

Technical and Bibliographic Notes / Notes techniques et bibliographiques

Canadiana.org has attempted to obtain the best copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

Canadiana.org a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- | | | | |
|--------------------------|---|-------------------------------------|---|
| <input type="checkbox"/> | Coloured covers /
Couverture de couleur | <input type="checkbox"/> | Coloured pages / Pages de couleur |
| <input type="checkbox"/> | Covers damaged /
Couverture endommagée | <input type="checkbox"/> | Pages damaged / Pages endommagées |
| <input type="checkbox"/> | Covers restored and/or laminated /
Couverture restaurée et/ou pelliculée | <input type="checkbox"/> | Pages restored and/or laminated /
Pages restaurées et/ou pelliculées |
| <input type="checkbox"/> | Cover title missing /
Le titre de couverture manque | <input checked="" type="checkbox"/> | Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées |
| <input type="checkbox"/> | Coloured maps /
Cartes géographiques en couleur | <input type="checkbox"/> | Pages detached / Pages détachées |
| <input type="checkbox"/> | Coloured ink (i.e. other than blue or black) /
Encre de couleur (i.e. autre que bleue ou noire) | <input checked="" type="checkbox"/> | Showthrough / Transparence |
| <input type="checkbox"/> | Coloured plates and/or illustrations /
Planches et/ou illustrations en couleur | <input checked="" type="checkbox"/> | Quality of print varies /
Qualité inégale de l'impression |
| <input type="checkbox"/> | Bound with other material /
Relié avec d'autres documents | <input type="checkbox"/> | Includes supplementary materials /
Comprend du matériel supplémentaire |
| <input type="checkbox"/> | Only edition available /
Seule édition disponible | <input type="checkbox"/> | Blank leaves added during restorations may
appear within the text. Whenever possible, these
have been omitted from scanning / Il se peut que
certaines pages blanches ajoutées lors d'une
restauration apparaissent dans le texte, mais,
lorsque cela était possible, ces pages n'ont pas
été numérisées. |
| <input type="checkbox"/> | Tight binding may cause shadows or distortion
along interior margin / La reliure serrée peut
causer de l'ombre ou de la distorsion le long de la
marge intérieure. | | |
| <input type="checkbox"/> | Additional comments /
Commentaires supplémentaires: | | |

THE
CANADIAN JOURNAL
OF
MEDICINE AND SURGERY

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF
MEDICINE AND SURGERY

J. J. CASSIDY, M.D., EDITOR.

VOL. VII.
JANUARY TO JUNE, 1900.

BUSINESS MANAGER
W. A. YOUNG, M.D., L.R.G.P.LOND.
145 COLLEGE ST., TORONTO, CAN.

1900

INDEX TO VOLUME VII.

BOOK REVIEWS.		PAGE	PAGE
<p>A Laboratory Manual of Physiological Chemistry. By Elbert W. Rockwood, B.S., M.D.</p> <p>A Manual of Medicine. By W. H. Allchin, M.D., F.R.C.P., F.R.S.</p> <p>A Manual of Surgery. By Charles Stoham, F.R.C.S. Eng.</p> <p>A Manual of the Diagnosis and Treatment of the Diseases of the Eye. By Edward Jackson, A.M., M.D.</p> <p>A Manual of Gynecological Practice for Students and Practitioners. By Dr. A. Dührssen.</p> <p>A Manual of Practice of Medicine. By A. A. Stevens, A.M., M.D.</p> <p>A Manual of Pathology. By Joseph Coats, M.D.</p> <p>Anesthetics: Their Uses and Administration. By Dudley Wilmot Buxton, M.D., B.S.</p> <p>A Pocket Medical Dictionary. By Geo. M. Gould, A.M., M.D.</p> <p>A System of Gynecology by Many Writers. Edited by Thomas Clifford Allbutt, M.A., M.D.</p> <p>A System of Medicine by Many Writers. Edited by Thomas Clifford Allbutt, M.A., M.D.</p> <p>A Text-Book of Embryology for Students of Medicine. By John Clement Heister, M.D.</p> <p>A Text-Book of Diseases of Women. By Charles B. Penrose, Ph.D.</p> <p>Chirurgie du Foie et des Voies Biliaires. Par J. Pantaloni.</p> <p>Christian Science. By W. A. Purrington.</p> <p>Christmas in French Canada. By Louis Frechette.</p> <p>Clinical Lectures on Neurasthenia. By Thos. D. Savill, M.D.</p> <p>Consumption: Its Nature and Treatment. By Wm. H. Spencer, M.A., M.D.</p> <p>Diseases of the Genito-Urinary System. By Eugene Fuller, M.D.</p> <p>Diseases of the Nose and Throat. By J. Price-Brown, M.B., L.R.C.P.E.</p> <p>Diseases of the Tongue. By Henry T. Butlin, F.R.C.S., D.C.L.</p> <p>Dr. Berkeley's Discovery. By Richard Slee and Cornelia A. Pratt.</p>	<p>120</p> <p>423</p> <p>125</p> <p>120</p> <p>426</p> <p>108</p> <p>363</p> <p>425</p> <p>270</p> <p>306</p> <p>198</p> <p>120</p> <p>196</p> <p>275</p> <p>195</p> <p>52</p> <p>50</p> <p>281</p> <p>425</p> <p>277</p> <p>426</p> <p>280</p>	<p>Elements of Clinical Bacteriology for Physicians and Students. By Levy and Klemperer.</p> <p>Encyclopedia Medica. By Chalmers Watson, M.B., M.R.C.P.E.</p> <p>Essentials of Physical Diagnosis of the Thorax. By Arthur M. Corwin, A.M., M.D.</p> <p>General and Local Anesthesia. By Aime Paul Heineck.</p> <p>Hemmeter: Diseases of the Stomach, their Special Pathology, Diagnosis and Treatment. By John C. Hemmeter, M.E.</p> <p>Home Nursing. By Eveleen Harrison.</p> <p>Imperative Surgery for the General Practitioner, the Specialist and the Recent Graduate. By Howard Lillenthal, M.D.</p> <p>Injuries to the Eye in their Medico-Legal Aspect. By S. Baudry, M.D.</p> <p>International Clinics. Edited by Judson Doland, M.D.</p> <p>Kit Kennedy—Country Boy. By S. R. Crockett.</p> <p>La Peste et Son Microbe: Sérothérapie et Vaccination. Par le Dr. Netter.</p> <p>La Tuberculose Est Curable.</p> <p>Lessons in Elementary Physiology. By Thomas H. Huxley, LL.D., F.R.S.</p> <p>Letter, Word, and Mind—Blindness. By James Hinshelwood, M.A., M.D.</p> <p>Mental Affections: An Introduction to the Study of Insanity. By John Macpherson, M.D., F.R.C.P.E.</p> <p>Mental Diseases. By Daniel Clark, M.D.</p> <p>Mentally Deficient Children: Their Treatment and Training. By G. E. Shuttleworth, M.D.</p> <p>Merck's Manual of the Materia Medica.</p> <p>Notes on the Modern Treatment of Fractures. By John B. Roberts, A.M., M.D.</p> <p>Operative Surgery. By Joseph D. Bryant, M.D.</p> <p>Paralytic Deformities of the Lower Extremities. By E. Noble Smith, F.R.C.S.</p> <p>Polk's Medical and Surgical Register of the United States and Canada.</p> <p>Sajous' Annual and Analytical Cyclopedia of Practical Medicine.</p> <p>Saunders' Question Compend, No. 2. By Edward Martin, A.M., M.D.</p>	<p>427</p> <p>428</p> <p>52</p> <p>280</p> <p>362</p> <p>420</p> <p>365</p> <p>307</p> <p>279</p> <p>281</p> <p>51</p> <p>429</p> <p>279</p> <p>126</p> <p>52</p> <p>280</p> <p>130</p> <p>50</p> <p>47</p> <p>428</p> <p>199</p> <p>49</p> <p>366</p>

ORIGINAL COMMUNICATIONS.		PATHOLOGY.	
	PAGE		PAGE
A Case of Jacksonian Epilepsy in which the Paroxysms were controlled by Chlorotone. By W. T. Parry, M.D.	240	On the Significance of Mixed Infection in Phthisis.....	170
A New Epoch in Hospital Evolution. By Ernest Hall, M.D.	93	PHARMACOLOGY AND THERAPEUTICS.	
Address in Surgery. By W. B. Coley, M.D., New York	73	Clinical Notes on a Case of Carbolic Acid Poisoning.....	105
Address to the Association of Executive Health Officers of Ontario. By J. J. Cassidy, M.D.	146	Chemical Notes on Equiniline	319
An Experience in Formaldehyde Disinfection. By F. Mentzamber, M.D.	170	PROCEEDINGS OF SOCIETIES.	
Anesthesia by Chloroform and Ether. By William B. Jones, M.D., Rochester, N.Y.	18	American Gynecological Society	393
Broad Ligament Cyst. By Chas. M. Smith, M.D., Orangetown, Ont	377	American Surgical Association.....	393
Cases of Puerperal Sepsis Treated with Anti-Streptococcus Serum—with Notes. By Geo. T. McKeough, M.D., M.R.C.S. (Eng.), Chatham, Ont.	26	Association of American Surgeons	300
Clinical Notes on the Use of Endoxine in Typhoid Fever. By A. J. Harrington, M.D., M.R.C.S. (Eng.).....	375	Congress of American Physicians and Surgeons.....	385
Complications of Suppuration of Middle Ear. By J. M. MacCallum, M.D.	244	International Congress of Medical Deontology or Medical Ethics.....	250
Disease in Korea. By O. R. Avison, M.D.	301	Ontario Medical Association	261
Extreme Emaciation in Eysteria, with Notes of a Case. By T. Beath, B.A., M.B. (Tor.), Winnipeg	95	The Second Quarterly Meeting of the Provincial Board of Health	403
Medical Evidence. By Jos. McDougall, Esq.	207	The 1000 Meeting Canadian Medical Association.....	260
On the Role of Primary and Secondary Osteoplastic Surgery in the Treatment of Complicated or Compound Fractures of the Extremities. By Thomas H. Manley, M.D., New York	157, 225	PUBLIC HEALTH AND HYGIENE.	
Systematic Intra-uterine Exploration after Expulsion of Placenta. By John Hunter, M.D.	172	Réport of Deaths from all causes and from Contagious Diseases in Ontario	53, 107, 262, 400
The Doctor of the Future. By Albert D. Watson, M.D.	311	SELECTED ARTICLES.	
The History of Medicine. By Ezra H. B. Stafford, M.B.	1	Alkalometry	200
The Hospital Room in Each Dwelling. By W. J. Telfer, M.D., C.M. (McG.), Montreal.....	30	Argonin, Hoechst Patented.....	71
The Relation of Deformity of the Pelvis to Lateral Curvature of the Spine. By H. P. H. Galloway, M.D.	380	Army Medical Staff.....	339
The Relation of Insanity to Pelvic and Other Lesions. By Dr. A. T. Hobbs, London.....	88	A Tuberculosis Congress.....	223
The Smallpox Outbreak in Essex. By P. H. Bryce, M.A., M.D.	101	Chronic Dyspepsia Successfully Treated with H ₂ O ₂	230
The Treatment of the Acute Digestive Disorders of Infancy. By Andrew R. Gordon, M.B.	10	Dionin: A New Morphine Derivative.....	295
		Dr. Pettyjohn, of Alma, Mich., to go to Europe for a Year's Rest and Study	293
		Lecture on the Cinematograph and the Teaching of Surgery.....	130
		Mark Twain on Christian Science	201
		On the Medicinal Uses of Hydrogen Peroxide	212
		Stypticin in Hemorrhage	72
		Surgery in South Africa.....	220
		Surgical Measures of Relief in Stenosis of the Upper Air Passages.....	206
		The Bacteria in Existence	214
		The Diagnosis of Perforation in Typhoid Fever.....	370
		The Etiology and Treatment of "Neurasthenia. An Analysis of Three Hundred and Thirty-three Cases.....	54, 131
		The Local Treatment of Hemorrhoids	323
		The New Highway to the Orient	233
		The Treatment of Asthma and Hay Fever	325
		The Treatment of Recurrent Attacks of Spasmodic Croup—With Reports of Cases.....	210
		Time Limit	68
		Toronto Branch of the Walker-Gordon Laboratory of Boston, Mass.....	217
		Treatment of Erosions of the Anus.....	331
ORTHOPEDIC SURGERY.			
The Technique of Osteotomy.....	103		

The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF
MEDICINE AND SURGERY

VOL. VII.

TORONTO, JANUARY, 1900.

No. 1.

Original Contributions.

THE HISTORY OF MEDICINE.

BY EZRA H. B. STAFFORD, M.B.

Ad E. A. M. R., Salutem. The history of medicine has not as yet been written, though many writers of exemplary patience and unbounded leisure have dallied with the ample subject.

The fact, in all its seriousness, that such a history *might* be written, or ought to be written, seems first to have struck the German mind; and a large number of writers of this nationality have soberly addressed themselves to the congenial task. Probably a German scholar's ideal of earthly happiness is to be calmly engaged in writing a work, published by volumes from year to year, and of such a nature that the writer need have no apprehension of ever getting to the end. Casper Neumann's Chemistry may be taken as an example of this sort of work, which, carried on slowly, without unseemly haste, through the first half of the eighteenth century, covered eventually seven comfortable quarto volumes of about eight thousand pages, and came, only with the author's death, to a yawning termination, not unlike the mediæval notion of the edge of the earth.

