances in

which as many minutes only have been necessary to convince you of the nature of the case. Remember there are two parties to the transaction. Your own enlightment is not the only requisite. The neurasthenic always takes himself and, at least, some of his symptoms seriously. To tell him abruptly that this or that means nothing is not convincing to him, however true to you. No obvious foundation has been laid for so positive a statement in so short and superficial an examination. To you many of the symptoms are distorted by exaggeration, to him they are real. Do not forget the axiomatic fact that neurasthenia does not develop in a fool, and as corollary to this fact make your appeal to the intelligence of your patient. Explain things; give the patient something tangible to grasp, some explanation which appeals to reason. He will leave the ether of imagination and come down to the terra firma of fact gladly. The effect at first may be upon the subconscious ego only, but the leaven of action will later rise into controlling consciousness. The physician, by the way, should never think, or believe, or guess; he should know. Therefore, he should lay at least a plausible foundation for such knowledge in a patient examination at the first interview. It is just as important that a reverse attitude should be the rule thereafter. Discuss with your patient in subsequent interviews every topic conceivable except his ills. At stated intervals go over the case objectively, taking an account of stock. Where favorable progress is noted, not only mention it—prove it; if still in statu quo, explain the delay in results. Silence is rarely golden in such situations. Equally important with this factor or proper relationship between doctor and subject is the control of the patient's environment. Just which is proper varies with different cases, but once settled, it should rarely vary with the case. Compromises and concessions are always dangerous. The patient's hand should never touch the tiller, once you have taken charge of the ship. First, place him so as to minimize the influence of all adverse factors, domestic, financial or otherwise. Break up, as far as possible, all subtle or obvious factors which contribute to a morbid introspection by conscious or subconscious association. Encourage objective consciousness by a change in the physical and mental atmosphere. Sometimes this must be done radically, and the patient cut out from the family or from his business. Never leave him alone, and never leave him idle. Put with him a tactful, resourceful. sensible, attendant-train your own nurse, by the way-train him over again, if a hospital graduate. Don't call him a nurse in any event—neurasthenics resent trained nurses. Give all

your instructions to this nurse-companion—never to the patient, who should have nothing whatever to do with his case. Arrange all details of diet, of exercise, medicines, baths, diversion, etc., with the nurse. Give your patient a chance to escape from a knowledge every hour of the day that he is a patient. Keep him busy, fill in every minute of the day. A salt rub in the morning, the patient standing in eighteen or twenty inches of hot water, three minutes of practice in deep breathing exercises, after which comes breakfast. All meals should gradually be made as full and as nutritious as possible. I observe idiosyncrasies, but no other law of special diet. After each meal from twenty to thirty minutes of recumbent rest is insisted upon—a abit observed by nearly every carnivorous animal, except man. Next comes the daily visit to my office, with treatment by the galvanic current, one electrode back of the neck, the other over the forehead, both as large as possible, in order to get the utmost diffusion at the point of contact and thus a maximum of electricity with a minimum of discomfort from local action. battery, a rheostat, a metre, and proper electrodes are absolutely essential. Part of the benefit is undoubtedly due to suggestion. This is a small part, however, by comparison with what I am firmly convinced by years of careful observation to be an intrinsically dynamic effect of sometimes striking benefit from electricity thus administered in these cases. I never exceed five milliamperes in amount, or half an hour for the seance. Usually I begin with one milliampere and a five-minute seance. On leaving my office, my patient goes direct, riding or walking, according to circumstances, to a gymnasium, the director of which, Dr. Watson L. Savage, is a medical graudate, whose lifework has been given with enthusiasm to the co-operation, elaboration and perfection of a plan, which we both believe will, when perfected, prove a specific, curative treatment for these cases, a proper environment and control being the only other essentials. By this plan of psychophysical, educational control, we secure, by the indirect method, what is always difficult, and often impossible, by any direct plan—a lowering of tension, a mental relaxation, a return to rational inhibition, to order from These patients are taught the lesson of physical, muscular relaxation—how to lie down, how to go through the mattress to the bottom, how to turn loose physically. That the muscular system is energized and overkeyed into states of hypertension through sympathy with states of mento-nervous exaltation is familiar to us all in the tense mouth, the corrugated brow, the clinched hand, the restless walk. We simply start at the

other end, and re-educate the higher through the lower. quickest, the surest, the most rational way to key-down a man mentally, is first to key him down motorially. I have waited for ten years of results to accumulate before announcing publically. except in the lecture-room, the value of this procedure. I give you no experimental theory. My unqualified endorsement is based not only upon a rational conception but many confirmations in experience. I count this part of the plan of treatment in neurasthenia one of the most positively helpful and essential of a. the major details. The afternoon, following lunch and another half-hour of rest, is spent out of doors—a drive, a horseback ride, golf, tennis, a walk, a visit to some museum or place of public interest; a shifting from one to another of these various diversions, largely based upon the personal equation of temperament and aptitude in your patient, fills up the afternoons. In suitable cases part of the evening must be filled, and occasionally the theatre or a concert can be utilized, but never at the expense of sleep, if insomnia be present. A half-hour of massage at bedtime closes the day's work.

This one symptom, insomnia, must be controlled always. Make your patient sleep—count a dreamful night insomnia. Veronal, trional, sulfonal, in 5, 10 and 15-grain doses, are effective and satisfactory. I often shift them. All should be given in some hot menstruum. No nervous patient should ever know his drugs—send the prescription yourself, and always mark it, "No copy. Do not repeat." Fifteen years ago a few neurasthenics under my care came back to health and nervous poise in spite of the drugs which I employed in treating them. For five years past, using less than half the drugs, my percentage of recoveries has increased fourfold. Drugs play a varying part—sometimes no role at all, again a vital one. patients demand them, others are indifferent, and still others need them neither mentally nor physically. Sleep must be secured and maintained, elimination and prompt sewage function regulated and complicating accidents combated. For temporary use, until the regime outlined becomes effective in lessening it, the mental state of unjest and hyper-psychical esthesia should be controlled, and the drug which most effectively accomplishes this purpose is opium in the torm of the denarcotized. aqueous extract in doses from one-tenth to quarter-grain three or four times daily. Free water drinking between meals is a desirable habit to encourage and a positive water, always symptomatically remedial in cases in which lithemia is an aggravating factor, is the Royal Fachingen. I do not believe in the

sanatorium treatment of these cases as I know sanatoria. If the ideal sanatorium existed, the sanatorium plan would be ideal. I add nothing to your personal knowledge, when I tell you that such an ideal does not exist. I can conceive of no more fitting nor important statement in conclusion than one of condemnatory criticism of the misapplication of the Weir-Mitchell plan of rest and isolation in these cases. It is to be condemned first, as involving the conception of a routine system or plan of treatment; second, as encouraging introspection; and, third, as violating in principle all intelligent interpretation of the whole subject. For women and feminine males it will do no harm; for men and masculine women it is an insult to intelligence.

## MASTER-MINDS OF MEDICINE: I—WILLIAM HARVEY (1578-1657), DISCOVERER OF THE CIRCULATION.

By Dr. WILLIAM J. FISCHER, WATERLOO, ONT.

Author of Songs by the Wayside.

"My trust is in my love of truth and the candour of cultivated minds."—William Harvey.

The foundation for modern medicine was lain when William Harvey discovered the circulation of the blood through the human heart. This was away back in the seventeenth century, but it gave the builders of science something to work upon. Two books—epoch-making in their importance—stand to the credit of Harvey, the Englishman, who besides holding many important offices in his day, was also physician to His Majesty, King Charles I. They are "De Circulatione Sanguinis" and "De Generatione," and, simple as they read to-day, they contain the fundamental truths on the circulation of the blood and development, as worked out by a man, through long, weary years of research, at a time when medicine and science ebbed low and England herself was disturbed by the convulsions of internal strife and war.

Harvey is looked upon as the first great discoverer in physiology—a branch that tends so much to the perfection of medicine—and even to-day, men—great, living, intellectual giants—point to him as a prince among physicians and repeat his simple truths



#### WILLIAM HARVEY

DISCOVERER OF THE CIRCULATION OF BLOOD THROUGH THE HEART

"William Harvey is looked upon as the first great discoverer in physiology—a branch that tends so much to the perfection of medicine—and even to-day, men—great, living, intellectual giants—point to him as a prince among physicians, and repeat his simple truths, strong and convincing."

strong and convincing. "Harvey's memory remains," writes one, "and needs neither bricks and mortar, nor pictures, nor a statue, to perpetuate it." It was he who first set his finger upon the heart and its vessels—studied, dissected and experimented upon them until he realized the important truth that was to be told to the world, and his name will be remembered just as long as there are hearts that burn with love, just as long as human lives spend their

energies in the mighty battle of existence.