And who shall have the audacity to say that Neumann's work is not eminently interesting? "Tin," he pauses to remark, "is called in the Syriac and Chaldaic languages 'Bragmanack,' that is, the kingdom of Jupiter; whence are deduced, 'Bratman,' 'Britman,' 'Britannia.'" From a reflection so flattering to the English, the deliberate author composedly passes on to a consideration of the

tin-pans of various countries, and, as a digression, devotes a few pages more to an almost enthusiastic description of the proper steps one should take to infuse a dish of tea in one of these same tin cans.

A *magnum opus* of this description has a great advantage over the Encyclopædia Britannica, in that it is all on one subject, while in the Encyclopædia the enchanted reader is constantly vexed by being wrenched here and there from one subject to another. The dream of Casper Neumann was to write on through eternity on the one subject, with the same circle of readers patiently following him *in sæcula sæculorum*.

To writers of this class the history of medicine offered a field of satisfactory vastness, and presently, through the sombre penumbra cast by the subject into the limitless spaces of oblivion, a gloomy constellation of German literary men began to heavily move in slow circles.

A little work on the history of medicine had, it is true, already been published in England by Dr. Freind, who, it will be remembered, was the same Freind who was imprisoned by Walpole for making some unseemly remarks in the House of Parliament about a bishop; and released at the instigation of the great Dr. Mead, to whom Martyn, the old professor of botany, dedicated his edition of Virgil's *Georgics*, a work replete with notes and marginaliæ, of which every other paragraph has some admiring reference to Dr. Mead's private library. Dr. Mead was not only a man of literary culture, however, but also a man of action; and though Freind was a foe in the lists of science, he was after all a physician, and as the professional blood was then, as now, thicker than water, Mead fervently desired to see Freind out of the Tower, after which, in all probability, he would settle scientific differences, but not till then. So he waited until Sir Robert had another attack, most likely of gout, and had called him in, whereupon, plucking up a brave spirit, more especially as the Prime Minister's was at that time probably very weak, he told Sir Robert flatly that not a pill nor a plaister should he get from him until he had let Freind go free. Even so they importuned Pharaoh, and, like Pharaoh, Sir Robert let go the peccant Freind; and, we hope, was amply benefited by the treatment which, after such an act of atonement, was no doubt at once forthcoming from the propitiated and magnific Mead.

But Freind's "History of Medicine" was only a little trifle in a couple of large, fat, leather-bound volumes, and the German authors saw that the subject had not been properly handled and was capable of more voluminous and comprehensive treatment. I fancy they must have been disgusted with Freind.

However, after a couple of tentative attempts by Heinrich Schultze and Ernst Hebenstreit, Gabriel Hensler formally opened the new field of activity with an unpretentious bagatelle of ten or a dozen volumes, just to show what the capabilities of the new subject were. And he showed it to be, without a doubt—to use the

words of Charles Stuart Calverley, in his poem on the "Cock and the Bull":

"A thing Imagination boggles at,
And might, odds-bobbs sir, in judicious hands
Extend from here to Mesopotamy."

At this stage Kurt Polycarp Joachim Sprengel suddenly began to show painful exacerbations of uneasiness. It did not exactly strike him that Hensler had done his best; or, at all events, Hensler's best was not what Sprengel's soon should be. At this juncture "Sprengel developed a perfectly marvellous activity," remarks his admirer, Hermann Baas; and the remainder of Sprengel's life was devoted to deliberately amassing the most bulky history of medicine that had ever been written. *Facile princeps* from the standpoint of *area*, it looms forever like an enormous pyramid in the silence of the Egyptian darkness.

Worshipping from afar, it struck Baas that a minute vest-pocket compendium of the subject might prove of utility to those who prefer to read while they run. In humble guise, therefore, and not as an original genius, so much as a fervent admirer of the vast accomplishments of his predecessors, Baas put forth, in due time, his trifling synopsis or epitome of the subject, which, in the abridged translation, has been so compressed as to only fill twelve hundred pages of close diamond type in a little imperial octave volume. This chaotic work, though in no sense of the word a history, is crammed with the material out of which histories are made, and is admittedly the most satisfactory literary effort of the sort at present available; and like all labors of love should, perhaps, pass unscathed by criticism.

Analogies are often helpful to a bewildered person, and I accordingly consulted with my respected Semitic friend, Mr. Isaac B——, who follows the rag and bone business, for an apt analogy. Isaac very courteously enlightened me upon many points which bear upon the scope and methods of the rag and bone business.

It would seem in the first place, from what Isaac says, that everything that is palpable to the senses has some value, sometimes not very much value, but always, if properly exploited, capable of definite profit. A broken teacup, a dead alligator or a pile of ashes—all are sacred. But Isaac has the Midas touch by which he transmutes all things whatsoever into—much-soiled bank notes. All cannot do this. I cannot do it. The reader cannot do it. But Isaac and Sprengel held the mystic secret.

That the pen is mightier than the sword is an assertion frequently made by those who have shown moderate facility in the use of the former. But Sprengel's armamentarium was a shovel. He worked, as has been shown, with a will. And into this history of his, the honest, vigorous fellow conscientiously shovelled every possible object from the lanes and alleys of literature that had, to his somewhat perverted olfactory sense, the remotest smell of

medicine. Biographical old clothes, the dried offal of obsolete disputes, the ghosts of ten thousand fools, the mildew of occult superstitions, the cadaver of forgotten greatness, the broken umbrella that once shaded the head of pomposity, the pots and pans of academic pretentiousness, the rags and tatters of all time. In the dismantled mausoleum of Herodotus a stolid scavenger with his donkey cart has stored the arkana miscellanea of his devious pilgrimages.

And to repeat the words of Isaac, whom I admire, "The rag and bone business is the independentest and also the happiest occupation which one can follow among men." No ideals are necessary—it is simply a question of keeping occupied all the time. "Sprenge*l developed* a perfectly marvellous activity."

Thomas A. Wise was another true believer. Dr. Wise believed in the ancientness and the authenticity of the medical writings of the Ayur-Veda as preserved in fragments scattered through the writings of Charaka and Susruta. I sincerely trust that he did not live to hear Max Müller's ruthless "aside" in regard to these Sanscrit writings. It really would have hurt him so very much. Since then, I know, various historians of medicine have contended upon the opposite sides with varying applause—some that Charaka and Susruta (Oh, bitter spite!) had in reality obtained their medical knowledge from MSS. or pupils of Hippocrates imported into Hindostan; and others, like Wise, that Hippocrates had, as a matter of fact, travelled far more extensively than was generally supposed, and under the sun of India had at last paused in awestruck admiration at the golden truths with which he became for the first time familiar in the writings of Charaka and Susruta. As it may. In his history of Oriental medicine Dr. Wise has bequeathed to posterity, if not a work of transcendent historical value, at least a record with all the charm and busy quaintness, and the same partiality for a tessellation of names which still endears the Anatomy of Melancholy to readers of otherwise the most antagonistic tastes.

To this partial enumeration might also be added Bettany's Sketches of Eminent English Physicians—idle, personal gossip, it is true, yet charming to readers, professional and lay, for the same reason that the series of little books entitled "Masters of Medicine" is charming—because, without going to the centre, all alike play in an easy superficial manner upon the trivial little matters that in the field of biography always seem to possess the greatest interest. Berdoe's popular volume may also be mentioned here; not so much because he has succeeded in writing anything that approaches to a history of medicine, as because his intentions were certainly good even though his execution was deficient.

Park's Epitome is not a volume of original research at all, but a compressed outline of the particular field of medicine already covered by Hermann Baas. As a series of biographical memoranda, and a repository of dates and names it will be found exceedingly useful for reference, and, as perhaps the most convenient handbook

on the subject, may be consulted with advantage when one is in search of some point.

Baas wrote in a party spirit. Like so many of that untutored race, he confused the violence of his prejudices with soundness of thought. Of a few of his own compatriots he speaks benignantly, but of most aliens, sourly, contemptuously often, and seldom with any sympathy whatever. To this grave infirmity add the fact that the Muse of History abode not with him, and one sees a reason why his book is not a living whole, entire, self-contained, perfect, but a scrappy miscellany: of stale odds and ends, lacking outline, light, cohesion or color.

Roswell Park, on the other hand, is a successful surgeon, but not having sufficiently familiarized himself with the *dramatis personæ* of the healing art, an end which could only be accomplished by long intimacy with that goodly company, they are, many of them, but names to him still, I fancy, like so many visiting cards, and Park displays therefor no sympathies and no hatreds, for he does not know enough of the inner life of the people of whom he speaks to feel either. In the construction of his book, therefore, he has shown the surgeon's skill rather than the historian's intuition, and has cut and clipped out, and sewn and sutured together the dry facts of the past as gathered from the "most authentic sources." The result is before us. These facts, as I have already admitted, are useful. The exploit, as a literary operation, is a neat one. But it is not literature, it is not history.

Many local histories of medicine also abound on both sides of the Atlantic, which need not be particularly mentioned here; consisting, as they do, merely of long chains of personal memoranda, and written chiefly for the felicitation of the individuals celebrated, or their families, who are usually the only willing purchasers and the sole readers. Indeed, it is worthy of note that unskilled writers, when girding themselves for a so-called historical work, invariably fall into petty biography, and lose themselves and the yawning reader in vapid maunderings concerning the personal characteristics of an obscure throng of mediocre and commonplace nobodies whose chief claim to immortality lies in their passive respectability and the willingness of their posterity to subscribe for five copies of the book.

To this class may be added, furthermore, those numerous works which treat of the history of one special branch of the healing art, or of the progress made by medicine during a given time; as, for example, "South's Craft of Surgery in England," or the writer's modest volume on Medicine in the Nineteenth Century Series. Such works cannot be regarded in the serious light of history any more than the German haystack school of literature already referred to; but all go together, let us hope, to form a vasty bulk which patiently awaits the Röntgen rays of the historian that is yet to arrive among us.

"I do not see why one should speak disparagingly of a history

of medicine," Dr. Lewellys Barker remarks in a letter; "it seems to me that the historical side, more than any other, is what is neglected." It is of the histories, and not of the history, that I have been speaking in the foregoing; but to turn now to the latter, it certainly is neglected in more ways than one.

The whole fabric of law is built up of historical precedents. It has no past, for the past of law, strictly speaking, is a vital part of its present. In theology the same fact holds good to a similar, or even a greater degree. The *beaux arts* in like manner carry their history with them through all their revolutions and into every new field of fancy, living over and over the doctrines of the past, and repeating periodically both their blunders and their triumphs, as Mr. Tress, of London, repeats every decade or so the contour of discarded silk hats. Poets and hatters, lawyers and painters, ecclesiastics and musicians alike batten perpetually upon the glory and stupidity of their past histories; and while this may be, and I think is, an indication of their limitations, the benefit is still very great in the case of all, especially the hatter, keeping warm the enthusiasm in the subject, spurring on the ambitious to new feats of strength or audacity, and lending a pride and an *esprit de corps* to all the members of each separate guild.

But in medicine, behold the dispiriting contrast! The day of the boldest or of the profoundest medical thinker can only be ephemeral. As a horse is damned by its teeth, so the great and brilliant medical work, that basked for a brief space in the noisy applause of the profession, presently succeeds in eliciting only a reluctant respect, rapidly sinking into a position of tacit, and then of outspoken contempt, and too soon into utter oblivion. Then, indeed, it goes down unnoticed into the Hades of the second-hand bookseller's cellar, into which shadowy realm of spectral sadness the present writer, like Dante at the heels of Virgilius Maro, has often descended behind Mr. Albert Britnell, bearing a flickering lantern into that zone of shadow.

Eheu! fugaces. O Reynolds, Holmes, and all thy silent train! Heberden there I saw; the august Boerhaave, oh, heavy change; Cullen, with his masterly description of the best method of practising variolous inoculation; Rokitansky, fallen on evil days; Schwann, the apostle of cells who had been thrust down by Jove into a cellar; Sydenham, Brodie, Andral and Bichat were there, and also Marshall Hall, too disgusted to even pick a quarrel; Galen and Hippocrates with their pig-skin bindings gone beyond repair; Francis de le Boë—but

Multis ille bonis flebilis occidit,
Nulli flebilior quam mihi.

And is this well? Would not even the student at his clinic take a more enlightened interest in the case of pneumonia if he knew the story of Count Leopold Auenbrugger, the old Viennese physician, or called to mind as he adjusted his stethoscope the weird

boyhood of Hyacinthe Laënnec, walking while a tender lad amid the camps and the hospitals of the French Reign of Terror, and forming there the foundations of his character?

In the pages of a few of the medical writers of the present day kindly homage is rendered to the names of those who have adorned the history of medicine. In Erichsen's noble work on Surgery there are very numerous references to the surgeons of past time. Hilton Fagge, also, in his Practice of Medicine, was not forgetful of those who had added lustre to the science, while in America, Osler, though restricted in space to a single volume, still finds it possible to acknowledge the labors of earlier investigators.