William Harvey, born at Folkstone, April 1, 1578, was the son of one Thomas Harvey,—"the eldest of a week of sons," as Fuller expresses it, "whereof this William was bred to learning his other brethren being bound apprentices in London, and all at last ended in effect in merchants." His father was an intelligent man and was alderman and mayor, at one time or another, of his native town. Of his mother, Joan Harvey, little is known. In the parish church at Folkstone, England, a brass tablet bears the following inscription, which will give the reader an idea of the mother of this distinguished son:

"A.D. 1605. Nov. 8. died in the 55th yeare of her age Joan, wife of Tho. Harvey. Mother of 7 sones & 2 daughters A Godly, harmless Woman. A chaste loveinge wife; A charitable quiet neighbor; a cofortable friendly Matron A provident diligent Huswyfe. A careful teder-hearted Mother Deere to her Husband: Reverend of her Children: Beloved of her neighbors: Elected of God. Whose Soule rest in Heaven, her body in this Grave: To her a Happy Advantage—to Hers an Unhappy Loss."

Nothing is known of Harvey's first years except that he attended the schools of his town, studying Latin principally. It was about this time the "Spanish Armada" tried to make a little bit of history for the world, and even in Harvey's own town, closely allied with the Cinque Ports, there was much bustle and excitement. This same year, 1588, the young lad entered King's School, Canterbury, where he remained for five years. Then followed a course at Caius College, Cambridge—founded by Dr. Caius, an eminent authority on Greek. Caius is also said to have been the first to introduce the study of practical anatomy into England. In 1507, Harvey received his Bachelor of Arts degree from Caius College, having made a special study of Latin, Greek and physics. His medical education, however, was to begin only now. The following year he travelled through Germany, France and Italy. Italy was in her palmy days then, and was noted for the strength of her several universities. Pisa, Pavia, Padua and Bologna were doing colossal work. Harvey chose Padua, the brilliant Catholic centre, as his Alma Mater, and in 1598 entered upon a thorough training. Vesalius, the anatomist, Fabricius, the eminent historian of medicine, and Dr. Caius, at one time lecturer of Greek at Padua,

had done much by their original work to make Padua famous. The student days of this era had a touch of romance and beauty about them. Many queer customs had been handed down from year to year. A great number were in time abolished. "One, however, remained," writes one, "which allowed the students to tear the clothes from the back of the newly elected rector, who was then called upon to redeem the pieces at an exorbitant rate."

The rector of Padua in Harvey's time was Hieronymus Fabricius—a man of wonderful mind. The medical session always began on St. Luke's day. First there was an oration on medicine, then came solemn High Mass, and then the Litany of the Holy Ghost. The students often had to rise quite early for it was a common thing to have lectures at daybreak. The theatre in which Fabricius lectured stands to this day. It is said "the seats are nearly black with age and give a most venerable appearance to the small apartment, which is wainscoted with curiously carved oak. The lectures must have been given by candle-light, for the building is so constructed that no daylight can be admitted."

Fabricius and Harvey soon became great friends. Fabricius, the master, was then sixty-one. His whole mind was taken up with his studies of the valves of the veins, upon which the miser, Sylvius of Louvilly (1478-1555), had previously done much original

work.

In 1602 Padua gave Harvey the degree of Doctor of Medicine. The diploma read that "he (Harvey) had conducted himself so wonderfully well in the examination and had shown such skill, memory and learning that he had far surpassed even the great hopes which his examiners had formed of him. They decided. therefore, that he was skilful, expert and most efficiently qualified both in arts and medicine, and to this they put their hands unanimously, willingly, with complete agreement and unhesitatingly." Could a diploma have been couched in more promising, more eulogistic terms? No wonder, then, that the young doctor of twenty-four easily obtained the degree of M.D. from Cambridge the year following. In 1604 Harvey became a member of the College of Physicians—the most noted body of medical men at that time. The same year, he married Elizabeth Browne, daughter of Dr. Browne, who was physician to Queen Elizabeth and James I. Absolutely nothing is known of Mrs. Harvey. We know, however, that there were no children to bless the marriage.

Harvey spent the first years in London, practising his profession. He did much original work, however, studying the anatomy of all animals. In 1607 he was chosen a Fellow of the College of Physicians. Shortly after came the appointment of attending physician to the poor of St. Bartholomew's Hospital. The charge

read in part:

"You shall not for favour, lucre, or gain, appoint or write anything for the poor but such good and wholesome things as you shall think with your best advice will do the poor good, without any affection or respect to be had to the apothecary. And you shall take no gift or reward of any of the poor of this house for your counsel. This you will promise to do as you shall answer before God, and as it becometh a faithful physician, whom you chiefly ought to serve in this vocation, is by God called unto, and for your negligence herein, if you fail, you shall render account. And so we require you faithfully to promise in God, His most Holy name, to perform this your charge in the hearing of us, with your best endeavor as God shall enable you, so long as you shall be physician to the poor of this hospital."

"As physician," writes Dr. Norman Moore, "Harvey sat once a week at a table in the hall of the hospital, and the patients, who were brought to him, sat side by side on a settle—the apothecary, the steward, and the matron standing by whilst he wrote his prescription in a book, which was always kept locked.

Great strides were now being made in England in the study of anatomy. Everywhere lectures were being given and dissections made. In 1581, Lord Lumley and Dr. Caldwell established the famous Lumleian lectures at the College of Physicians. The lecturer, who was appointed for life, was to be a man high up in the profession and was, in turn, to receive a good fee for his bi-weekly lectures on Wednesdays and Fridays. For the first three-quarters of an hour the lecturer held forth in Latin; then followed fifteen minutes in English. The tables of Horatius Morus, the works of Galen, Paulus Ægineta, Oribasius, Holerius and others were touched upon. In 1615 the Lumleian lectureship was accepted by William Harvey, then thirty-seven years old, and he held it for the next forty-one years, when it fell into the hands of his friend, Sir Charles Scarborough. A writer gives us the following interesting picture of Harvey in these days when he held forth in the theatre of the College of Physicians, surrounded by the anxious, intelligent student-body: "He was a man of the lowest stature, round-faced, with a complexion like the wainscot; his eyes small, round, very black and full of spirit; his hair as black as a raven, and curling; rapid in his ufterance, choleric, given to gesture, and used, when in discourse with any one, to play unconsciously with the handle of the small dagger he wore at his side."

Harvey has the distinction, also, of having been a very poor and miserable writer. No one to-day can decipher the strange lines of his manuscripts—perhaps he himself would be puzzled. The manuscripts of his first Lumleian lectures—the title pages of which are in red ink—are now in the British museum and are quite a curiosity. Much of the writing is in Latin. Harvey was a great Latin and English scholar, and conversed and wrote as freely in one as in the other. Often he would combine sentences, partly Latin and partly English, for example: "Exempto corde, frogg scipp, eele crawle, dogg ambulat.' Then, again, he would

let his fancies stray and give us something really beautiful and poetic—for instance:

"An cerebrum rex,
Nervi magistratus,
Ramuli nervorum officialis,
Musculi cives, populus."

(Whether the brain is to be looked upon as king, the nerves as his ministers, and the branches of the nerves as their subordinates, while the muscles are the burgesses or the commonality.)

All his life Harvey remained a close student and a friend of books—those silent ones who carried in their hearts the gold of centuries. In a letter, thanking a friend for a copy of Lucretius' account of the plague, he says: "Nor need you plead in excuse your advanced life. I myself, though verging on my eightieth year and sorely failed in bodily health, nevertheless feel my mind still vigorous, so that I continue to give myself up to studies of this kind, especially connected with the sacred things of Apollo, for I do indeed rejoice to see learned men everywhere illustrating the republic of letters."

The lecturer in anatomy in Harvey's days, besides being great intellectually, was also looked upon as a person of very great import-He held the respect and gratitude of the student-body. Orders were given to those in charge that they were "to see and provide that there be every year a mat about the hearth in the hall, that Mr. Doctor be made not to take cold upon his feet. . How thoughtful! It was in his Lumleian lectures that Harvey first mentioned his discovery of the circulation, though he had almost completed it years before. In 1628, however, his book on the circulation was first given to the world. Published at Frankfort-on-the-Main, it soon attracted wide attention. book was dedicated to His Majesty, King Charles I. We quote below his own version of the discovery, as given in his memorable treatise. These were the simple lines that startled the world; these were the simple truths that meant so much for later, newer and fuller developments. "It is plain, from the structure of the heart," Harvey goes on, "that the blood is passed continuously through the lungs to the aorta, as by the two clacks of a waterbellows to raise water.

"It is shown by the application of a ligature that the passage of the blood is from the arteries into the veins. Whence it follows that the movement of the blood is constantly in a circle, and is brought about by the beat of the heart. It is a question, therefore, whether this is for the sake of nourishment or rather for the preservation of the blood and the limbs by the communication of heat, the blood cooled by warming the limbs being in turn warmed by the heart."