In the majority of the smaller text-books, however, the writers' fact must commend themselves to a favorable reception for the same reason as do the eggs of the huckster. Freshness is all in all, and then, brevity. Possibly this may be due to a certain extent to the medical book market (an implication that the author writes for the publisher and not that the publisher publishes for the author), for this book market consists largely of very practical practitioners, and haunted medical students, the latter frantically hurling themselves from examination to examination; and, if they fall, falling heroically with a cram compend in each hand. The practitioner in his haste and the student goaded by terror are not in a mood for leisurely retrospect or placid reflection, and to them the history of medicine will never probably appeal, under any circumstances. On the other hand, as has been shown, even those most interested in the subject have much reasonable fault to find with the solemn dulness of the performances already put forward; for the style is rambling, and the matter, though sufficiently ancient, yet insufficiently illuminated as ancient things ought to be. "It is," in fact, to apply the words of Touchstone, "the right butter-woman's rate to market. For a taste:"

From the most remote times (with Touchstone's grimace) the healing art was practised by priests and kings, and among the Chosen People a considerable degree of medical knowledge was early displayed. Indeed, no race of antiquity evinced so prudent a regard for the laws of sanitary science; and though the Egyptians, as Baron Larrey and the Parisians do vainly boast, engaged very extensively in the practice of *post-mortems*, contrast with such a vaunt the knowledge of *Comparative Anatomy* which the Levitical priesthood would gradually acquire through the practice of making burnt offerings of the cattle of the laity; on which occasions the abdominal viscera alone were burnt, and the remainder, with the exception of the hoofs and the horns, solemnly devoured by the sacred brethren, a custom in gastronomy, as far as rejecting the hoofs and horns and intestines goes, which succeeding ages have sedulously copied from that sacred origin. Nor are other instances wanting to clearly indicate a sagacity in the rules of hygiene which more than anticipates the discoveries of modern times. Take, by way of example, that noble utterance in Sacred Writ (Deut. xiv. 21) where the inspired writer admonishes the Holy People as follows:

"Ye shall not eat of anything that dieth of itself; thou shalt give it unto the stranger that is in thy gates that he may eat it; or thou mayest sell it unto an alien, for thou art an holy people."

Here we see beautifully exemplified—*Pace*, Willford Herriman—a candid dislike to the use of animals as food which have fallen dead of disease.

The historian having been supposed, in this strain, to have also said all that is to be said regarding medicine in Egypt and in Babylon, the beaten track of medical history leads straight to Hindostan, where the Shastras of the Sanscrit medical writers should be assailed in either the Wise or the Müller spirit; then back to Hellas, on to Rome, through the Arabian interregnum of Avicenna, Rhazes and Avenzoar, across the Middle Ages by way of Salerno and the Universities to the Iatro-Physical and the Iatro-Chemical schools, and behold—Rosierucianism lies moribund! Expiring Vitalists fade away into shadows! Phlogiston has become a thing of the past! Leeuwenhoek turns in his grave for Amici has got his lenses to working at last and we are face to face with modern medicine! Into this splendid realm may we on the present occasion, like Moses, discreetly die rather than enter.

"Let us hear the conclusion of the whole matter." Here we have an art which is older than all others. The graduate of the vernal equinox now approaching will be able to look back through forty centuries, and find before him the same difficult duties that perplexed the followers of the Memphian Imhotep, the identical problems that drew the lines of care on the brow of Hippocrates. Surely with the more pride he will claim membership in a profession less open to the charge of mercenary cunning or petty selfishness or vulgar hypocrisy than any other; a profession which with venerable dignity towers far above the extraneous farcical elements with which all professions are inevitably surrounded; a profession which, as it is assailed now on all sides by discordant cries and ludicrous pretensions and pseudo-sciences and multiform impostures, has ever been so surrounded by a similar Circean rabble from century to century, and has outlived the menaces of them all, for these are but the ephemeral gnats that hover about a statue of stone.

And this the history of medicine teaches: the unity of aim, the singleness of purpose, the undeviating allegiance to an unchanging ideal through long ages, that can be claimed by no other art, no other fraternity. The spirit is always the same—a note not without a quaint yet despairing touch of humor.

"Medicine is of all the arts," the Coan practitioner observes in his Law, or gnomon, by which true physicians are to be distinguished from the false, "of all arts the most noble; but, owing to the ignorance of those who practise it, and of those who inconsiderately form a judgment of them, it is at present far behind all the other arts. Their mistake appears to me to arise principally from this: that in the cities there is no punishment connected with the practice of medicine except disgrace, and that does not hurt those

who are used to it. Such persons are like the figures which are introduced in tragedies, for as they have the shape and dress and personal appearance of an actor, but are not actors, so also physicians are many in title, but very few in reality."

In the Oath also, for Francis Adams' translation of which, in a richly embellished, and, in spite of one or two anachronisms, most artistic illumination, we are indebted to the kindness of Mr. R. L. Gibson of this city, the same dignified spirit is manifested.

Nor in their ethics alone, but in the actual practice of their art also, the early physicians display the same qualities of mind with which one associates the best physicians of the present day. In this manner, for example, Aretæus, the Cappadocian, sets down (in his work on Therapeutics) various prescriptions by which the comfort of patients afflicted with cardiac disease may be ensured, letting slip, in his earnest admonishment, a quotation from the national epic: "Mix together some of the hair of wormwood, and of myrtle, and of acacia, and of the manna of frankincense, all sifted; which, being all rubbed up together, are to be added to the cerate of wild vine. But if the sweat be not thereby restrained, the juice of wild grape is to be added to the mixture, and acacia, and gum, and the edible part of sumach, and alum, and dates, and the scented juice of roses. All these things, along with nard, and oil of wild vine are to be applied to the chest; for this, at the same time, cools, and is astringent. Let him lie in cool air, and in a house having a northern exposure; and if the cool breeze of Boreas breathe upon him, *'it will refresh his soul sadly gasping for breath.'* The prospect should be towards meadows, fountains and babbling streams, for the sweet exhalations from them, and the delightful view, warm the soul and refresh nature. But if from want one is not fortunate enough to possess these things, we must make an imitation of the cool breeze, by fanning with the branches of fragrant boughs, and, if the season of spring, by strewing the ground with such leaves and flowers as are at hand."

"The Physician," quoth dear, pious John Allen, many centuries later, in his *Synopsis Medicinæ*, "The Physician Administers, Nature Heals, and may God, in the meanwhile, mercifully grant his Blessing."

One might continue indefinitely from age to age, and from school to school, turning the pages of the writers on medical doctrine, and ever finding the same purpose, the same altruistic ideal; never, it is true, ostentatiously published and set down, but rather, as in the foregoing, unconsciously admitted, and more to be inferred than definitely apprehended.

And though by considerations of this kind the futile attempt is not made to mantle the fact that, as at the Shearers' Feast, so here, many despicable and base persons, unscrupulous, and urged by the most vulgar motives of gain, have contrived, through all time, to thrust themselves into this serious company of worthy men; the truth still remains that the medical profession has exerted an

influence during the past century more beneficent to the human race than any other. Setting its signet upon health and morals, in the scientific sense, it has laid a restraining hand upon the very Furies of Justice, and by its disinterestedness and its sincerity has appealed to the purest and most exalted feelings of the race.

In every Scene, from Act to Act, and until the dark curtain slowly falls upon the Drama of life, the physician is present and plays a leading part, as well in the most solemn as in the gayest situations. Once, as the cannon slowly cooled all night long, his work was upon moonlit battle-fields, operating in the ominous silence by the flickering light of a lantern. In the purer and more serene civilization which is dawning, and in the last bitter conflict between the grotesque monstrosities of Superstition with which Truth unarmed is still confronted, his place will be in the action itself. Nor upon Marathon nor upon Waterloo hung more palpably the authentic destiny of man.

THE TREATMENT OF THE ACUTE DIGESTIVE DISORDERS OF INFANCY.*

BY ANDREW R. GORDON, M.B.(TOR.).

In choosing this subject, "The Treatment of the Acute Digestive Disorders of Infancy," I am not unaware of its comprehensiveness nor of its importance. You will allow me, however, to limit myself to the discussion of features common to the many forms of the acute digestive disorders of infancy, and to emphasize certain principles pertaining to the treatment of them, and so pardon my temerity in attacking such a subject in so short a paper.

My purpose is to discuss the treatment of those acute attacks of digestive disturbances occurring in previously healthy infants, and the often alarming attacks occurring from time to time in cases of those whose proneness to them, make them a constant care to the mother and so often an anxiety and perplexity to the physician.

Such attacks are the result of the disturbance of the equilibrium between the digestive forces and the materials which they are supposed to digest. Whether we subtract from the one arm of the balance or add to the other, the result is the same.

When we speak of the digestive functions we must not think of the salivary, gastric and pancreatic secretions alone, and the chemical activities of their specific elements upon the ingesta, but also of the subtle influence of the succus entericus, about which so little is known; the mysterious internal secretion of liver, pancreas and other glandular structures directly connected with the tract, as well as of their more evident functions; the peristalsis of

* Read before the Canadian Medical Association held in Toronto, August, 1899.

stomach and bowels and the various ducts emptying into the canal, the absorption of products from its contents, wherein is manifested the wonderful selective power of the epithelium to accept or reject products offered; the excretion of waste products from the economy, and the "wheels within wheels" of the complicated mechanism which we try to understand. These can be fairly well summarized in the terms secretion, absorption, peristalsis and excretion, interference with any one of which leads to disorder of the whole.

These various disorders, from the vomiting of the excess of wholesome milk taken by a healthy and vigorous babe, to the grave conditions of chronic gastritis and chronic ileo-colitis, are different only in degree. If the excess of wholesome milk taken by the healthy babe be not vomited, the balance is disturbed, and, possibly, we may see the primary gastric irritation from the non-digested food, become an acute gastritis, an intestinal irritation, an enteritis, an ileo-colitis—acute or chronic—upon which, at any stage of the course, may be heaped an acute milk infection, an acute gastro-enteric infection, a cholera infantum, or that serious condition by whatever name it may be known.

While Emmett Holt recognizes an "acute gastric" and an "acute intestinal irritation," without showing any pathological changes, Ewald recognizes in them all the one process, a gastric, enteric, or gastro-enteric inflammation, and the condition ascribed by Holt as a gastric irritation he accepts as the primary congestive stage of a gastric inflammation or gastritis. The term "catarrh" he condemns as conveying an altogether false idea. The gastric mucosa is not simply a mucous membrane as the pharyngeal membrane is, but owing to the abundant glandular arrangements, considers it as the "glandular layer" of the stomach, and its inflammation as an "adenitis," having nothing in common with a "catarrh," *e.g.*, pharyngeal or nasal, except the "flow" from the mucous glands, which are altogether insignificant when compared with the other glandular structures composing the most of its substance.

Ewald points out (?) that whenever we have an irritant present in the stomach, *e.g.*, undigested, fermenting or decomposing food, we have a congested or an inflamed membrane, whatever may be its degree; and (2) while in the earliest stages of an inflammation of the mucosa, there may be an increased cellular activity, the *quality* of such secretion is defective although its *quantity* may be increased; and (3) as a matter of fact, in all gastric inflammations, the secretion of the HCl is in abeyance, while the pepsin may be present and the "rennet-zymogen" unaffected, which latter, in the absence of free HCl, does not become converted into the "rennet-ferment"; and (4) in the absence of free HCl, the natural stimulant of the muscularis, the peristalsis of the stomach is impaired or ceases altogether. Thus we have the most favorable combination of circumstances for the development of bacteria: the presence of organic matter at a favorable temperature, the absence of the digestive ferment and bactericide—the HCl, and impaired or no peristalsis.

The passage of the vicious products there produced into the intestine excites a similar condition there—an intestinal irritation, an enteritis, an ileo-colitis, according to the viciousness of the irritant and the forces present to combat it. The intestinal epithelium impaired and unable to exercise its selective property of absorption, the portal tributaries become surcharged with poisonous products whether peptone, propeptone, or products of decomposition; the circulation in the liver becomes sluggish, its secretion defective, its interception and retention of, and specific action upon, peptone and other products imperfect, and we have all the symptoms from malaise and headache to those of alarming toxemia. The natural purgative, nature's intestinal antiseptic, the important digestive factor of fats, is defective, and the primary disorder still further intensified. Upon this depends the treatment. We must cut off the supply of the offending material and get rid of what is already there, and strive to allay the irritation produced by it. This is secured by starvation, purgation, flushing, and the use of sedatives.

Starvation—It must be decided. If the attack is stomachic the reason is the more evident. If primarily intestinal, the gastric functions are invariably defective as a consequence, and the exhibition of food will add to our difficulties by exciting a gastric derangement and aggravating the intestinal. It is true, however, that the gastric functions, in the great majority of cases, are primarily at fault.

The withholding of food must be absolute. In the milder cases eight, ten, twelve or twenty-four hours' starvation may be necessary—everything withheld except water, or water with a trace of common salt added, until vomiting ceases, if it be present; until the discharges from the bowel change decidedly for the better as to frequency, appearance, and odor; until the temperature falls to normal, or nearly so, if fever be a feature of the disease; until the pulse approaches the normal in rate and character; until pain and distress, excitement, stupor, or other nervous symptoms disappear.

In the simpler forms we often do not find much disturbance of pulse or temperature, when a few hours' starvation and the administration of a purge will be all that is necessary. We do not get elevation of temperature and rapid pulse until fermentation and decomposition of contents have become established; but very often, especially where there is a chronic digestive weakness, these very symptoms are present for some hours before the severity of the attack manifests itself, and fortunate it is if they be recognized.

In the more protracted cases, where we have a definite gastritis or an ileo-colitis, we have to still further persist in the "starvation diet" falsely so called, for we must remember that it is not the food that a child takes into its stomach that determines its nutrition, but what its digests and absorbs, and the injudicious administration of food may mean further loss of nutrition rather than its supply.

After the first period of starvation for twenty-four hours or so,

rice, barley, arrowroot, toast, or albumen-water should be used in small quantities, but frequently administered. Small quantities of beef juice, liquid peptonoids, or beef extract should be added. Liquid peptonoids, with some of the above waters, I have found most satisfactory. It is stimulating and nourishing, and appears to be most acceptable to the most irritable stomach.

In these more serious cases, the non-digestion and decomposition of the albumens is the chief source of the trouble, accountable, at any rate, for the production of the more toxic products; hence the advisability of using the starch waters. The fermentation of the starchy foods and fats produces more pain and distress, but not the toxemia of the former, and so, when we find the stomach or intestinal contents acid from the presence of the vegetable or fatty acids, or their salts, we have recourse to the albumen-water and beef juice, or other albuminous food.

It may be necessary to persist in the use of the diet for days, until, as I said before, the symptoms disappear, and the child is practically convalescing. During this period stimulants are always necessary, and should be used freely, but well diluted.

The return to the accustomed diet must be made with extreme caution. In the case of bottle-fed infants, or of those who are weaned, cow's milk should be the very last of the liquid foods to be allowed. We should use one class of foods exclusively at a time—either the starches, some of the malted foods or the albumens, but never together. Otherwise, if there is any disturbance, we are at a loss to know which is at fault.

When milk is to be allowed, it is safe to peptonize it more or less completely, although I have seen plain sterilized milk with lime water, and well diluted with plain sterilized water, starch water, or some of the water-foods, more readily taken than peptonized milk.

Purgation.—Purgation, and purgation repeated again and again, is of essential importance. When we want a sweeping purge, calomel is the best—a single large dose, gr. i. to grs. iii., combined with soda bicarbonate. The soda prevents griping, possibly by preventing its conversion into bichloride, although some therapeutists believe that such conversion always takes place. When we remember that in all gastric inflammations, free HCl is absent or deficient, the certainty of it is not so evident. It should be given when the stomach is empty, as long after food as possible, or immediately after vomiting.

Divided doses can be used to better advantage when we have the case well in hand, or when vomiting is troublesome; when we might be uncertain how much of the large single dose had been retained, and as to the advisability of repeating it.

For the gastric varieties, or when we wish the slower but longer-continued action of the drug, *i.e.*, after we have secured a free evacuation of the bowel by our initial dose of calomel, grey powder I believe to be the most satisfactory.

The great advantage of mercury is owing to its cholagogue action, direct and indirect, its antiseptic property, and to the fortunate fact that it is extremely well borne by children.

The "vicious circle" is thus broken at its central link. The liver is restored more or less completely to its normal activity, the portal circulation is relieved, the bile flows more freely, and we get not only an emptying of the canal, but an abundant flow of nature's own antiseptic. Its use should always be followed by some other laxative—castor oil or rhubarb. There appears to be nothing quite equal to castor oil. It is safe and effectual and essentially is it soothing to an inflamed membrane. If vomited it should be repeated immediately. It is its nauseating taste that induces the vomiting, and the child, having become accustomed to the taste of it, rarely vomits the second dose.

Occasionally, where the digestion of fat has been at fault, and irritating fatty acids are present, it appears to aggravate the trouble, and cause considerable griping.

For the more continued use, and during convalescence, the aromatic syrup of rhubarb or the phosphate of soda are very satisfactory. They are both hepatic stimulants, and the latter has the advantage that it can be added to the food without in any way divulging its presence.

Daily purging should be continued with these remedies until the temperature falls to normal, or nearly so, until the pulse improves, until the nervous disturbances disappear, until all offensiveness of the discharges ceases.

We cannot conclude that because the child has had one, two or three doses or courses of calomel and oil, that the intestinal canal is clean, although these are the best agents wherewith to cleanse it. How often do we see that after such a course, the discharges changed in character, free from odor, etc., and yet the temperature remaining high, and other symptoms possibly only modified, a final full dose of calomel and oil has the effect of bringing away, perhaps, a small quantity of fecal matter, exceedingly offensive, and resembling in character that seen in the early stage of the disease, but which has been lodged in some crypt or recess in the bowel, and with its removal the patient appears like a different child, and practically convalescence is thoroughly established. And how often we feel quite safe when we see the characteristic calomel stool.

Flushing.—This has the same object in view as purgation. Water should be used *ad libitum*.

When the stomach is foul, copious draughts of water, with enough salt added that its taste may be distinctly detected, should be given. If vomiting be present it is no contra-indication; if it be not a feature of the disease, it will often induce a very desirable emptying of the stomach. Until we feel sure that the stomach is clean we should give it again and again. It serves every purpose of "lavage"—except in urgent cases where time is a factor and in

cases of chronic gastritis—and may be used except in the continued vomiting of acute gastritis or the persistent vomiting, of cerebral origin, after the stomach has been cleaned. But even here we often find it a more excellent sedative (when taken hot and in small quantities) than ice.

Water (normal saline solution or preferably a solution a little less than normal) per rectum is even more important. In all cases it should be used to remove offending matters from the bowel, to dilute poisons, to flush the system, to stimulate the portal circulation. The quantity should be large, and in severe cases should be used three or four times daily. The temperature is determined by the condition of the patient. Cold rectal flushings in high fever is one of the safest and best antipyretics. When there is moderate rise of temperature, when the temperature becomes normal, and in continued cases the temperature of the water should be about 98° F. When there is severe diarrhea, the temperature subnormal or symptoms of collapse, it should be hot, even 110° F., but used in smaller quantities.

The long rectal tube, a catheter of heavy rubber No. 18 or 20, should always be used, and with not more than one and one-half or two feet head. The patient should be placed in the lithotomy position, turned slightly to the left, and made to lie comfortably. We often thus find a crying distressed babe soon become quiet and comfortable, as soon indeed as the first expulsive effort has passed.

The water should always precede the end of the tube that the semilunar folds of rectal membrane be safely passed. That offering the most difficulty is the one placed on the right side near the upper end of the second portion of the rectum. By using gentle pressure and rotating the tube on its axis this difficulty is overcome. We thus assist in removing one of our greatest difficulties, the engorgement at the portal tributaries, and contribute to the restoration of the hepatic function and all that that means.

Sedatives.—The sedatives to be used are the local and general, and we have nothing better than bismuth and opium. The former should always be used in large doses, as much as ℥ii. in 24 hours when there is an ileo-colitis or a gastritis.

After the colon is cleansed by flushing ℥i. or more may be carried into the bowel before the tube is removed.

When there is defective starchy digestion the subcarbonate is to be preferred, as it is more antacid than the subnitrate, but in the majority of cases the subnitrate is the more reliable.

The other compounds of bismuth, the salicylate, beta-naphthylate or the subgallate, are only of benefit from their antiseptic properties, as their doses are too small to have any markedly local sedative effect. Its recommendations are: it is sedative and non-toxic (if it be pure) and combines with noxious gases in the bowel, forming innocuous compounds.

Opium should be used to relieve pain and particularly to control peristalsis. It is unfortunate if it is required before the bowel

is cleansed. Its use certainly should be delayed if possible until we secure the full effect of our initial purge. While the temperature remains high its use should be restricted. It should be administered separately and never in mixtures, either per os or as a suppository or in combination with starch, per rectum. It is contraindicated where there is cerebral-edema, as it is in all cases of stupor.

The necessity for its administration must always be considered an unfortunate one, but in cases of violent colic, unrelieved by other measures, and especially in the later stages of these digestive disorders where we find excessive intestinal peristalsis, its judicious use is most satisfactory and safe. It controls peristalsis, puts the gut at rest and favors resolution.

This is illustrated in a rather unpleasant way by a case reported to me of an obstinate ileo-colitis. The parents of the child had become impatient with the daily flushings of the colon practised by the attending physician—one of the highest reputation—and acting on the advice of a neighbor dismissed the physician, and had recourse to the use of a proprietary medicine of which opium is the chief ingredient, and boasted of a speedy cure. They would probably have had a different experience had their patience been exhausted sooner, *i.e.*, before the gut had been cleansed.

As to the profitable use of antiseptics I am very sceptical in any case. Certainly in the early stages of the acute digestive disorders I believe they often do positive harm. When you consider the extent of surface to be disinfected and the quantity of poison to be neutralized, the dosage must be large—incompatible with the life of the child if neutralization is to be complete; for the rule which applies to antiseptics in surgical practice applies here, that to destroy bacteria high percentages are required; and while physiological doses may have a retarding influence upon the putrefactive processes, at the same time they still further harass an already overpowered membrane. The salicylates are depressing; the naphthol preparations are pungent and burning; the iodine preparations often are most irritating. Resorcin I have seen in grain doses in a child of one year produce severe epigastric pain. We know that it has been the difficulty in surgery to secure an antiseptic that is unirritating to a wound, how much more difficult to secure one unirritating to an already inflamed stomach and bowel. Why should we so sedulously look for one when we have nature's to hand—the bile and free HCl—and when the efforts to secure these are the very efforts we employ to get rid of the offending material.

The administration of antiseptics in the acute stages of these disorders as commonly practised, appears to me much the same as a surgeon trusting to his carbolic solution, to the disregard of soap and water, clean linen and his penknife.

In the later stages I believe they are of great benefit. They should be given in the food or immediately after it, certainly not before it. Our object in using them should be to prevent putre-

fection, not to overcome it. I do not propose to enumerate and analyze the various antiseptics, but will only mention one which I believe one of the best although not commonly used, namely, hydrochloric acid. It must be well diluted and given after food. Very young children are often disturbed by it.

Astringents have a very limited use in the treatment of these diseases. Their administration per os is a source of irritation, while in cases of colitis, per rectum they are of the greatest value. The most satisfactory to me has been the undistilled fl. ext. of Hamamelis, ℥i. of which added to the last pint of the saline enema controls the number of the discharges markedly and has a distinct sedative action upon the mucous membrane.

Antipyretics must be used with extreme caution. If any of the coal tar products be used, it should be at first only in minimum doses and guarded by strychnine, caffeine or other heart tonic. The safest of all, and perhaps the most efficient, is the cold sponge or spinal friction with a lump of ice. The temperature is lowered with safety and nervous excitement allayed.

Stimulation is required in all severe cases, and generally urgently so. As indicated by the pulse, strychnine and brandy or whiskey are generally a necessity in some stage of the disease, and often very early.

In protracted and severe cases we sometimes find a slow and irregular pulse, which impresses upon us the gravity of the case.

There are one or two features of the hygienic treatment which I would like to emphasize. In the acute stage the child should be kept in an airy room with a temperature as near to 68° or 70° F. as possible and not too bright. While sunlight is of inestimable benefit in the late stages, and so important a factor in the maintenance of health, while the nervous symptoms are at their height it does not conduce to repose but irritates an already irritable child.

The clothing should be light but of wool. The child should be kept in its cot or cradle as much as possible. The use of a hammock has the advantage of being airy, noiseless and comfortable. After the severity of the attack has passed a change of air is often of more benefit than all medication, but where that is impracticable the child must be kept outside as much as possible. In hot weather it is much better that the child should be kept quietly within doors, if there be no convenient shady spot to which it may be taken.

The advisability of sending a child out on daily excursions, *e.g.*, to our island or on the lake, is to my mind very doubtful. The confusion attending the excursion, the crowds and noise and commotion are exceedingly injurious, and often and often I have seen an attack excited by such a day's outing. The sail upon the lake, of course, is exceedingly desirable, and a quiet day at the island one would think to be most beneficial, but if these are attained only through a half hour's confusion and noise of the wharves and downtown streets in the morning and a recurrence of the same upon the

return, they cease to be an unmixed blessing. Confusion, excitement, noise and fatigue must be avoided.

Anything like full discussion of the treatment of these diseases or even the exhaustive discussion of such a grave condition as cholera infantum or other of the diseases mentioned, is beyond the limits of this paper, and a task which I would only undertake with greatest hesitancy. My only purpose is to emphasize a few of the features of the successful rational treatment of our little patients as it appeals to my mind.

345 Bloor Street West, Toronto.

ANESTHESIA BY CHLOROFORM AND ETHER.

BY WILLIAM B. JONES, M.D., ROCHESTER, N.Y.

ALTHOUGH there is sufficient of admonition against poor methods of administering anesthetics, and of pleading for humane consideration of patients, it is still done in a way that is reprehensible and shocks sympathetic observers. For about twenty years I have witnessed operations, and among many thousands have seen very few die of the anesthetic, yet every one of these was an unnecessary death. But I have seen more than I can describe of avoidable distress and danger.

Not every competent physician is a good anesthetist, or can become one. A special talent is needed as much as to be expert in diagnosis, surgery, or any branch of our art. Yet it is not infrequent to entrust the ether to the least experienced physician present, because he must be asked to do something lest his feelings be hurt, and he is not skilful enough to do anything else. In hospitals it is customary to have it done by the member of the resident staff who is the latest comer from college, and as the colleges do not adequately teach it, he learns on the patients, too often the best he can by himself, without practical instruction from anyone. So it happens that in a majority of cases the giving of an anesthetic is accompanied by suffering and danger that are needless. Nearly everyone who has taken it dreads it more than pain. The terror of suffocation, struggle, and restraint, the horror of the sensation of impending death are vividly before the mind after time has nearly obliterated all lively remembrance of the pain. Those who know most about it dread it most. Physicians are not backward about submitting to operations, but they are about taking anesthetics. Among every three or four anesthetizations, by as many physicians, there are one or more terrifying experiences before loss of consciousness. Ask any patient who has submitted to it and you will get a graphic description. And after consciousness is passed there are the dangerous fluctuations, at one time exasper-

ating the operator by straining, vomiting, or muscular rigidity, interfering when time is precious. Then when he is hurrying to make up for it, comes the announcement that the condition is alarming. Then follow the anxiety as to whether it is so, the confusion of giving or not giving restoratives, and afterward the operation must be finished. After such an experience the surgeon is not in his best form. And the pity is that it is not necessary.