Harvey's discovery disturbed many scientific minds. believed and praised the theory; others ridiculed it. Some even went so far as to cry out that Harvey was insane. He himself tells us that, as a result of his announcement, "he fell mightily in his practice." Parisanus viciously attacked the doctrine, but he was silenced by Dr. Ent—a close and true friend of Harvey and an alumnus of Padua. Caspar Hofmann, of Nuremberg, was also among the dissatisfied ones. Harvey's theory held forth no attractions to him. Harvey himself went to Nuremberg to clear himself and demonstrate his discovery. "He (Hofmann) impeached," writes Harvey, "and condemned Nature of folly and error, and imputed to her the character of a most clumsy and inefficient artificer in suffering the blood to become recrudescent, and making it return again and again to the heart in order to be reconcocted, only to grow effece again in the arterial system; thus uselessly spoiling the perfectly made blood merely to find her something to do." The public demonstration took place at Nuremberg, and many German scientists were convinced by Harvey that day. Hofmann alone remained stubborn. All Harvey's proofs and arguments could not move that rock out of its place. Hofmann kept on with his objections and ridicule for some time. Harvey could stand it no longer. Angry and excited, he threw down his knife and lest the amphitheatre in disgust. Another troublesome contemporary was Alexander Reid, of the College of Physicians—a lecturer in anatomy. Both he and Harvey lectured at the same time—each propounding different theories; that of Reid, insipid, nonsensical, that of Harvey, simple, clear and convincing. Reid was obdurate and would not accept Harvey's explanations, but, from year to year, printed his own text-books, containing his own conflicting ideas, and circulated them among his students.

But all this adverse criticism had little or no effect upon Harvey, the most noted man of his time. True, he had fallen into some slight errors, but the framework of Truth was there, raised up by the work of years, and no arguments of a Hofmann, a Reid or a Parisanus were strong enough to pull it to the ground. "Scarce a day, scarce an hour has passed since the birthday of the circulation of the blood," writes Harvey, "that I have not heard something, for good or for evil, said of this, my discovery. Some abuse it is a feeble infant and yet unworthy to have seen the light; others, again, think the bantling deserves to be cherished and cared for. . . . Detractors, mummers, and writers defiled with abuse, so I resolved with myself never to read them, satisfied that anything solid or excellent, nothing but foul terms was to be expected from them, so have I held them still less worthy of an answer. Let them consume on their own ill-nature. They will scarcely find many well-disposed readers, I imagine, nor does God give that which is most excellent and chiefly to be desired—wisdom

—to the wicked. Let them go on railing, I say, until they are

weary, if not ashamed."

Harvey's days at the college and at St. Bartholomew's passed by peacefully and, in time, success led him into a well-paying practice. Soon another honor fell upon his well-deserving shoulders. On February 3, 1618, he was appointed physician extraordinary to James I. Later on, a like honor came to him during the reign of Charles I. Harvey had, furthermore, an introduction into the homes of the most distinguished nobles and prelates of his time. Lord Chancellor Bacon, the philosopher—a confirmed neurasthenic—was a patient of his. Harvey evidently was not an admirer of Bacon's literary output or he would not have said: "He writes philosophy like a Lord Chancellor."

In 1629, the king appointed Harvey to accompany the Duke of Lennox—an invalid—abroad. Since his return from Padua Harvey had never left England, and the offer came, therefore, as a delightful change to the busy physician. In 1639, Charles I. appointed him his physician in ordinary at £400 a year, with a residence at the royal palace—Whitehall. "Harvey," writes D'Arcy Power, "became the personal friend of his king; he accompanied him everywhere and consequently took a share in the

hunting excursions to which His Majesty was so devoted."

When the civil war broke out, Dr. Harvey was commanded to attend His Majesty on his tour in Scotland. Harvey was an eyewitness to many of the struggles of that day. At the battle of Edgehill, Harvey had in his keeping the two princes—boys of twelve and ten years—who afterwards became Charles II. and James II. When the battle was raging its fiercest, Harvey was there, treating the wounded. Anthony Wood, in his account of Adrian Scrope, says: "This most valiant person, who was son of Sir Jervais Scrope, did most loyally attend His Majesty at the fight of Edgehill, where, receiving several wounds, he was stripped and left among the dead as a dead person there, but brought off by his son and recovered by the immortal Dr. Will. Harvey, who was there, but withdrawn under a hedge with the Prince and Duke, while the battle was at its height."

Harvey was thought by many to have been a rabid Royalist and, on one occasion during these stormy days, a mob of frenzied soldiers and citizens entered his room, plundered the contents, and destroyed and scattered many valuable manuscripts. "He had made," writes Aubrey, a contemporary writer, "dissections of frogs, toads, a number of animals, and had curious observations upon them." Harvey felt badly over the loss of these hard-earned treasures; all his years of hard work were imprisoned in those missing papers. No wonder, then, that his heart was filled with a thousand regrets. "Let gentle minds forgive me," he writes sorrowfully, "if, recalling the irreparable injuries I have suffered, I

here give vent to a sigh. This is the cause of my sorrow—whilst in attendance on His Majesty the King during our late troubles, and more than civil wars, not only with the permission, but by the command of Parliament, certain rapacious hands not only stripped my house of all its furniture but, what is a subject of far greater regret to me, my enemies abstracted from my museum the fruits of many years of toil. Whence it has come to pass that many observations, particularly on the generation of insects, have perished with detriment, I venture to say, to the republic of letters."

When the conflict in Scotland was over, Harvey accompanied the king to Oxford. The sound of war was still in the air, but it did not disturb Harvey. He settled down to work with increased vigor. Aubrey first saw Harvey in Oxford "in 1642 after the Edgehill fight, but I was then too young," he writes, "to be acquainted with so great a doctor." In 1642 Oxford declared Harvey a "Doctor of Physic." The following year he retired from all active duty at St. Bartholomew's. Harvey loved the strong. healthy atmosphere of Oxford and it braced him into unusual activities. In 1645 he was elected Warden of Merton College. The conflict was still raging. Then came the battle of Naseby and a crushing defeat for the Royal cause. All this had a very deleterious effect upon the seats of learning, but Harvey still continued to draw men towards Oxford by his brilliant scholarship, among them, Charles Scarborough, the first English editor of Euclid, who later on was created a Doctor of Physic by the university. The two soon became great friends, and when Oxford surrendered in 1645 Harvey returned to London. Scarborough espoused the Royal cause. "Prithee! leave off thy gunning and stay here." Harvey wrote him from London. will bring thee into practice." And Harvey, the true friend, kept his word. Through his influence, Scarborough was appointed a lecturer in anatomy, a Fellow of the College of Physicians and, later, physician to Charles II., who knighted him. Later on, again, he was appointed physician also to William III. When on July 28, 1656, Harvey resigned the Lumleian lectureship, the voice of the friend was still in evidence and this great honor also fell upon Scarborough's shoulders, and well was he qualified for the position. In his day Harvey must also have been a surgeon, for in his "will" we read of a bequest to Dr. Scarborough "of all my little silver. instruments of surgery." He also bequeathed him his velvet gown. Was friend ever more faithful?

When Harvey left Oxford and returned to London, he practically retired from all active life. One day Dr. Ent—one of his heart's closest friends—called to see him and, in conversation, hinted that the learned world was anxiously waiting for further original work in his own line. "And would you be the man," said Harvey, smiling, "who should recommend ane to quit the peaceful haven

where I now pass my life and launch again upon the faithless sea? You know full well what a storm my former lucubrations raised. Much better is it oftentimes to grow wise at home and in private than by publishing what you have amassed with infinite labor, to stir up tempests that may rob you of peace and quiet for the rest of your days."

"True," answered Ent: "it is the usual reward of virtue to have received ill for having merited well. But the winds which raised the storms, like the northwestern blast, which drowns itself in its own rain, have only drawn mischief on themselves."

Harvey was now sixty-eight years old and was much troubled with gout. Not having had any children his life was necessarily a lonely one. Every now and then he would take an excursion into the country to visit some of his dearly beloved brothers. Strange to relate, Harvey was one of the first to use coffee as a drink in England. Long before coffee-houses were opened, he and his brother Eliah had a coffee-pot of their own in constant use. In his "will" even this old coffee-pot was not forgotten. "I give unto my niece Mary West and her daughter Amy West," so it reads, "half the linen I shall leave at London in my chests and chambers, together with all my plate except my coffee-pot." To whom, I wonder, did the coffee-pot go?

Like all great men, Harvey also had his eccentricities. A great-niece of his has said that "his saltcellar was contrarily filled with sugar, which he used to eat instead of salt; he also used to walk out in a morning combing his hair in the fields, and he was humorsome, and would sit down exactly at the time he had appointed for dinner whether the company was come or not."

One of the last generous acts of Harvey was the founding of a library in connection with the College of Physicians. When it was completed a statue of Harvey was placed therein, the great genius being represented in cap and gown, as if he were lecturing.

Shortly before his death he was elected President of the College of Physicians, but he declined the honor on account of failing health. In a letter to Dr. Horst, Hesse-Darmstadt, he hints at his failing health—"I am much pleased," he writes, "to find that in spite of the long time that has passed and the distance that separates us, you have not yet lost me from your memory, and I could wish that it lay in my power to anwser all your inquiries. But, indeed, my age does not permit me to have this pleasure, for I am not only far stricken in years but am afflicted with more and more indifferent health."

But even in those last days his mind was still active. All day he sat with his books, and he was happy. Just before his death he was working out problems in Oughtred's "Clavis Mathematics."

On June 3, 1657, in the house of his brother Eliah, the white

messenger stole into the room of William Harvey—great man of the world—and closed his eyes forever. Apoplexy had come upon him suddenly in the morning, and at night the struggle was over. His body was brought to London where it remained until June twenty-sixth, when, amidst a great concourse of sorrowing friends, it was borne away to Hempstead, in Essex—about fifty miles from old London—and laid away forever in the Harvey chapel, which his brother, Eliah, had erected two years previously.