The anesthetist should know the name, age, and general condition of his patient, the result of urinalysis, including total solids excreted in twenty-four hours, the condition of the heart, vessels, and circulation. A careless listening for murmurs is a farce. A murmur ordinarily makes no difference. He should know the efficiency of the heart's action, strength of its muscle, and whether the arteries are resilient and strong, or fibrous, or atheromatous; also whether well filled with good blood. In examining the lungs he should not omit to look for pleuritic fluid and old adhesions. When artificial teeth are admitted, remove them before commencing; when denied, see if they can be a few moments later. Note any deformities that they may be favored by posture, and any partial paralysis that you may not be worried by discovering it after the operation. Learn the manner in which anesthetics have affected the patient if ever taken before, and whether opiates cause nausea and depression.

The anesthetist should know the proposed operation, and the surgeon's usual method and time required. In every serious operation there are stages where deeper anesthesia are essential, and others where less will maintain the ideal passive condition. It must be just right all the time, and with the least possible of ether or chloroform.

The simplest preparation is best. Chloroform and ether in measured quantity. The amount used should be known. For an inhaler I prefer a napkin of gauze to hold in my fingers; for a bottle to use, cork the original container or any common bottle with wool or cotton batting loosely inserted. The liquid can be dropped at any rate desired. It is unnecessary to disgust the patient by smearing vaseline all over his face; the vapor does not excoriate, and running ether all over the skin is inexcusable. One hypodermic syringe loaded with one-fifteenth gr. strychnia nitrate or sulphate, to be used in two doses. Another with nitro-glycerine one-fiftieth gr., and atropine sulphate one one-hundredth gr., a basin for vomiting, and towels. It is better to administer no drugs beforehand. There should have been an easily digested meal about twelve hours, and a cup of soup, broth, or gruel, four hours before. When beginning have the room very quiet; permit no conversation, and as few people present as may be, preferably one nurse only. Speak to the patient in a way to allay apprehension, but let it be very few words.

Place the napkin over the face upon your outspread fingers. Drop chloroform slowly and regularly upon it, not stopping until

the operation is finished. The rate will vary, but as evenly as possible. Continuous effect is extremely important. At first the vapor irritates mucous membrane, excites the patient, and tends to a reflex that may stop the heart. For the comfort of the patient, for his safety, and for the hope of keeping from the remorse of having needlessly sacrificed a human life, give it slowly until sensation is a little benumbed. Neither should be given fast enough to cause the cough and suffocation so often seen, and crowding ether early is the brutal, inhuman way that stirs one's soul with indignation. The suffering of that is fearful. About eight to twelve drops of chloroform a minute. Then increase the rate to thirty or forty until reflexes are abolished, when it should be reduced to just what is needed—eight to twelve in most cases. I have seen a laparotomy with ideal anesthesia maintained with four drops a minute for half an hour. For ether the quantity is much greater, but the method the same.

Unless unfavorable symptoms occur, let the pulse alone. The hue of the face tells more than the pulse does about the efficiency of circulation. Blanching or cyanosis denotes failure of force of the heart. They almost always occur very gradually, and should be noticed immediately. A little less of the anesthetic relieves the condition promptly. If not, change from chloroform to ether, or if already giving ether administer a heart stimulant.

If blanching comes suddenly the same indications are more urgent. Pupils and pulse correspond and denote more acute and severe prostration. It may be only nausea, and in that case soon passes off. Pulse rate of itself signifies very little and may be taken at the temporal arteries without extra motion. Fumbling by the wrist is done by beginners.

Upon the sympathetic system depends the existence of life. Nowhere is there another available index so accurate as the pupils; study them well, and observe them frequently, even continuously. With the effect of both ether and chloroform they gradually lose their reaction to light, and it deepens until death. They also contract until just as dissolution is impending, when they dilate widely, and this warning is usually early enough to give time for successful efforts at resuscitation. A contracted pupil beginning to dilate without reaction to light signifies gravest danger, with reaction, that narcosis is passing off. The conjunctival reflex is of little value, being lost before the surgical stage develops. Yet a surgeon telling that the patient is not yet under, is often answered, "He must be; his reflexes are gone at the eye." That obtained by brushing the eye-lashes is more reliable, and does not cause sore eyes afterward.

I have yet to see trouble without premonitory disturbance of respiration. Before complete anesthesia irregularity makes no difference, except that when breathing is exaggerated the drug should be administered more sparingly because it is being taken faster, and when diminished it may be crowded, so little air and vapor are

being consumed. If shallowness persists to an alarming degree substitute ether for chloroform. Its greater irritation of respiratory mucous membrane, and primary stimulation of the heart, will restore adequate respiration.

I would urge above all else that the anesthetist must know how every breath comes and goes. It should be free, regular, effectual, and quiet, or with the gentlest tendency to a nasal snore; and all this can be. It is some one's fault if it be not so. Most people have learned that during sleep snoring is exhausting. The impediment of enlarged tonsils or adenoid vegetations cause restless sleep, tired waking, exhausted, debilitated children. Moderate dyspnea of laryngeal diphtheria causes rapid exhaustion with pulmonary congestion or pneumonia. Yet the ideal of many is to keep the surgical patient so nearly choked by his own tongue and palate that his stertorous breathing is louder and more difficult than any of these conditions. Without an operation, an hour of such anesthesia is enough to prostrate a strong man. It adds greatly to the shock and the mortality. It is frequently done in this way, and is unwittingly an inhuman abuse of a helpless person. I cannot understand why it does not seem clear to everyone, unless, influenced by insufficient teaching rather than by reason, the administrator remembers that stertorous breathing occurs with surgical anesthesia, and is gratified to have it as much so as possible. Stertorous breathing does not occur with surgical anesthesia if the anesthetist knows his business and is faithful to his patient. The head should be over extended by placing the pillow under the shoulder, not the neck. That opens the air passages, and there is no occasion for pulling on the jaw and bruising it, or pulling out the tongue with forceps, or piercing it with a needle and thread. If that is not known to anyone, let him extend the head upon the the back as far as he can and then try to swallow. It is impossible to close the glottis or to interfere with respiration.

Regular rising and falling of chest or abdomen do not always denote breathing. Know that air enters and leaves the mouth and nose. With the tongue dropped so far back as to entirely close the glottis, the respiratory muscles may continue rhythmic though gradually weaker action until from apnea the heart begins to fail and the face to blanch. More than once I have had attention called to this condition, and an assistant giving heart stimulants, and the patient was moving no air through his trachea, the heart getting weaker and weaker, the pulse flickering and by this time feeble. Extension of the head and raising of the lower jaw liberated the epiglottis, and with fresh air in the lungs the heart impediment quickly dispersed. I believe many such cases going on to death are reported as showing and dying of failure of the heart with satisfactory respiration, the truth being that unnoticed they suffocated. There is need to establish a recognition of the fact that during anesthesia absolute stoppage of respiration occurs without struggle, noise, or anything else to attract attention, and results in

rapidly progressive failure of the heart, and death with the pallor of the latter—not cyanosis. In dyspnea or apnea cyanosis occurs with exaggeration of respiratory efforts, pallor without. Again with mucus or vomited liquid in the throat there is partial suffocation, the respirations are noisy and with more effort, but after a time respiratory muscles tire and weaken like any others. If nothing be done they will do less and less, and the patient will drown. You may see experienced men let it go on to extreme danger. If it cannot easily and quickly be sponged out of the mouth with a gauze napkin on the finger, turn him over and let it run out; then turn back and go on. My remarks about the exhaustion of dyspnea apply to the same from this cause. Fluid should not be allowed to remain in the throat, but cleared out at once, even if necessary to interrupt the operator.

Now, with unobstructed air passages, if during the operation respiration becomes irregular find out immediately what it means. Oftenest more anesthetic is required, the patient is reviving; manipulations of the operator may cause it and then it will soon be normal again. But if from neither of these it is a warning of immediate danger. At once take measures for resuscitation to be described presently.

Having finished without trouble lay a napkin across the patient's eyes so that when he wakes all will come to him gradually, especially avoiding the sight of what is strange and maybe terrifying. Do not leave him until he is able to answer intelligently any simple question, and then with a nurse or friend. For subsequent nausea and depression vinegar bathed upon all the face, and its fumes breathed continuously from a napkin are grateful. Mustard or other counter irritation to the epigastrium are helpful. The urine should be examined every alternate day for a week, especially after ether, because nephritis takes off some during the first two weeks.

The symptoms of impending death are irregularity of respiration, weak, shallow and failing, or strenuous and deep like a mighty sighing, and dilation of the pupils in paralysis without reaction to light. It is the vacant stare of the dying and resembles nothing else. Almost inevitably, though we are told not quite so, the respiratory warning comes first, but even at first appearance of the other usually there is time to save life. Stop the anesthetic, ensure admission of a strong current of fresh air upon the face, perform artificial respiration, acting with and not against what efforts are automatically made. See that the air passages are not closed by relaxation or otherwise. Seize the tongue with thumb and fingers in which is held a towel to prevent slipping and retract it gently but forcibly just before each desired inspiration. There is a tendency for each retraction to be followed by a deep gasp. This should harmonize with other efforts at artificial respiration. The contents of two syringes can be used, giving nitroglycerine $\frac{1}{16}$ gr., atropine $\frac{1}{16}$, and strychnine $\frac{1}{16}$, or half of each if

symptoms are not too urgent. The head should be lowered and respiration continued. If it is not satisfactory the O'Dwyer-Fell artificial respiration apparatus should be used, or one equally as good.

Ether is less depressing than chloroform to the heart, respiration and nervous system during administration, but afterward more so, and besides is oftener followed by pneumonia, bronchitis and nephritis. They are not uncommon dangers. It causes so much secretion of mucus in the respiratory passages as to be a frequent interference to every one concerned, and occasionally a menace to life. Even after being put to bed if not yet well recovered a patient may suffocate from it. The nausea and prostration afterward are so much greater as to be dangerous to a very weak person. The danger while on the table is less from ether, but afterward so much greater that I am convinced that ultimately more people die of it.

Chloroform probably kills in three ways:

1. Suddenly with only a few whiffs and the patient still conscious; not enough drug to cause it. Undoubtedly fright has much to do with it. It is just as the same thing occurs and nearly as often from an incision made, or from the attempt to make one, without any anesthetic. We do not hear of such accidents with ether, and that may be because of the primary stimulation of ether.

2. Just at the beginning of deep anesthesia, in patients who have scarcely breathed at all for a time, allowing the air in the mask, mouth, pharynx and larger bronchials to become saturated with chloroform, then with or without struggling, deeper inspiration conveys it to the heart in solution so strong as to paralyze it. Laboratory experiments demonstrate that a small quantity paralyzes the heart if applied directly or in strong solution, but would be harmless by slow inhalation.

3. Gradually, like ether, a protracted administration slowly weakening not only the heart but the whole vitality. Respiration and pulse fail together, and it is immaterial which makes the last feeble attempt. Respiration will usually show impairment before the heart does.

It is the logical conclusion that chloroform should be used for all with well acting hearts with or without valvular lesions if the anesthetizer is competent to give both; that where the patient's respiration and circulation are poor, ether should be substituted as soon as that is noticed. He who has learned ether and then chloroform may return to ether and find he gives it better than before and uses only a small part of the quantity he formerly did. For him ether is as safe as chloroform, but not till he has that experience is he fully qualified.

A skilful anesthetist needs no suggestions or assistance from the operator, and does not annoy him in any way but attends to the patient whatever his condition, gets out of all difficulties with his own resources, and only speaks in the almost unknown event

of its being necessary to stop or shorten the operation. He should keep the patient warm, and, if possible, dry, prevent anything that would interfere with respiration, not hesitating to direct a change in the arrangement of wrappings or the position of operator or assistants, especially if any one leans upon the patient's chest. Prevent undue pressure upon any part. The patient's limbs must not be bruised against the table edge, or his nerves paralyzed by over extension of a joint, especially at the shoulder. Insufflation of mucus, vomitus, and sometimes blood and irrigating solution must be avoided. It should be remembered that with extreme abdominal distension, relaxation may let loose a deluge of fluid vomites that drowns in spite of all care. For such it is safer to keep the head and chest high from the first. See that the operating room is warmed to about 80°, or if cooler, have heaters and woolen blankets used freely. Death from thermic fever has followed operation in very warm rooms. There is lessening of resistance to both heat and cold, and they should be guarded against most carefully. His responsibility is in no way second to the surgeon's, and he is not filling his position unless he feels it to be so, is able to do his work through with good nerve and quiet dignity, in himself equal to every emergency and, regardless of any excitement of others, commanding and directing all that pertains to it, allowing nothing and no one to interfere with him. Most of all interference to be disregarded is that of the operator. The latter may well inform him if relaxation is incomplete, but he is not in a position to know how much more should be given, and positive direction of the anesthesia is not for him. Criticism, levity, scolding are most unseemly. Ignore them like a gentleman, and with undisturbed equanimity attend to business. A record should be filled in for every case, observations being recorded every ten minutes. This ensures close attention and afterwards furnishes evidence of good work.

In a very few hospitals there is an anesthetizer for all major operations, who has earned a reputation as a specialist. There is a marked result in safety and comfort to patients. Accidents and embarrassing delays are practically unknown. An index of it is the small quantity used. One friend tells me of a laparotomy lasting an hour with two drachms of chloroform, another of about the same with two ounces of ether. The day after operations their wards do not resemble the deck of an excursion steamer in a storm. But, as a rule, present methods need to be changed. Most of the danger and distress are due to culpable management of the institutions. The profession in and out of them should at least require that an experienced man be present to direct and teach. Where there is much surgery each interne becomes one, but not until the end of that part of his service, and therefore it is practically always done by one who is not. In charity wards it is an abuse of people doubly helpless, being ignorant of the matter and too poor to have it different; to paying patients an imposition, and breach of an

CASES OF PUERPERAL SEPSIS TREATED WITH ANTI-STREPTOCOCCUS SERUM—WITH NOTES.

BY GEORGE T. McKEOUGH, M.D., M.R.C.S.(Eng.),

Chatham, Ont.

JUNE 25th, 1899.—Mrs. R. M., aged 25; farmer's wife; personal and family history good. She was confined with her second child five days ago. There was no medical man in attendance at the confinement, neighbors only assisting. On the day following, the patient's "genitalia" feeling sore, a quantity of that infallible remedy, goose-grease, was injected into the vagina. I saw her for the first time to-day; complained of headache and chilly sensations; temperature 103° F., pulse 100, lochia scanty, plenty of milk. Ordered vaginal injections of carbolic acid lotion 1-60 every 3 hours, a purgative and large doses of quinine.

June 26th.—Received a morning report that patient was better. Was called in the evening again, patient having had a severe chill during the afternoon; found her restless, looking ill, and temperature 104° F. Gave an intra-uterine douche of carbolic acid lotion.

June 27th.—The patient was brought into the City Hospital this morning in an ambulance, a distance of six miles. She did not complain of the journey; temperature on arrival was 102° F., pulse 90. Carefully curetted the uterus with a dull spoon curette and douched with carbolic acid solution 1-80. Several abrasions of the vulva and vagina were covered with the usual greyish-white coating of infected puerperal wounds. Ordered whiskey, strychnine and the intra-uterine douches every four hours. Her temperature in the evening was 102½° F., and had not exceeded that all day. At 10 p.m. injected 10 c.c. of antistreptococcus serum in the fleshy part of the thigh.

June 28th.—Her temperature gradually fell during the night and registered 99½ at 8 o'clock this morning. Repeated 10 c.c. of serum. The abrasions in the vagina were still covered with the grey diphtheritic-looking membrane, as was also a large everted laceration of the cervix. Patient, however, felt better. Continued intra-uterine injections of carbolic acid solution every eight hours with vaginal injections in the intervals. Temperature registered 100½° F. at 8 p.m., and pulse 90. Did not use serum this evening, my supply being exhausted.

June 29th.—Temperature this morning at 8 a.m. was 101½° F. Bichloride 1 to 5000 was substituted for the carbolic acid in the intra-uterine injections, and continued every four hours. At noon to-day she had a rigor, and at 5 p.m. her temperature rose to 105° F. The entire vagina, the cervix and as much of the interior of the uterus as could be seen was coated with a pearly grey membrane. I telephoned during the afternoon to Parke, Davis & Co.,

Walkerville, for more serum, and in the meantime, in the absence of any bacteriological examination of the discharges, and knowing that the Klebs-Loeffler bacillus in the vagina and uterus produced puerperal fever, I injected 2000 units of diphtheria antitoxin. The patient looked and felt badly to-night. At 9 p.m. her temperature was 103° F. and at 11 p.m. it was again 105° F., notwithstanding the constant application of cold by means of the ordinary wet pack rung out of ice-water.

June 30th.—Cold bathing was continued. The intra-uterine douche of bichloride was given every four hours. Strychnine $\frac{1}{10}$ gr. was administered hypodermically every four hours, and whiskey $\frac{1}{2}$ oz. every two hours with milk, beef tea and sugar and egg mixture. The temperature raised from 103° F. to 104° F. during the morning. There was no pain, tenderness or tympanitis; the vagina remained thickly covered with the membranous deposit. At 12 o'clock, having received more serum, I injected 10 c.c., the temperature being at that time 104 $\frac{1}{2}$ ° F. The fever gradually subsided during the afternoon, and at 8 p.m. the thermometer registered 101° F. when 10 c.c. more of the serum were injected. Her gums being slightly reddened and swollen, and the bowels moving frequently, I substituted carbolic acid for bichloride for intra-uterine and vaginal douche.

July 1st.—Patient rested well during the night. Temperature this morning registered only 99° F. There was quite a profuse discharge from the uterus and vagina, which were becoming cleaner, the membrane peeling off. Again injected 10 c.c. of serum. Patient remained well all day; the temperature did not exceed 99 $\frac{1}{2}$.

July 2nd.—At midnight the temperature advanced to 101° F., but cold sponging was resorted to, and it did not go beyond that. At 8 a.m. the thermometer registered 100° F. My serum was again exhausted. The patient being so much better the day before, I thought recovery was in sight, and to-day being Sunday I was unable to get by telephone Parke, Davis & Co.'s laboratory in Walkerville. The intra-uterine douche was continued regularly, but in spite of them, large doses of quinine and cold sponging, the temperature rose to 104° F. and pulse 136 during the day, and the vagina, which was cleaning off nicely, again became covered with the grey membrane.

July 3rd.—The temperature varied to-day from 101° to 103° F., the same treatment being continued. More serum having arrived, I injected this evening 10 c.c.

July 4th.—Her temperature this morning was 99° F. Ten c.c. of serum injected. During the day, as on previous occasions when the serum was used, the discharge from the uterus and vagina was profuse, the grey coating peeling off and the vagina becoming clean. Temperature at 9 p.m. was 100, pulse 100, 10 c.c. of serum being again administered.

July 5th.—Temperature this morning was 99° F. and remained low all day. The intra-uterine douche was used every eight hours

only, patient being much improved generally. Quite a profuse discharge continued from vagina.

July 6th—Temperature normal. Recovery from this out was ideal and uninterrupted.

A few weeks before this case came under my care I saw with Dr. Langford, of Blenheim, a case of puerperal fever which we thought was due to some unsanitary environment. Dr. Langford had been using the orthodox treatment for several days, the fever persisting. He subsequently used the antistreptococcus serum and he thought beneficially, the patient making a good recovery. A short time afterwards he saw another case with Dr. Marr, of Ridgeway, in which they used the serum, the patient recovering.

My partner, Dr. Holmes, consulted with Dr. Hird, of Wallaceburgh, in a case recently and suggested the serum. Dr. Hird was very strongly of the opinion that its use was markedly beneficial.

Dr. Sharp, of Tilbury, has informed me that he used the serum in one case, but after each administration there was an elevation of temperature. It was not used, however, until the third week of the disease, the patient dying in the fourth week.

Apparently the use of the serum in the case which I have reported somewhat fully was advantageous. Thirty c.c. were used in three doses, at intervals of about twelve hours on three different occasions, and on each occasion the temperature fell, the condition of the vagina so characteristic of puerperal infection improved, the patient's general condition was much better, and after the last injection recovery ensued.

Published reports of the use of the serum in puerperal septicemia are most conflicting and, on the whole, possibly not encouraging. It evidently, however, exerts no pernicious or baneful effects, and, I believe, merits a continued use. From published reports and my own limited experience, to be of much avail it would seem that, like the diphtheria serum, it must be used early, repeated frequently, its administration persisted in, and in the more severe and malignant forms of the disease in large doses. The nature and character also of the specific poison producing the fever have much to do with the benefit to be derived. It can not be expected to be of much use after septic foci have developed elsewhere than in the uterus, or numerous abscesses formed in the uterine wall. Nor do I think that the use of the serum, even if valuable in itself, will do away with the washing out and drainage of the uterus, which is probably the most important factor in the treatment of puerperal sepsis. How often large quantities of a foul ichorous-looking discharge escape from the uterus on gently dilating the cervix or introducing the intra-uterine nozzle for the purpose of washing out the uterus. This discharge must be kept washed and drained away, but if the serum would limit the application of the douche, it will be a great desideratum, especially in country practice, where, until the public as well as medical men learn the well-established principles of prophylaxis in puerperal cases, there will be every now

and again cases of puerperal septicemia, as frequently no doctor is present at labor cases or consulted in regard to them.

Marmoreck maintains that an indispensable condition in successfully carrying out this treatment is the determination by bacteriological examination of the presence or absence of the streptococci. This will not be an easy matter in the country, where possibly the largest number of cases of puerperal fever will occur. However, there is no doubt the large majority of cases of puerperal infection are due to the streptococci; but puerperal fever, so called, is a very comprehensive term, and may not be due to streptococci or staphylococci. Olshausen states that infections of the genital tract, such as tetanus, scarlatina, diphtheria and especially gonorrhoea, may cause fever in puerperal women by no means essentially puerperal fever. Besides, in a recent discussion before the Obstetrical Society of France, it was stated that there were no less than fifteen varieties of streptococci, any one of which might cause puerperal septicemia, and that if this serum was to be of any advantage, it must be possible to identify the numerous varieties and treat each with a special serum. If this should be the case, it would be quite unpractical and the use of the serum quite limited.

The average dose of the antistreptococcus serum is 10 c.c. In severe cases 20 c.c. would not be too much at one injection, and as much as 100 c.c. has been given in twenty-four hours.

The serum used in all the cases referred to in this paper was prepared by Parke, Davis & Co., Walkerville, and I have no doubt is as carefully and skilfully prepared as their diphtheria antitoxin with which I have had a large, successful and happy experience.

In regard to one or two other points in the treatment of the case reported, the diphtheria antitoxin used did not seem to make any impression on patient, neither on the temperature nor on the appearance of the vagina. In a paper read before the County of Kent Medical Society some years ago I reported the successful treatment of a stubborn case of puerperal septicemia with cold baths. Dr. Hanks, of Blenheim, informed me a short time ago that he had treated in a similar way with most satisfactory results since a desperate case of puerperal fever in which the intra-uterine douche failed to affect the temperature of the patient.

The Obstetrical Society of France had a discussion on puerperal sepsis in April of this year. Refrigeration had many advocates, although the results were not comparable to those obtained in typhoid fever. The beneficial results of the application of cold in puerperal fever, are not so pronounced as in typhoid, but its action has a tonic and stimulant effect upon the heart, lungs, kidneys and nervous system, slowing the pulse and respiration, increasing the secretion of urine, quieting a restless patient and fortifying the system against the inroads of pathogenic bacteria.

THE HOSPITAL ROOM IN EACH DWELLING.

BY W. J. TELFER, M.D., C.M. (McG.), MONTREAL.

ONE of the first considerations when assuming the care of a patient is the placing of that patient in the best available surroundings. When face to face with this problem we are often at a loss, even in the best of houses as now constructed, to give our patient fair play. Sickness comes to every family, but this fact, it appears to me, has been hitherto ignored by architects in the construction of dwellings.

Great advance has been made in recent years in the direction of compactness, comfort, etc., and it appears to the physician that almost everything else has been thought of in the planning and finishing of dwellings to have the maximum of comfort and convenience at the minimum of cost, but no thought has been expended on that portion of the dwelling to be occupied by any unfortunate member of the family who may be taken ill.

In planning the hospital room, the following conditions should take precedence: lighting, ventilation, control of temperature, sanitation, access, isolation and aspect. While we should not lose sight of the importance of having this room pleasantly situated, the frequent necessity of isolation and freedom from noise and odors, especially in town houses, must be taken into account, and though it may be impossible to attain to perfection, I am of opinion that even in the most humble dwellings arrangements may be made whereby the physician's endeavors may be greatly facilitated.

It is not my idea to take up an important part of the dwelling to be reserved for use only in time of sickness. Indeed, this apartment should be the favorite one when there is no sickness in the family; nevertheless, when occasion arises, it may in half an hour be changed into a more or less complete hospital.

The ceiling, walls and floor must be finished so that they can be washed clean. Such furniture as may be necessary must be so constructed as to be readily rendered aseptic. There should be ready access to water and toilet adjuncts. In town houses a special bath and water-closet should be arranged for; in country houses movable substitutes for these can be used with easy access to the outside. Where isolation is imperative, either the front or back entrance with its stairway may be temporarily set apart for the use of the patient's attendants. More or less complete arrangements could be made from the above suggestions in dwellings already constructed, and with these points properly considered in the planning of new houses, very satisfactory conditions may be attained.

The assistance of trained nursing—thanks to the zealous teach-

ng of this subject throughout the land, and the enthusiasm with which it has been taken up by capable women—is now, or soon will be, practically within the reach of everyone. With this assistance and the hospital room, the physician would be able to give the sufferer every chance of recovery. While the necessity which now so often arises for the removal of patients from their homes with the hardship, suffering and expense which this removal entails, could be in nearly every case obviated. With few exceptions, given the facilities here outlined, the sick can be most effectually treated at their own homes.

The advantages of the hospital room in each dwelling must be great and far-reaching. Not only will the patient be more effectually treated, but by this means attacks may be shortened, contagion obviated, suffering and expense much lessened, while an object-lesson being continually before the eyes of the laity on the great subject of antisepsis, the tendency should be mighty towards prevention.

Where surgical interference is required, we are constantly under the necessity, in the present state of affairs, of removing the patient to a hospital, often at the sacrifice of time, which is vital, and with great suffering, danger and expense to the patient. How much easier, in almost every case with the patient already in the hospital room, to bring the surgeon and his equipment to the assistance of the sufferer. The general practitioner would also be encouraged to advise and undertake operative work which without the hospital room might be imprudent.