#### INVOCATION TO HIPPGCRATES.

By J. S. SPRAGUE, M.D.

Our father in medicine, O Divine Hippocrates! thou of the Æsclepiadae, who, before all others in our literature, doth stand alone in excellency. Thy name is in all nations equally venerated May thy name be ever thus sanctified, and may thy rulings, even thy medical kingdom which thou foresaw, and now seest in Coelo, be that of those times, on earth. May such rulings come, and the dicisions of thy exalted spirit come, and thy will even be done; for we leaderless lambs, are at the mercy—the unrelenting mercy-of the patent medicine man. We pray thee to lead us no longer into grievous and thoughtless temptations, and if ever, even now deliver us from evil—the same evils. Eth-pharmacal, or made-for-the-doctor-at-the-front-door and at the back-door-forthe-dear-people, preparations. Food, ordinary bread-pabulum diurnalis—give to us. Such is quenet, est suf, for we know (hence these tears) that the Eth-pharm Co. is getting all the cake cream-and wine. In temptationem nos ne inducas-patre medi-Do not drag us further into the serbonian bog, whither professors (non-pardonable) and country doctors (now and then fully pardonable), not knowing ethics and foolish enough to believe the professors' stories in journals, have led us. Do now deliver us, deliver us from such evils and the Hydra—if ever, now. For not only are such so-called companies debasing medical literature; the fair name of medicine; but robbing us of our hard-earned shekels. Yes, even at this imprecation are revisions being made in national pharmacopogas, in which such companies, in several instances, are urging, through the revisers, a fixed insertion of their patent compounds. Are we, who are thy disciples, faithful, and inter homines eruditissimi, adoring thee, thou venerable shade of the glory of Thou of Co.'s—are we to abandon the B.P. and the U.S.P. for the price lists of the Pharm Co. and the patent medicine almanac? If so, so direct—then we abandon Mat., Med., and Pharm. The price list and its compounds need not have the stamp of the public analyst either. We thrice imprecate thee, thou harbinger of health to the once plague-stricken city, Athens, watered by the murmuring waters of Ilissus and Cephissus, to purify with equal celerity the temples of medicine—libera nos e malis in nostris temporibus, for the odd and even named Proprietary Compound manufacturers are shaking the pillars of thy temples—and making slaves of us, thy disciples—not least, free medical journalism—from non-official preparations and the marks of the fakir—so that thy name and our own names be not too unredeemably disgraced among men. The people deceived and we, too, impoverished—and the glory to thee we give.

#### BANQUET TO DR. CHARLES O'REILLY.

Dr. Charles O'Reilly, former Superintendent of the Toronto General Hospital, was made the recipient of a testimonial, June 10th, when a hundred or more of his professional companions, and other friends, tendered him a banquet at the Albany Club. Dr. Adam Wright presided, and beside him were seated the guest of the evening and the Hon. J. J. Foy, Attorney-General of the Province. Others present were Dr. L. H. Barker, successor to Dr. Wm. Osler in the Chair of Medicine in the Johns Hopkins Hospital, Baltimore; Dr. Thomas Cullen, Professor of Obsterrics in the same University—both graduates of the University of Toronto; Drs. W. H. B. Aikins, Duncan Anderson, H. B. Anderson, Allen Baines, William Barnhardt, Mr. S. T. Bastedo, Drs. N. H. Beemer (Mimico), G. A. Bingham, C. Bird (Gananoque), E. J. Barrick, Wm. Britton, G. G. Boyd, H. A. Bruce, G. H. Burnham, W. P. Caven, Graham Chambers, G. S. Clelland, E. K. Cullen, J. M. Cotton, W. G. Collison (Lindsay), Mr. C. Cockshutt, Drs. J. L. Davison, C. R. Dickson, P. E. Doolittle, G. Elliott, J. E. Elliott, F. Fenton, J. Ferguson, G. H. Field (Cobourg), J. T. Fotheringham, J. S. A. Graham, F. L. M. Grasett, J. B. Gullen, H. J. Hamilton, A. J. Harrington, A. O. Hastings, C. J. O. Hastings, W. B. Hendry, Mr. J. H. Horsey, Drs. R. M. Hillary (Aurora), H. S. Hutchison, C. Hodgetts, Samuel Johnston, A. J. Johnson, John S. King, Mr. Cecil King, Drs. A. A. Macdonald, T. B. Macdonald, G. R. McDonagh, H. A. McCullough, W. J. McCollum, D. N. Maclennan, D. McGillivray, Murray McFarlane, K. C. McIlwraith, Mr. John Massey, Drs. C. F. Murray, T. H. Middleborough (Owen Sound), R. T. Noble, Brefney O'Reilly, Gerald O'Reilly, H. C. Parsons, W. T. Parke (Woodstock), S. G. Peaker, W. H. Pepler, A. Primrose, R. A. Reeve, J. F. W. Ross, B. L. Riordan, J. W. Rountree, R. L.

Stewart, S. Singer, E. W. Sprague, R. W. Bruce Smith, G. Silverthorn, G. B. Smith, J. A. Temple, Chas. Trow, T. S. Webster, T. Wylie, D. J. G. Wishart and Messrs. D. R. Wilkie and W. A. Wilson,



DR. CHARLES O'REILLY
For over twenty nine years Superintendent of Toronto General Hospital.

After the toast of the King, the Chairman proposed the toast of Dr. O'Reilly's only son, Dr. Brefney O'Reilly, who, in replying, expressed himself as being deeply sensitive of the kindness and good-feeling shown to his father. Dr. J. F. W. Ross, in proposing

the health of Dr. Gerald O'Reilly, brother of Dr. Charles, said no man had done more to promote good feeling among the members of the profession than their guest.

Speaking to the guest of the evening, Dr. John S. King said:

"I am indeed happy at this eventful period in the life of Dr. Chas. O'Reilly, to be permitted to give expression to a few of the many thoughts evolving regarding him; and to call up some of the reminiscences of him who has been my earliest preceptor—my Esculapius—my friend.

"The birth of this fair Dominion on the 1st day of July, 1867, was marked by much rejoicing, and the inauguration of Dr. O'Reilly as Medical Superintendent of the Hamilton Hospital. At the time I entered the Hospital, a couple of years later, the Medical Superintendent organized a clinical class, and a junior medical and surgical house staff. Both class and staff were composed that summer of myself. Dr. O'Reilly at once became my preceptor, and few, indeed, there be among preceptors as painstaking in imparting practical knowledge, not only in his clinical work, but in the detailed instruction as to the wound dressing, bandaging, making fracture splints, compounding medicines, and everything connected with hospital work. He was himself a genius at making new and original devices for all manner of purpose.

"His exemplification of treatment of obstinate cases was most original and effective, as may be illustrated by one case, if I may be permitted by the Doctor to speak of it. It was a case of persistent hysteria, which had for nearly two years baffled the skill of the older physicians. The woman remained constantly in bed, and vowed she was unable to use her limbs. One day he was seen running into her ward with a pail of water, crying, 'Fire! fire!' and, stripping down the sheets, told the woman the place was on fire and to escape for her life, at the same moment emptying the water over her prostrate form. The application was sudden; so was her exit from the bed, and she made good speed into the corridor. She was cured.

"Another circumstance, which was somewhat exceptional even at that early period of the Doctor's experience. I may mention as characteristic of the man, was that of the amputation of the foot and lower third of the leg without the use of an anesthetic. The patient was himself a doctor, who objected to chloroform for personal reasons. This long antedated the Oslerized chloroform age limit. Preparations for the operation were effected by first filling a box with stone, to the lid of which box the limb was securely strapped. The patient, meanwhile, was seated in a chair adjacent to the box, and braced his courage with a goblet of what was known in those days as 'Old 40 Rod,' and smcked a pipe of tobacco. The O'Reilly bandage—now called Esmarch's bandage—

was employed to empty the limb of blood. The bandage was previously saturated with oxide of hydrogen. It will thus appear that the antiseptic treatment was unique, and besides being cheap, was always on tap. Result, a bloodless amputation, satisfactory and complete. The amputated portion was preserved in a cool place until the recovery of the patient, when, with the help of my preceptor, the doctor dissected his own foot to decide what were the remote and proximate causes of the trouble.

"Another matter that differed then from now was the absence of fear from contagion. It was the custom of the preceptor and his pupil to go the rounds daily of the medical, surgical and small-pox wards, the latter patients occupying the old frame building on the grounds at the rear of the brick building. One diagnostic feature of the smallpox cases, as pointed out by my preceptor in his clinic to me, and which was verified in repeated cases, and which permanently impressed me with its value, was that this most disgusting contagious disease gave rise to a most fragrant and agreeable odor when the nose was brought near the pustules, which odor most nearly resembled that of the contents of a freshly-broken bumblebees' honey-comb in the meadow in the summer time.

"Hours might easily be occupied in outlining interesting events of our friend's career, but time forbids, though I cannot refrain from citing one which might have prevented the possibility of this social gathering. Be it remembered that at the times alluded to our friend was a blushing bachelor; and, being the disciple of this Æsculapius, and as such his friend, I occasionally accompanied him in his voyage to the northern shore of the most beautiful bay called Burlington, where resided a worthy lady destined to become, as she since became and continues, a partner in his joys and sorrows. On the particular occasion to which I refer, his call was prolonged well into the evening-and so was mine at the Beach—which evening proved to be one of the darkest I ever remember. After my long wait I saw my preceptor's near approach, and found him equally anxious with myself, owing to the rapid approach of a threatening storm. By the aid of the electric flashlights we started our row-boat in the direction of the hospital on the opposite shore of the bay. Æsculapius sat at the helm and his disciple plied the oars. When well on our way the storm broke into violence and fury. Heaven's artillery roared and electric pyrotechnics at swift following intervals enabled the helmsman to guide the tiny boat over the vast billows, which were rolling higher and higher every minute. We two mortals felt our time had come, and expected every moment to sink to a watery Had it not been for his good judgment and discernment and correct work at the helm I would not have been able to tell you anything of the Doctor's early career; and if I had not made

the most strenuous efforts at the oars till the shore was reached, you would not have had our mutual friend as guest here to-night; and free I am to confess before you all, and in which confession I doubt not he will join—that the joint toiling of each for both, and both for each, proved a bond of friendship never yet broken; and Heaven forbid that it should ever be. We landed safely as you see, though fear turned my hairs to gray, and drove crimson blood into his, thus giving me the appearance of age, and him of youth, which, as you all must know, is a reverse of the true condition. This condition of his will be in his favor in seeking to avoid the chloroform age. But of reminiscence and of humor enough.

"Environment contributes greatly to education, and is a most important factor in the formation of character; and the aggregate of the diversified environment to which our friend was related during a period of over one-third of a century as Medical Superintendent, first of the Hamilton Hospital, where his natural qualifications, scholastic attainment, practical experience and professional lore had marked him a most suitable man to assume the responsibilities of a similar but more onerous position to which he was called, namely, that of Medical Superintendent of the largest hospital in the Province, in the Queen City of Toronto. The varied environments in the latter position during a period of thirty years must have occasioned a crucial test of strength of will, power of self-possession, of self-abnegation, resolution of purpose, and other attributes of a strong, well-balanced mind so necessary in one having to consider the varied interests of the trustees, the profession, the patients, the staff and the public. That he met their expectations, and merited their fullest confidence and appreciation, has been or is being proved in a marked degree.

"As the composite picture or aggregate of impressions of the several artists produces the true physiognomy and cranial form of the individual, marking well each characteristic, so the constantly occurring, extensive, yet varied impressions received from the wise, experienced, skilled, cultured and fraternal in the medical and surgical world of the Province, continuous over more than one generation of time, must have created the ideal, composite, representative Doctor.

"And such ideal, permit me to say, in my humble judgment, is personified in the mentality, individuality, and professional lore of him whom we to-night in a social way seek to honor as our friend.

"As he now withdraws from the activities of a long-filled official position to enjoy a season of rest and enjoyment, he will carry with him our friendship and our best wishes that the afternoon of his life may, like the later, leafy days of June, be long, bright and cheerful."

Hon. Mr. Foy, in a brief address, said he had known Dr.

O'Reilly very intimately for many years, of which he had none but pleasant memories.

Mr. D. R. Wilkie expressed himself as being glad of the opportunity of being present, and paid a high tribute to Dr. O'Reilly's personal worth and administrative abilities.

Dr. Thomas Cullen appreciated very much the privilege of responding for the house staff. He looked upon Dr. O'Reilly as his medical father, and referred to his lovable personal qualities and his distinguished abilities.

Dr. J. Algernon Temple proposed the health of the guest of the evening. He thought the honor was conferred upon him because he was perhaps the oldest friend Dr. O'Reilly had present in the room, their intimacy having extended over forty years. He compared the hospital of that period with the well-equipped hospital of to-day, and spoke of what Dr. O'Reilly had done to advance the interest of the profession and of the young men who had had the good fortune to serve under him.

Dr. Allen Baines then read an address expressing regret at the resignation of Dr. O'Reilly and asking the acceptance of some pieces of plate as a very slight token of good-will. On behalf of the subscribers, the address was signed by J. Algernon Temple, Allen Baines, H. J. Hamilton, J. O. Orr, A. H. Wright, W. H. B. Aikins, Bruce L. Riordan, James F. W. Ross and Samuel Johnston.

Dr. Barker, of Baltimore, was then called upon. He looked back with pleasure to his year on the house staff of the Toronto General Hospital, and remembered with much appreciation the great kindness which Dr. O'Reilly had shown to himself and the other members of the house staff. He was sure every man who had ever served in the Toronto General Hospital felt a deep sense of gratitude to Dr. O'Reilly for his unvarying kindness.

Dr. Adam Wright presented the solid silver gift, and read a telegram of regret for absence from the Hon. Senator Sullivan, of Kingston. "Toronto Hospital," he wired, "was a monument of

Dr. O'Reilly's reforming genius and love of humanity."

Dr. O'Reilly received a perfect ovation on rising to respond. He thanked all present for the magnificent banquet, and the absentees for their cables, wires, letters and messages, and was glad to see so many of his ex-house staff present. He had come to Toronto on January 1st, 1876, at the request of the Board, all of whom—C. S. Ross (Chairman), W. T. O'Reilly, Thomas McCrosson, Wm. Elliott and W. H. Howland—have since slipped away. Judge Patterson and Walter S. Lee had also joined the great majority. The medical staff then consisted of Drs. W. T. Aikins, H. H. Wright, Bethune, Hodder, Graham, Thorburn, Geikie, Richardson, Cartwright, Cassidy, Reeve and Temple. The last five were all alive, and some of them present.

"I was at Dr. Hodder's last operation and at Dr. Grasett's first

operation, he being the youngest surgeon on the staff at that time, and glad I am to see him here to-night as senior surgeon of the hospital. My first two house surgeons were Drs. Fisher and McArton, then fourth-year students, and my two first graduates were Dr. Langstaff and  $D\tau$ . Stark, both alive to-day. I cannot be accused of being a 'rolling stone,' as I have only lived, in all my life, in my father's house and in the hospitals of Hamilton and Toronto.

"I am not saying good-bye, but only good-day, and may we all have many happy years. Let us keep young by associating with each other oftener than we do, and with the younger members of the profession like ourselves, for the vitality of youth is very contagious, and will carry us over the chloroform period. The very idea of knowing that I am surrounded by over a hundred friends to-night makes it hard indeed for me to put into words the feelings which I should like to express. I shall conclude by saying how sincerely Mrs. O'Reilly, my son and myself appreciate this magnificent ovation, your expressions of kindly feeling and your handsome present, and by thanking you for all you have done and said for 'me and mine.'"

## Clinical Department.

Foreign Body in the Trachea. L. P. POLLMANN, M.D., St., Louis, in Inter-State Medical Journal.

About three weeks ago Dr. J. F. V. Krebs and myself were hurriedly called to see a little boy of two years, who, while seated at the table and amusing himself with buttons, pins, and sundry articles, was suddenly seized with an attack of choking. The mother stated that while in a room adjoining she heard the child scream, and rushing to its assistance, found it very much agitated, cyanotic and breathing heavily.

The little chap having enjoyed perfect health up to this very moment, and no throat disease being discernible, the natural presumption was that some obstructing agent must have entered the air passages from without, and it was probably to be found in one of the various playthings the child had been toying with at the

table.

The gravity of the condition was explained to the mother, and immediately operation advised, which was readily accepted. A tracheotomy above the isthmus of the thyroid gland was done, because it was held that the larynx as well as the trachea would be equally easy of access through an incision in that locality. At the moment the tracheal wound was drawn asunder for subsequent instrumental exploration, a small brass rod shot up into it from below, evidently carried along by the expiratory current. It was easily extracted, and proved to be quite a stout scarf-pin two inches in length, and carrying an ovoid head 7 m.m. in diameter. Free respiration was re-established at once, the mucous membrane of the trachea presenting a normal appearance. The wound was closed immediately and a dressing applied.

Recovery was complete eight clays thereafter, when the sutures

were removed and the patient discharged.

Considering the large size of the pin's head, the diameter of which corresponded with that of a trachea (lumen, of course), two years old, it is certainly to be wondered at why the obturation of the windpipe did not become complete at the moment of entry of the foreign body and terminate the youngster's life abruptly.

The trachea of the child is frequently found to widen as it approaches the bifurcation, and this factor, in connection with prompt surgical interference, no doubt determined the very gratify-

ing result achieved in our case.

## Society Reports--Notes of Interets.

Nux Vomica ir Hyperchlorhydria. At the recent meeting of the Association of American Physicians, Dr. John H. Musser id that where there is an abundance of acid in the stomach, sedatives were generally em-

ployed, but these had not proven satisfactory in his experience, but that nux vomica, commencing with fifteen-drop doses three times a day, and gradually increasing until physiologic effects of the drug are being produced, had produced excellent effects. Dr. Tyson confirmed this in all forms of nervous dyspepsia

Absence of Salt in Epilepsy.