One department of medicine in which we at present fall very far short of the ideal, is the preventive treatment of contagious diseases, solely for the lack of a hospital room in each dwelling. Had we this room at our disposal, the moment that suspicion arises the patient could be effectually isolated, rational up-to-date treatment carried out, while after convalescence, the hospital room and all accessories could be perfectly disinfected. Contrast such a course with what at present obtains. The patient, often of a tender age, is kept for days where contagion is rampant, awaiting an absolute diagnosis. Then we have, in the cities, two alternatives—either isolation is attempted at home, to the great risk of the other members of the family and those with whom they come in contact, or the patient is given over to the horrors of the ambulance and the hospital for contagious diseases, which, in cases of very young children, is so often tantamount to signing their death-warrant. We have an example of this in our own city of Montreal, where the contagious diseases hospital is so ill-equipped, notwithstanding the zealous efforts to the contrary of our city medical officer.

It is hardly necessary for me to refer to the usefulness of the hospital room in obstetrics. I am persuaded that every accoucheur will at once appreciate the boon that this would be to the patient,

doctor and nurse, not to speak of the improvement there would be in the statistics relating to this department of our work.

In caring for patients suffering from chronic diseases, and more especially those of an infectious nature, whether the patient be bed-ridden or ambulant, what an advantage would be the hospital room, with the conveniences which could be there arranged for alleviating the distress of this really large portion of suffering humanity, while materially lessening the heavy burdens of those whose lot it is to care for incurables.

I may add that I have discussed this subject with one of our leading architects, who assures me that the idea is entirely practicable, and that it only remains for the medical profession to persistently advocate this reform to have it adopted.

A Grant for Professor Koch.—The German Reichstag has made, according to *Science*, a grant of 60,000 marks for Prof. Robert Koch's approaching expedition to the tropics to investigate the nature and origin of malaria.

Heroism of a Nurse.—The trustees of St. Luke's Hospital, New York, at their last meeting passed a resolution expressing their appreciation of the heroism displayed by Miss Francis C. Troop, a graduate of St. Luke's Training School for Nurses, in saving the life of her patient at the Windsor Hotel fire. The patient was the invalid daughter of Mr. Leland, the proprietor of the hotel, and she had to be brought down from one of the upper floors.

Proposal to Erect a Monument to the Late Dr. Rolph.—A bust of the late Hon. Dr. John Rolph has recently been placed in the Museum of the Education Department in Toronto. Dr. Rolph was one of the most energetic and ablest of the Reformers during the old "Family Compact" days, when this meant a great struggle for years—a struggle as often apparently hopeless as it was thankless. But after many years it brought about responsible government in Canada, to which she owes her present proud position, as at once practically a self-governing nation, and a most loyal part of the great British Empire. Dr. Rolph was also the founder of medical education in Ontario, and an abler or more zealous teacher could not be. His remains lie in Mount Pleasant Cemetery without, as yet, a stone to mark the spot. It has been suggested that it would be a graceful and well-deserved tribute to his memory for his friends still living amongst the old Reformers, and the great number of medical men scattered over Canada and the States, whom he educated, to send in subscriptions for this purpose, so that a modest, yet appropriate monument might mark the spot where his dust lies. Dr. Geikie, Dean of Trinity Medical College, Toronto, would be glad to receive such contributions, and to see that the desire of those sending them was suitably carried out.

The Canadian Journal of Medicine and Surgery

J. J. CASSIDY, M.D.,

EDITOR,

69 BLOOR STREET EAST, TORONTO.

W. A. YOUNG, M.D., L.R.C.P.LOND.

BUSINESS MANAGER,

145 COLLEGE STREET, TORONTO.

Surgery—BRUCE L. RIGBAND, M.D., C.M., McGill University; M.D. University of Toronto; Surgeon Toronto General Hospital; Surgeon Grand Trunk R.R.; Consulting Surgeon Toronto Home for Incurables; Pension Examiner United States Government; and F. N. G. STARR, M.B., Toronto, Lecturer and Demonstrator in Anatomy, Toronto University; Surgeon to the Out-Door Department Toronto General Hospital and Hospital for Sick Children.

Orthopedic Surgery—B. E. MCKENZIE, B.A., M.D., Toronto, Surgeon to the Toronto Orthopedic Hospital; Surgeon to the Out-Patient Department, Toronto General Hospital; Assistant Professor of Clinical Surgery, Ontario Medical College for Women; Member of the American Orthopedic Association; and H. P. H. GALLOWAY, M.D., Toronto, Surgeon to the Toronto Orthopedic Hospital; Orthopedic Surgeon, Toronto Western Hospital; Member of the American Orthopedic Association.

Oral Surgery—E. H. ADAMS, M.D., D.D.S., Toronto.

Surgical Pathology—T. H. MANLEY, M.D., New York, Visiting Surgeon to Harlem Hospital, Professor of Surgery, New York School of Clinical Medicine, New York, etc., etc.

Medicine—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; and W. J. WILSON, M.D., Toronto, Physician Toronto Western Hospital.

Clinical Medicine—ALEXANDER MCFREDRAN, M.D., Professor of Medicine and Clinical Medicine Toronto University; Physician Toronto General Hospital, St. Michael's Hospital, and Victoria Hospital for Sick Children.

Gynecology and Obstetrics—GEO. T. MCKEOUGH, M.D., M.R.C.S. Eng., Chatham, Ont.; and J. H. LOWE, M.D., Newark, Ont.

Medical Jurisprudence and Toxicology—N. A. POWELL, M.D., Toronto, and W. A. YOUNG, M.D., L.R.C.P. Lond., Toronto.

Mental Diseases—EZRA H. STAFFORD, M.D., Toronto, Resident Physician Toronto Asylum for the Insane.

Public Health and Hygiene—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon Toronto General Hospital; and E. H. ADAMS, M.D., Toronto.

Pharmacology and Therapeutics—A. J. HARRINGTON, M.D., M.R.C.S. Eng., Toronto.

Physiology—A. B. EADIE, M.D., Toronto, Professor of Physiology Woman's Medical College, Toronto.

Pediatrics—AUGUSTA STOWE GULEX, M.D., Toronto, Professor of Diseases of Children Woman's Medical College, Toronto.

Pathology—W. H. PEPLER, M.D., C.M., Trinity University; Pathologist Hospital for Sick Children, Toronto; Demonstrator of Pathology Trinity Medical College; Physician to Outdoor Department Toronto General Hospital, Surgeon Canadian Pacific R.R., Toronto; and J. J. MACKENZIE, B.A., M.B., Bacteriologist to Ontario Provincial Board of Health.

Laryngology and Rhinology—J. D. THORBURN, M.D., Toronto, Laryngologist and Rhinologist Toronto General Hospital.

Ophthalmology and Otolaryngology—J. M. MACCALLUM, M.D., Toronto, Assistant Physician Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Address all Communications, Correspondence, Books, Matter Regarding Advertising, and make all Cheques, Drafts and Post-office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College St., Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifteenth of the preceding month.

VOL. VII.

TORONTO, JANUARY, 1900.

NO. 1.

Editorials.

MODERN RIFLE BULLETS.

OPINIONS differ as to the severity of the wounds produced by modern military rifle bullets, and in this connection we do not refer in any way to the dum-dum bullets. In South Africa many wounds caused by ordinary Mauser bullets have healed rapidly; and, on the other hand, some wounds have been of great severity, so much so, indeed, that the epithet "humane," when applied to the new bullet, appears rather ironical.

In an article which appeared in this magazine, November, 1897, we described some injuries inflicted by the Lebel rifle bullet (French), which closely resembles the Mauser. The experience of a French surgeon was quoted to show that its penetrating power is wonderful, and its capacity for producing destructive lesions at short range enormous. He says: "At the battle of Dogba, September 19th, 1891, the Dahomeyans, covered by the Arabs, advanced to within twenty metres of the French camp. After the battle we could see three dead bodies of the enemy, one behind the other, all bearing penetrating wounds at the same height from the ground, and inflicted by one bullet, which, prior to striking them, had passed through the trunk of a palm tree." He gives two instances of the so-called "explosive" character of the Lebel bullet. An Amazon, who fought in the front rank, was killed at the very moment when she brought her gun to the shoulder. A Lebel bullet, fired at about sixty metres from the woman, had struck the lower extremity of the humerus, parallel to the long diameter of the arm, had followed the course of the bone and made its exit in the supra-spinous region. The humerus had completely disappeared, nothing remaining of it except the head of the bone; the region of the shoulder was all burst to pieces and the axilla dissected out. In the case of a warrior, who had been struck by a bullet in the middle of the forehead, the wound of entrance was rather small, but the occipital bone was completely swept away, and the cranial cavity almost completely emptied. These destructive effects were said to have been caused by ordinary Lebel ammunition.

Military surgeons state that Mauser bullets, after passing through the soft parts, leave an exit wound like a circular punched-out hole, the edges of which are shreddy and slightly torn. The nearer a bullet strikes a bone at its greatest diameter, the greater is the destruction produced in the bone and the soft parts beyond. Simple wounds through the soft parts, however, heal quickly; and, in such cases, the wounds made by Mauser bullets may be justly called humane.

Surgeon Beck, of the 13th Minnesota Regiment, as the result of his experience in the Philippines, says: "To the small calibre bullets of the insurgents' Mausers, the wounded boys owe their lives and a continuance of their usual friendly association with good arms and legs. In the bony structure of the body the Mauser bores a clean little hole, rarely fracturing a limb; in the skull it takes a centre-shot to kill. Through the soft abdominal tissues the

Mauser bullet is always fatal. Wounds of the intestines, stomach and spleen always kill. Every operation for resection of wounded intestines resulted in death, and the operation is now entirely abandoned."

His conclusions are: "(1) That, owing to the velocity with which the bullet of a modern rifle travels, there is but little fear of pieces of clothing being carried into the wound, and, in consequence, the danger of infection by this means is very considerably reduced. (2) That the wounds produced are, as a rule, much less serious than when bullets of a larger calibre are used. (3) That the velocity of a bullet fired from any one of the new rifles is so great that it does more damage at a distance than at close quarters. (4) That the abdominal wounds effected by the Mauser are, in a high degree fatal."

Another authority, Dr. Davis, who derives his experience from the Greco-Turkish war, says that the destructive power of the small calibre rifle has been overestimated; that its stopping or disabling power is less than that of larger calibre; that wounds in future conflicts will be, as a rule, less severe, and will heal more rapidly, with fewer complications than has been the case in the past; that less radical treatment will be required, and conservatism will be followed by brilliant results.

Dr. Davis explains the so-called "explosive" action of the Mauser, as follows: "The initial force of the bullet being penetrative is, when impeded, transformed into a lateral one—the explosive effect being only another name for lateral action, *i.e.*, outside the track of the bullet. This lateral action is most marked in hard bones, the fragments being carried onward; and in organs containing water (bladder, brain, liver, etc.) the rotation of the bullet on its axis does not materially affect the character of the injury."

Dr. Roger, in his recently published work, "Introduction à l'Étude de la Médecine," writes: "We thus find all kinds of lesions similar to those produced by the older firearms; but, whilst the Chassepot bullets at 1,200 metres caused no serious wounds, at 1,500 metres the new bullets are effective, at 2,000 metres they maintain a speed of 197 metres to the second. . . . Finally, as Demosthen shows, the wounds inflicted by modern rifle bullets are not restricted to perforations; the skull is sometimes burst to pieces; in the bones of the extremities, even when the shot is fired from a distance of 1,500 metres, comminuted fractures, with from

fifteen to twenty fragments, are produced. Around the track of the bullet the muscles are cut up and strewn over with powdered bone substance."

The following excerpt, taken from Dr. Roger's book, shows the models of the different military rifles and their projectiles :

COUNTRY.	MODEL OF RIFLE.	Calibre.	Weight of Bullet.	Length of Bullet.	Envelope of Bullet.	Speed at 25 Metres.
		MM.	Gr.	MM.		M.
France	1886	8	15	30	Cupro-nickel alloy.	600
Germany	Mausser-Mannlicher 1888.	7.9	14.7	31.6	Steel, plated with cupro-nickel alloy.	620
England	Lee-Metford, 1889.	7.7	14	31.0	Id*	625
Austria	Mannlicher, 1888 .	6	15.8	31.8	Id	700
Roumania	Mannlicher, 1892..	6.5	10.3	31.4	Steel, plated with nickel.	700
Russia	1891	7.62	13.86	30.48	Cupro-nickel alloy.	615
Switzerland	Ruhin-Schmidt, 1889.	7.5	13.7	20	Copper	600

* A Canadian military authority says that the envelope of the Lee-Metford bullet consists of copper 80 parts, nickel 20 parts, and iron 0.5 parts.

There seems to be a general consensus of opinion that simple flesh-wounds inflicted by the modern rifle bullet are small and that they heal rapidly, foreign matter, such as bits of clothing, not being introduced into the wound. There is good evidence to show that some wounds inflicted at short range, 60 metres, are explosive, the whole force of the bullet being expended in overcoming great resistance, *e.g.*, the axis of a long bone, or a bony vault such as the skull. The same bullet, if it did not encounter other resistance than the soft parts, might easily perforate three or four soldiers if they were placed close to each other. This statement appears to be in direct opposition to Dr. Beck's third conclusion, in which he says, "That a bullet fired from any one of the new rifles does more damage at a distance than at close quarters." Yet these statements do not necessarily conflict. For instance, at 2,000 yards, a Mauser bullet may inflict more ragged wounds of entrance and exit, in the soft parts, than at 200 yards; and, similarly, instead of boring a round hole in a long bone, as it might at short range, it may cause a comminuted fracture of a bone at long range. This may be quite true, but it does not refute the statements made by the French surgeon, who made his observations of the destructive character of

Lebel rifle bullets fired at short range, and which encountered hard bones in the axis of their greatest resistance.