Discussing the absence of sait in epilepsy Dr. Joseph Collins, of New York, before the meeting of the Association of American Physicians, said that in twenty-five cases under

observation during the past two years there had been a reduction of the frequency and severity of the attacks amounting to 35 per cent. of improvement. That is to say, these patients were one-third better without salt in their diet than with it, and this Dr. Collins considers one of the most important elements in the treatment of Epilepsy.

Dr. Trudeau, in delivering his presidential address at the National Association for the Study and Prevention of Tuberculosis, said:

"The features of incipient tuberculosis must be taught in the medical schools, for the student is apt to think only of advanced cases. The teaching in the Public Schools must be rather with regard to hygiene than tuberculosis itself. There are three classes who need education with regard to tuberculosis, namely, the public, the medical profession and the patient." Said Dr. Osler at the same meeting: "Towards this end the public are now awake, but in this direction there are still three duties—the enactment of good laws, the proper care of early tuberculous cases, the care of the hopeless cases."

## Physician's Library.

A Text-Book on the Practice of Gynecology. For Practitioners and Students. By W. EASTERLY ASHTON, M.D., LL.D., Fellow of the American Gynecologic Society; Professor of Gynecology in the Medico-Chirurgical College of Philadelphia. Octavo volume of 1,079 pages, containing 1,046 new and entirely original line drawings. Philadelphia and London: W. B. Saunders & Company. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto. 1905. Cloth, \$6.50 net; Half Morocco, \$7.50 net.

Dr. Ashton's Practice of Gynecology is a new departure in medical text-book making. The author takes up each procedure step by step, the student being led from one step to another just as in studying any non-medical subject. Nothing is assumed, Dr. Ashton in every instance not only telling what should be done, but also precisely how to do it. All the methods and details of technic described have been thoroughly tested by the author himself, so as to assure their value and accuracy. A very commendable feature is the departure from the old routine method of devoting a general chapter to physical examination. In place of this the author presents the examination of each organ separately before describing its diseases, thus greatly aiding the student in familiarizing himself with the technic. A distinctly original feature consists in the line drawings made especially for this work, under the author's personal supervision, from actual apparatus, living models, dissections on the cadaver, and from the operative technics of other authors. There are ten hundred and forty-six of these illustrations, showing the procedures and operations without obscuring their purpose by unnecessary anatomic surroundings. Definite and precise instructions are given regarding the preservation of specimens of morbid tissues and secretions, and their delivery in good condition to the pathologist. The fore part of the work, dealing with antiseptic technic, shows great care in its preparation, Dr. Ashton wisely describing only those methods which he employs in his own practice, in order that the reader may have a clear and definite conception of the subject. Very special attention has been given to the consideration of visceral injuries, and we know of no other work on gynecology or general surgery discussing this important subject with the same amount of detail. This is decidedly a work for the general practitioner as well as for the student; and a good one.

Saunders' Pocket Medical Formulary. By WILLIAM M. POWELL, M.D., author of "Essentials of Diseases of Children"; Member of Philadelphia Pathological Society. Containing 1,831 formulas from the best known authorities. With an Appendix containing Posological Table, Formulas and Doses for Hypodermic Medication, Poisons and their Antidotes, Diameters of the Female Pelvis and Fetal Head, Obstetrical Table, Diet-list, Materials and Drugs used in Antiseptic Surgery, Treatment of Asphyxia from Drowning, Surgical Remembrancer, Tables of Incompatibles, Eruptive Fevers, etc., etc. Seventh Edition, Revised. In flexible morocco, with side index, wallet and flap. Philadelphia and London: W. B. Saunders & Co. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto. \$1.75 net.

When a work has reached its seventh edition there can be no doubt of its practical usefulness. And it is not at all surprising to us that Saunders' Pocket Medical Formulary should have attained such popularity, for we know of no similar work containing so much useful, practical, and accurate information in so small a compass. In this new seventh edition there have been added over 460 new and valuable formulas, selected from the works and private practices of the best authorities. The editor has shown rare discretion in the elimination of many obsolete formulas, inserting in their place newer and better ones, embodying a large number of approved new remedies. In its new edition this Formularly is thoroughly representative of the most recent therapeutic methods, and its convenient size and mechanical get-up make it the most desirable work of its kind on the market.

The Surgical Assistant. A Manual for Students, Practitioners, Hospital Internes and Nurses. By WALTER M. BRICKNER B.S., M.D., Assistant Surgeon, Mt. Sinai Hospital, Out-Patient Department, etc. 360 pages. 123 original illustrations and 116 illustrations of surgical instruments. New York: The International Journal of Surgery Co. 1905. Price, \$2.00 net.

This splendid manual is one of the really important books of the year, in as much as it fills a place in medical literature that has hitherto been unfilled. It certainly meets a wide spread demand in a highly acceptable manner, and it is sure to attain immediate

and lasting popularity.

The book is not too large for the doctor's overcoat pocket, nor the nurse's satchel, yet it covers the entire subject. The first two chapters deal, respectfully, with the general conduct of the assistant and the hospital interne and contain much practical sense and sound advice for young men to take to heart. Chapter three treats of assistance in examinations and dressings, fracture reductions, the manipulation of plaster-of-Paris, etc. Chapter four gives in great detail an illustrated, systematic scheme for the preparation of an operating room. Chapter five describes the immediate preparation of the patient and of the assistant himself, in which the technique of ascepsis is thoroughly impressed. Chapter six is a very practical article on the anesthetist. The two succeeding chapters take up the preservation and preparation of surgical accessories and the details of "instrument handing." They are brimful of "writkles" and useful hints. Chapter nine describes all the various manipulations concerned in assistance at the wound, from the proper manner of holding the hands and body to the method of managing an irrigator tip. A most valuable chapter is the tenth, concerning itself as it does with those important matters that may confront an assistant left to watch a patient just after operation. Vomiting urination, pain, the arrangement of the bed and other numerous details are succinctly dealt with, and a valuable table for differentiation between shock and concealed hemorrhage is incorporated. The management of these and all other emergencies that may arise is given in great detail.

The second part of the book (chapters eleven to twenty-five) deals with the most commonly performed operations, describing them step by step, from the assistant's standpoint. A regional classification is here adopted. With each operation is given a list of the instruments and accessories required, and the manner of preparing them. The complete technique of intravenous infusion is accurately described.

A useful appendix to the work consists in the preliminary preparation and routine after treatment of operative cases, the various methods of preparing suture material, iodoform gauze, etc., etc., and a formulary of surgical solutions and wound applications, etc. In a second appendix are printed illustrations of general surgical instruments, thus placed to be convenient for reference.

It is a book that no young practitioner should be without, as it will prove of the greatest value to him in his every day work. Likewise it should be in the hands of every nurse and hospital interne. Its use will not only assure greater efficiency in everything pertaining to surgical operations but will prevent all the embarrassing delays and annovances caused by inexperience or lack of knowledge.

Nothnagel's Practice.—Malaria, Influenca, and Dengue. By Dr. J. Mannaberg, of Vienna, and Dr. O. Leichtenstern, of Cologne. Entire volume edited, with additions, by Ronald Ross, F.R.C.S., F.R.S., Professor of Tropical Medicine, University of Liverpool; J. W. W. Stephens, M.D., D.P.H., Walter Myers Lecturer in Tropical Medicine, University of Liverpool; and Albert S. Grunbaum. F.R.C.P., Pfofessor of Experimental Medicine, University of Liverpool. Octavo volume of 769 pages, fully illustrated, including eight full-page plates. Philadelphia and London: W. B. Saunders & Company. Canadian agents: J. A. Carveth & Company, Limited, 434 Yonge St., Toronto. 1905. Cloth, \$5.00 net; Half Morocco, \$6.00 net.

This new volume in Saunders' American edition of Nothnagel's Practice represents the latest word on the subjects of which it treats. And more than that: It is the undisputed authority on these subjects. For this American edition Dr. Ross has made many additions to the article on malaria, so many discoveries having been made since the appearance of the original article. The articles on the Mosquito and its various relations to Malaria comes from the authoritative pen of Dr. J. W. W. Stephens, of Liverpool. The Influenza and Dengue Sections are equally well written. The untiring labor of the editors in preparing this work for the English speaking market is evidenced on almost every page by the lengthy and valuable editorial interpolations. This is the tenth volume in the series, and the eleventh one (that dealing with Diseases of the Kidneys and Spleen and with Hemorrhagic Diseases) is promised very soon. When the series is completed it will undoubtedly form the best practice of medicine in existence.

Atlas and Text-Book of Topographic and Applied Anatomy. By PROF. DR. O. SCHULTZE, of Würzburg. Edited, with additions by GEORGE D. STEWART, M.D., Professor of Anatomy and Clinical Surgery, University and Bellevue Hospital Medical College, New York. Large quarto volume of 187 pages, containing 25 figures on 22 colored lithographic plates, and 89 textcuts, 60 in colors. Philadelphia and London: W. B. Saunders & Co. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto. 1905. Cloth, \$5.50 net.

In the preparation of this book Professor Schultze had in mind the need of a work that would combine the features of a text-book

with the educational advantages of an atlas. He has produced a work of great merit, and not alone the anatomist but more particularly the general practitioner will find it of constant value. Professor Schultze has presented his own methods for the study of anatomy—methods proved to be correct and practical by many years of clinical study. Throughout the work the value of the knowledge of topographic anatomy in bedside diagnosis is emphasized. The many colored lithographic plates and the numerous test cuts, sixty of which are in colors, are of exceptional excellence. Indeed, both for accurateness of detail and artistic beauty we have never seen their equal. The greater portion of the dissections from which these illustrations have been made are from the author's own preparations. Dr. George D. Stewart, in editing the work, has added many valuable notes.

# The Canadian Medical Protective Association

#### ORGANIZED AT WINNIPEG, 1901

Under the Auspices of the Canadian Medical Association

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

The Association affords a ready channel where even those who feel that they are perfectly safe (which no one is) can for a small fee enrol themselves and so assist a professional brother in distress.

Experience has abundantly shown how useful the Association has been since its organization.

The Association has not lost a single case that it has agreed to defend. The annual fee is only \$2.50 at present, payable in January of each year.

The Association expects and hopes for the united support of the profession.

We have a bright and useful future if the profession will unite and join our ranks.

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# Dominion Medical Monthly

And Ontario Medical Journal

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#### COMMENT FROM MONTH TO MONTH.

The Twenty-Fifth Annual Meeting of the Ontario Medical Association, held in Toronto on the 6th, 7th and 8th of June, was one of the best in the history of that strong, provincial organization, now one quarter of a century old. It was, perhaps, the best meeting in the last decade, both from numbers and quality, to say nothing of quantity, of papers. The discussions were also especially animated, interesting, often keen. This was a marked and noticeable feature of the meeting, and is an especially valuable one, as it brings out individual opinions and experiences. There were certain papers along political rather that scientific lines, that is as affects medical matters, in a general sense, and the appointment of committees to prosecute these matters, such as caring for certain acute forms of insanity in special wards or pavilions, of general hospitals, in the interim, shows a progressive spirit and a charitable and unselfish desire, to do all possible on behalf of this class of sick, all too perfunctorily cared for. A particular feature of these annual gatherings is the social side. Medical men, probably more than others, especially those in country practices, tied down all winter with brain-wracking and body-tiring work, when they come

out to these meetings look for and expect a little recreation of a wholesome and relaxing character. They are not all eager to sit for hours at a time, morning, noon and night, listening to the reading of papers and discussions thereon, and now that the Association has attained to the dignity of a quarter of a century of age, and has seen fit to add on another day to compass its annual work. plenty of the social side should be thrown in. Indeed, it would seem that three solid sessions in any one day is too much for the digestive faculties of even a medical man. Then we would respectfully remind chairmen of future committees that there are a whole lot of younger men under forty, who might profitably be put on committees, and not year after year see about the same composition. It is pleasing to know that the Association meeting this vear brought out such large numbers from the country, and that the attendance was second best in its history. May it steadily prosper and still further develop.

There is every prospect of a continuance of the large meetings in recent years of the Canadian Medical Association, which this year convenes at Halifax from the 22nd to the 25th of August. A splendid programme has been arranged. The trip down Lake Ontario and through the Thousand Islands, shooting the numerous rapids before reaching Montreal to any who has never taken it, will alone repay for the entire journey. Then there is a boat trip to Pictou, from Montreal—five days. The scenery along the railway lines is exceedingly fine and picturesque; and the meeting is attracting many, owing to the fact that it is over twenty years since the C. M. A. last convened in Halifax. Information is to hand that a large party is going from Winnipeg and Manitoba. Montreal and Toronto will be well represented, and Ontario also promises well. One particular section of the profession in Canada should make a strong effort to be there in a body, namely, the members of the Canadian Medical Protective Association, as the occasion is the annual meeting of that ornanization, now thriving lustily. It is always safe to promise at these meetings that the entertainment will be of a high order, and this year will be no exception to the rule. Can you afford to miss it?

The Board of Trustees of the Toronto General Hospital has advertised for a General Superintendent, lay or medical, in succession to Dr. O'Reilly, and in doing so, has offered a position which, for the next decade, will be an unusually important one to fill. At this time, the hospital requires a very capable officer, and the choice of any other than a man of force and fine administrative ability, may result disastrously. It was told in professional circles before

the 1st of July that the management had had up to that date no less than eighty applicants. This may all be talk from the street, but if true, evinces an unusual eagerness, if not unusual confidence on the part of the applicants that they have taken the measure of themselves, and the office, and find that the fit is perfect. It will as well take the keenest judgment on the part of the hospital management to discriminate. There are very few men in the medical profession who have the necessary business, hospital and professional training to undertake this work, and those who are too eager for the position would very probably make ignominious failures. Let us hope that the hospital management will put its foot down good and hard on the first appearance of any wire-pulling; and that any medical man who endeavors to "work" the Board, who may think he has a pull, will get "good and left." If a medical man is to be selected, the advisory committee should, of their knowledge of the men who are applicants, be able to advise, wisely and strongly. The question of the appointment of a business man seems to us unwise. We are not educated up to that here in Canada yet. Probably the management may after all think it wise and go hunt their man.

The attempt of the opticians of Nova Scotia to obtain incorporation as an examining body from the Legislature of that province, emphasizes the need of general practitioners taking up the work of It emphasizes, moreover, the need of teaching fitting glasses. medical faculties preparing their student and their graduates for and also examining them in this work. When doctors rail at these so-called opticians and object to them prosecuting this work, when they are not prepared to do it themselves, they are rather pursuing a dog-in-the-manger style; for it now must be apparent that people are not going to go to oculists simply because doctors and eye specialists would like them to do so; and it will be a question whether legislators will continue to refuse recognition to these people, when general practitioners fail to qualify and equip themselves for the work. To many druggists the fitting of glasses has proven a profitable side line; and if people cannot be fitted for them in the offices of their family physician, they are going to go to either their druggist, their jeweller, or as in one case, in a western town their veterinary.

Bacteriology has determined that most cases of infectious summer diarrhæa are due to the bacillus dysenteriæ. Practically all the cases of summer diarrhæa may be included (according to Dunn in the Archives of Pediatrics for June) under the five following heads. (I) Acute nervous diarrhæa, characterized by loose

stools of normal color and odor, without abnormal constituents; (2) Irritative diarrhæa, acute intestinal indigestion of the irritative type, characterized by the absence of persistent fever, and by the presence of curds and undigested masses in the discharges. (3) Fermental diarrhæa. Acute fermental indigestion of the fermental type, characterized by the absence of fever, and by green stools of a foul or sour odor; (4) Infectious diarrhæa, characterized by the existence and persistence of fever and by the tendency towards early signs of ileo colitis, as shown by the presence of blood, and excess of mucous in the discharges. When a specific organism, the bacillus dysentriæ, is proved to be the cause, the case may be further particularized by the term infantile dysentery; (5) Rare cases occur, corresponding to the known description of heat exhaustion and cholera infantum. Of all these classes, the indigestion type, including the irritative and fermental cases, is the most common.

But the diagnosis is not nearly so difficult as the successful treatment of the patient with one of these forms of summer

diarrhœa.

In a subsequent paper Dr. Dunn will deal with treatment in detail, but in all cases it is well to give an initial dose of calomel or castor oil, followed up with twenty-four to forty-eight hours of starvation, and then a very mild, bland weak food. In most cases bismuth may be employed and in some colon irrigation.

## **Editorial Notes.**

The Present Status of the Treatment of Congenital Dislocation of the Hip.—The interest in the treatment of congenital dislocation of the hip, during the past two years, warrants a review of what has been done and a few words as to the present status of treatment.

Until Professor Lorenz, of Vienna, came to this country, in the fall of 1902, no general interest had been shown by the large majority of practitioners or by the laity, although orthopedic surgeons had been studying the subject for many years. Buckminster Brown, of Boston, had faithfully tried recumbent traction. Braces or ambulatory traction had been tested, hips had been reduced by the manipulative procedures advocated by Bigelow, Pacci and Lorenz. The operations of Hoffa, Lorenz and others had been fairly tested. The head of the femur had been nailed to the acetabulum to produce a stiff joint and the head of the femur had been excised, and in some cases the excised bone placed in the acetabular cavity, in others left free.

Although occasional cures by various methods had been reported, the percentage of failures was large and the dangers of some of the manipulative and operative procedures were so great as to deter any but the most experienced in continuing the work.

Lorenz demonstrated that in the hands of skilful operators more force could be used than any other operator had ever dared resort to, and thus some hips were reduced that surgeons had thought could not be reduced. He also showed the advantage of replacing the bone by leverage rather than by traction, and introduced new ideas as to the dressing to be applied after reduction, and the position in which the limb should be placed. No accurate record was kept of the number of operations done by him in this country by his so-called "bloodless method," but it exceeded one hundred. His work was not free from accident. Nor can anyone who will perform many reductions hope to escape from an occasional fracture of the femur in the shaft or in the neck, from an occasional case of paralysis of the leg muscles, or from the more serious complication of gangrene of the lower extremitry, due to tearing the femoral artery or to pressure of the femoral head against the vessel. Two deaths have been reported in America from this complication. The head of the femur has also been forced through the acetabulum and into the perineum. Sepsis is a rare cause of death in the Lorenz method, but serious abscesses have occurred, as the result of bruising of the tissues by the manipulative procedures, and subsequent infection.

With greater experience the accidents are becoming less numerous and the number of cures increasing, and this is largely due to the interest taken by the profession and laity in the subject. The diagnosis is made earlier and the patient presented for treatment at an earlier and more favorable age than was formerly done, as most physicians, until recently, believed the condition incurable.

As no accurate record was kept of the patients operated upon, so no accurate deduction can be made upon the ultimate results of Lorenz's personal work. In a very large majority of the cases an anterior reposition resulted and but in a small percentage was there a true anatomical reposition as proven by X-ray and careful examination by competent observers two years after the reduction. The large percentage of failure to place the femoral head in the acetabular cavity, and retain it there, has resulted in restricting this method to young children, as the accidents occurred in older cases and the percentage of cures was greatest in the young. The age limit is variously placed, but the bloodless operation should probably be restricted to those under six or seven years of age.

This age limit may be increased as the result of the very clever mechanical device now in use at the Children's Hospital, Boston, devised by Mr. Bartlett. It fixes the pelvis during the manipulation, and applies traction to the limb and pressure where needed. It is the best of all such devices that has so far appeared and its use may increase the percentage of successes by the "bloodless

method."

The age limit is not the only restriction, cases with much distortion of the neck of the femur do not yield good results, nor will the reduction succeed if there is no femoral head or a faulty and much filled-in acetabular cavity. It is the operation of choice in the very young, but if it is not possible to replace the head of the femur in the acetabulum, or if it does not remain in place, recourse should be had to the operation of Hoffa, which consists in cutting down to the joint, dividing the capsule and any and all obstructing tissues and replacing the head of the bone in the acetabulum, with or without gouging it out or deepening it. The operation is a difficult one, hemorrhage is frequently severe and a thorough knowledge of the technic and the anatomy are necessary. Sepsis is the only complication to be feared. Good results follow the operation in many cases and it is indicated when other measures have failed or where the non-bloody method is contra-indicated.

The report of the orthopedic staff, of the Boston Children's Hospital, on "Congenital Dislocation of the Hip," reprinted from the Boston Medical and Surgical Journal, Vol. CLI., states in conclusion, and it is the view of most other observers: "From the experience gained at the Children's Hospital it appears, also, to the writers of this report, that stretching the tissues by an efficient machine gives, in resistant cases, an unquestioned advantage, and

permits better reduction with less risks and in older patients, than if operative manipulation alone is employed.

"There is a certain analogy between the treatment of congenital dislocation of the hip and that of club-foot. In the simpler cases, manipulation under anesthetic is sufficient. In the more resistant cases, correction is helped by mechanical aid; in the oldest and complicated cases incision and osteotomy are often needed to perfect the cure. The present condition of the treatment of congenital dislocation of the hip may seem to illustrate that the world advances by impossibilities achieved. Twenty years ago, cure of this deformity was considered impossible. This, in many cases, is now easily accomplished.

(Sgd.) WISNER R. TOWNSEND, in Archives of Pediatrics.

In the June issue of this journal was published an important and interesting and, at the same time, valuable report, entitled: "A Review of the Anemia Commission upon Hook-Worm Disease in Porto Rico." The Commission used pepto-mangan (Gude) in eighteen cases, selected on account of their extreme severity, and it is gratifying to know that this well-known product stood the test well, and was, in fact, the only proprietary remedy reported by the Commission.

## News Items.

#### CANADIAN.

DR. RADCLIFFE, of Moose Jaw, is visiting in St. Mary's and Stratford.

Dr. Boynton, Cannington, has left town to open an office in Pefferlaw.

DR. McNAUGHTON, Brussels, has disposed of his practice and residence to Dr. Burns.

DR. C. W. CLARK and Dr. Gray, of Winnipeg, are visiting in Washington State.

DR. H. C. McLean, of Parry Sound, has been appointed jail surgeon in place of Dr. Appleby.

The Royal Jubilee Hospital, Victoria, B.C., treated 1,058 patients during the past official year.

DR. W. D. BRYDONE-JACK has returned to Vancouver after several weeks at the hospitals of the east.

DR. MACKAY, Cookstown, has decided to move to Toronto in the near future to pursue his profession.

DR. PENNYFATHER, of Holland, Man., will establish a sanitarium for consumptives near that town.

DR. STANDISH has disposed of his practice at Auburn to Dr. Weir. Dr. Standish moves to Georgetown.

DR. WALLACE SOMERS, of Waterford, left a few days ago via the lake route for Manitoba and the North-West.

WF tegret that Dr. A. E. Burrows, of McKellar, Ont., is leaving us in order to set up a practice in Parry Sound.

DR. T. H. FARRELL, of Utica, N.Y., has donated \$500 towards the proposed chair of anatomy in Queen's College.

DR. DUNN, of Beeton, who sold his practice to Dr. Hodgson, of Beaverton, a short time ago, intends going to Edmonton.

DR. R. P. BERRY, of Claremont, Iowa, and formerly of Lindsay, has been appointed President of the Claremont State Bank.

THE National Sanitarium Association has received a gift of \$3,500 for the purposes of a cottage at Muskoka Sanitarium.

DR. B. TUGHEN, of Toronto, will practise with Dr. Hutton, Humberstone during the summer. Dr. Tughen is well-known here.

Dr. W. J. McCollum, Toronto, has been appointed an Associate Coroner for the County of York.

DR. GRAHAM CHAMBERS, Toronto, has retired from general practice and will hereafter devote himself to internal medicine and diseases of the skin.

DR. J. R. LE TOUZEL left Goderich last month for Bermuda, en route to Jamaica, after spending several months in town visiting the old home.

CONGRATULATIONS are due to Dr. J. Algernon Temple and to the Hon. Dr. R. A Pyne, Toronto, on the conferring of LL.D.

upon both gentlemen by the University of Toronto.

DR. A. E. HARVEY, of Wyoming, died at his home last month in his 64th year. He was one of the oldest practitioners in Lambton County. His death was due to paralysis.

CANADIAN MEDICAL ASSOCIATION.—The annual meeting at Halifax from the 22nd to the 25th of August. Travel on Standard Convention Certificate plan which all get from ticket agents on starting.

DR. ERNEST K. CULLEN, of the Toronto General Hospital house staff, has been appointed fellow in pathology at Johns Hopkins University, at Baltimore. He graduated from Toronto University in 1903.

THE American Association of Genito-Urinary Surgeons met in Montreal on the 13th of May. Two prominent Montreal surgeons are members of this Association, namely Sir William Hingston and Dr. James Bell.

DR. FREEMAN resigned from the Hamilton General Hospital. Dr. Walter Langrill, the Medical Health Officer, was appointed in his place and Dr. Roberts has been appointed to the position of Medical Health Officer.

THE Western Hospital, Montreal, is shortly to commence work on a new wing to have accommodation for 100 patients; another wing will be added later on which will increase the capacity of the hospital to 500 patients.

DR. M. E. GOWLAND will assist Dr. Smith in his practice for the next few months. Dr. Gowland, Barrie, Ont., has had an unusually successful college course, having taken first class honors every year, and was silver medalist in his final. He is also a M.A.

Ontario Medical Council Examiners 1905-1906.—Anatomy, descriptive, Dr. T. W. G. McKay, of Oshawa; theory and practice of medicine, Dr. Geo. Hodge, of London; clinical medicine, Dr. H. R. Duff, of Kingston; midwifery, operative and other than operative, and respiral diseases, Dr. J. P. McCabe, of Strathroy; physiology and histology, Dr. R. D. Rudolf, of Toronto; surgery, operative and other than operative. Dr. W. T. Parke, of Woodstock; clinical sugery, Dr. J. S. McCullough, of Alliston; medical and surgical anatomy, Dr. T. H. Middleboro, of

Owen Sound; chemistry, theoretical and practical, and toxicology, Dr. A. R. Pyne, of Toronto; materia medica and pharmacology, Dr. Jas. S. Sprague, of Stirling; medical jurisprudence and sanitary science, Dr. D. J. Sinclair, of Woodstock; diseases of women, Dr. R. E. Webster, of Ottawa; diseases of children, Dr. Jas. Newall, of Watford; pathology, therapeutics and bacteriology, Dr. Isaac Wood, of Kingston; homeopathic examiner, Dr. W. A. McFall, of Peterborough.

TORONTO one year ago had thirty-six insane in jail; to-day there are but three. Dr. R. W. Bruce Smith, Inspector of Hospitals and Prisons, has been on a tour of inspection of these institutions in Eastern Ontario and reports the jails almost free from insane inmates.

THE Ontario Medical Council met in Toronto during the week ending the 8th of July and elected the following officers: President, Dr. Albert A. Macdonald, Toronto; Vice-President, Dr. W. H. Moorhouse, London; Registrar, Hon. Dr. R. A. Pyne; Treasurer, Dr. H. Wilberforce Aikins.

THE staff of the Manitoba Medical College has been enlarged to twenty-nine by the addition of the following practitioners of Winnipeg: Drs. A. J. Douglas, O. Bjornson, G. Heibert, C. C. Field, W. Rogers, H. Mackay, S. J. Elkin, A. J. Burridge and W Webster. The faculty is erecting a new building and have adopted the five year course.