The deadly nature of wounds in the abdomen is, if Dr. Beck's statement is confirmed, very unsatisfactory, and it is to be hoped that further investigations may produce a less sombre prognosis.

J. J. C.

VARIATION IN THE TYPE OF SMALLPOX.

DURING the past two years an eruptive, contagious disease, exhibiting many characteristics of smallpox, has appeared in the United States, and during the month of November, 1899, it attacked many persons in Ontario and Quebec. Nowhere in Ontario has it caused loss of life, except in one case, but it has spread freely from infected centres, and, owing to the severe methods of repression adopted by Boards of Health when dealing with suspected smallpox, it has caused great loss of time to patients, their friends and other exposed persons, as well as a large expenditure of money.

The disease in question has been pronounced to be chicken-pox. If this diagnosis were correct, the incidence of the disease would be unusual, seeing that many of the patients were adults, and chicken-pox is most common in children under four years of age, older children being also liable to it, while in rare instances only does it occur in adults. Cases of chicken-pox have been reported in several centres in Ontario during the past few months, and in December, 1899, Dr. Bryce, Secretary of the Provincial Board of Health, confirmed the statement that the outbreak which had appeared at Tilbury Village, Ontario, was chicken-pox. At the same time, however, and in places not very far from Tilbury, genuine smallpox cases were reported to exist, *e.g.*, in West Middlesex, Essex and Kent counties. In a paper read before the Medical Society of Windsor last November, Dr. Coventry, Medical Health Officer of that town, thus describes some cases that came under his observation :

"(1) Some have but little prodromal fever ; some have pains in the back, some do not ; some vomit, some do not.

"(2) In some, the eruption without the 'shotty' feeling appeared all together, and disappeared with one crop ; in others, there is the 'shotty' feeling with the succession of crops.

"(3) All the secondary eruptions are papular in first stage,

there being seldom any primary rash, and becoming vesicular within two days; some vesicles have aborted at this stage and dried up, while others become semi-purulent, marked at the apex with a dark spot, but without umbilication.

"(4) In no case has there been secondary fever.

"(5) Adults have had a more severe eruption than children, the vesicles in the latter blackening and drying up at the vesicular stage, the crust falling off at the seventh or tenth day from the beginning of the eruption.

"(6) Some have the eruptions on the fauces, and some have not.

"(7) *None of the cases had been vaccinated*; vaccinated persons living in contact with it do not contract the disease, and children vaccinated in time in houses where it is, have escaped it.

"(8) The outbreak has been traced to a man coming from a district where it prevailed epidemically."

We may say, that but one statement in this summary, viz., that under No. 7, need exact surprise. That varioloid presents the well-known features of variola in modified and restricted forms, such as Dr. Coventry describes, has been known for generations. In varioloid, while the primary fever is often as severe as in small-pox, the eruption is less copious, and it passes rapidly through the successive stages, complete maturation being reached in five or six days. Sometimes the eruption aborts to a considerable extent, and it may be arrested at the vesicular, or even the papular, period. The general symptoms are also less severe than in most cases of mild natural smallpox. The secondary fever is slight or wanting, and convalescence is rapid. Flint, however, maintains "that small-pox is modified in a certain proportion of cases spontaneously, that is, irrespective of inoculation or vaccination. Cases presenting the characters of varioloid occurred prior to the practice of inoculation and the discovery of vaccination. They were, however, rare."

Dr. Coventry's experience at Windsor, viz., that patients presenting typical pictures of varioloid had not been vaccinated, would induce the medical reader to think that such cases belong to the category described by Flint, only that instead of being rare they are quite common. All the same, no sufficient reason is offered to show why unvaccinated cases of variola should behave in such an unusual way.

Physicians called to see such cases should scrutinize them closely and look to the diagnosis with great care. The comparative mildness of the disease in the great majority of cases renders

treatment unnecessary; but a close study of the cases is important in order to form a correct estimate of the type of the prevailing epidemic, and inform the public of its true nature. J. J. C.

A HAPPY NEW YEAR.

To all our readers once again we wish a very happy New Year. At this season it seems almost natural to take a retrospective view of things in general, and perhaps the summing up amounts, with the majority of mankind, to nothing more nor less than the quotient figured into a total of "Ye shall no more pass this way." As to the day's work—with reluctance we file away the last twelve issues among our bound volumes, that mark another milestone in our progress as a medical journal. Perhaps we do not love it—this magazine of medicine. It has, in truth, its shortcomings; but, like the American humorist, who, upon being shown by the nurse a plump mass of flesh in the shape of his first-born son, expressed himself thus: "I do not love it, but I respect it for the sake of its father." So in reference to our journal, we cannot say we love it, but we highly revere it for the sake of its father—the physician of the twentieth century.

To please everybody would be impossible; to please many would be a vacillating and deviating task. To tabulate a set of principles and adhere to them, hit or miss, is what this journal has tried to do: not to become an automatic machine, where each collaborator must sing the same song or be mute, but rather an inkstand in common, wherein all may dip their quill and scribble their opinion out, appending their own initials, harmonious upon the larger view of any medical or surgical question, but in the carrying out of the minor details, each man a unit and free to voice his own opinion—something new, perhaps, even in that much-exploited realm of medical journalism, a policy possibly a little removed from "the daily round, the common task," and so far a success. W. A. Y.

EDITORIAL NOTES.

Worthy of Imitation.—It was an exceedingly noble action on the part of Parke, Davis & Co. to arrange to keep the names of all their members on half-pay during their absence in Africa with

the Canadian Contingent. The firm, in addition, presented \$100 worth of their antiseptics to the Canadian Contingent on leaving—a gift which will certainly be appreciated.

Toronto Western Hospital.—The new Toronto Western Hospital was opened with great eclat on the 15th of December. This institution has grown so rapidly that it became absolutely necessary to move to larger and more commodious quarters. The old buildings had become so overcrowded that from day to day cases had to be turned away owing to lack of room. The new buildings are situated at 381 Bathurst Street (corner Nassau), and are sur-



TORONTO WESTERN HOSPITAL.—NEW BUILDINGS.

rounded by beautiful grounds. It is an ideal site for an institution of this kind. The board of directors were indeed lucky to be able to secure such suitable accommodation. We feel sure that from this date even greater prosperity will attend "The Western" than in the past.

Our Second Annual Dinner.—On December 27th the members of the staff of this journal held their second annual dinner in the Blue Room of the Temple Café. It was "a family party," the invitations being only extended to those holding intimate connec-

tion with the JOURNAL. A grand concert graphophone caused much amusement, and proved a slight rest between the many witty and wise speeches, which continued till some sleepy one wished the JOURNAL and all its friends the compliments of "the top of the mornin'."

A New Treatment for Varicose Ulcers.—Dr. Lafond-Grellety, of Bourdeaux (*La Presse Medicale*), in treating large, old, varicose ulcers, with indurated edges, and accompanied by considerable edema, has obtained very satisfactory results by employing the following treatment: He begins by removing the edema through subcutaneous capillary drainage, leaving the drain or cannula in position until the flow of serum has stopped for twenty-four hours. The edema having been removed, he stimulates the granulations on the surface of the ulcer with the solid nitrate of silver for two days. Compresses of absorbent cotton steeped in a 10 per cent. warm solution (98½ F.) of gelatine are laid over the ulcer and retained with adhesive plaster, the limb being placed in the horizontal position. The dressing is changed three or four times a day, in order to replace the solidified gelatine by a warm and liquid gelatine, which exercises a better effect. Cicatrization of a varicose ulcer, treated in this fashion, takes place in from fifteen to thirty-five days.

The Presence of Tubercle Bacilli in the Milk of Tubercular Cows.—From experimental work done by Robinowitsch and W. Kempner, and which is detailed in *Zeitschrift für Hygiene und Infectionen* (Krankheiten, 1899, Vol. XXXI., No. 1, p. 137), we learn that some of the animals tested were in the primary stage of tuberculosis, not having any tubercular disease of the udder, and others had a latent tuberculosis, which was revealed by the tuberculin test. Samples of milk were taken from fifteen cows. Each sample having been centrifugalized, the cream and the sediment were submitted to microscopic examination, and subsequently injected into the peritoneal cavity of a guinea-pig. The results of these intra-peritoneal injections were demonstrative. Of the fifteen specimens ten contained tubercle bacilli, a proportion of 66.6 per cent. The authors conclude that the tuberculin test ought to be made obligatory in the case of dairy cows, and that the milk of cows which have reacted to this test, ought to be considered suspicious.

Suppurative Parotitis in Gonorrhoea.—Colombini reports (*Centralblatt für Bakteriologie*, Vol. XXIV., No. 25, p. 955) a case

remarkable for the number of infectious centres and processes of suppuration, in which he found the gonococcus. This case is also particularly interesting, inasmuch as it is a unique example of gonorrhoeal parotitis. A man twenty-eight years of age, a mason's assistant, contracted gonorrhoea, which was badly treated. Two weeks later a suppurating bubo, which required incision, appeared in the left groin, and also a left epididymitis, which became suppurative. The temperature rose to 103½ F.; fever continued for two weeks and was accompanied with marked emaciation and albuminuria. A right suppurative parotitis appeared and also required incision. Bacteriological examination of the specimens showed the presence of the gonococcus in the urethral pus, in the pus taken from the abscess of the groin, in that taken from the epididymitis, and in that taken from the parotitis. Mingled with other microbes, the gonococcus was also found in the man's urine. Blood taken from a vein in his arm at first yielded no result; taken a second time, it grew; the outcome of the third crop, inoculated on the urethra of a young man, caused a clap in twenty-four hours.

Canada Balsam in Cystitis.—Dr. P. A. Mesnard, in *La Presse Medicale*, describes a new formula for preparing Canada Balsam for internal administration. An old-time formula is:

℞ Canada balsam 308 grs.
 Calcined magnesia q. s.
 M. et divide in pilulas 100.

Sig.: Take at first 4, and subsequently 5, pills a day.

This formula he thinks objectionable, as Canada balsam, like similar drugs, when combined directly with magnesia, produces stucco balls, which pass through the digestive tube unchanged. After considerable experiment, made in concert with Dr. H. Hyronimus, he found a method of making these pills by which they become dissolvable and assimilable; and when used in several cases of chronic cystitis of varied origin, their action was decidedly favorable. The formula finally adopted is as follows:

℞ Canada balsam 308 grs.
 Calcined magnesia 30.8 grs.
 Powdered soap }
 Powdered benzoin } āā q.s.
 M. et divide in pilulas 100.

Sig.: 4 to 6 pills each day.

N.B.—The pills should be made very soft, and not rolled until after a half-hour has elapsed, when they have grown a little firmer. They should be rolled in magnesia, which covers them with a

harder layer. Of course, the ordinary treatment of chronic cystitis (injections, washing of the bladder, etc.) should be employed at the same time.

Medical Gleanings from Roman Egypt.—The *Lancet* for February 25th says that it is probable that no archeological literary discovery of the expiring century will in future be so celebrated as the rescue from the sands of the Egyptian Fayoum of more than ten thousand complete and fragmentary papyri by the explorers acting under the auspices of the "Greco-Roman Branch of the Egyptian Exploration Fund," a society which at its commencement owed much to the late Sir Erasmus Wilson. A selection from some fourteen hundred documents, the greater part of which are at Oxford and the minority at the Ghizeh Museum, has been made by Messrs. Grenfell and Hunt, who have carefully edited about a hundred and fifty of them and published them with a commentary in a volume entitled "The Oxyrhynchus Papyri: Part I, with Eight Facsimile Plates." First in importance is the now famous portion of a "Logia," or collection of "Sayings of our Lord." There are also pieces by Sappho, Thucydides, Plato, and other classical writers. The first papyrus of medical interest is No. 39, which is from the military archives of Oxyrhynchus, and is the certificate for the release from army service of one Tryphon because of defective eyesight. It reads thus: "Copy of release, dated and signed in the twelfth year of Tiberius Claudius Caesar, Release from service was granted by G. Vergilius Capito, prefect of Upper and Lower Egypt, to Tryphon, son of Dionysius, weaver, suffering from cataract and shortness of sight, of the metropolis of Oxyrhynchus. Examination was made at Alexandria." Another papyrus gives an account of a lawsuit relative to the identity and the custody of an infant who had been placed with a baby farmer. Papyrus No. 51 is the report of a medical officer upon a case of suicide, and is dated A.D. 173. A similar document is to be found in the large collection of Greek papyri in the Berlin Museum. The present one is as follows: "To Claudianus, strategist, from Dionysius, son of Apollodorus, son of Dionysius of Oxyrhynchus, public physician. I was to-day instructed by you through Heraclides, your assistant, to inspect the body of a man who had been found hanged, named Hierax, and to report to you my opinion upon it. I therefore inspected the body in the presence of Heraclides at the house of Epagathus in the Broad Street quarter, and found it hanged by a noose, which fact I accordingly report."

The Physician's Library.

BOOK REVIEWS.

Twentieth Century Practice. An International Encyclopedia of Modern Medical Science by leading authorities of Europe and America. Edited by THOMAS L. STEWART, M.D., New York City. Twenty volumes. Vols. XIII., XIV., XV. and XVI. New York: William Wood & Co. 1898.

These four volumes of "The Twentieth Century Practice" are devoted entirely to infectious diseases, and give the profession one of the most complete works on this department of medicine in print. We know of no system which presents in so complete, and withal so interesting, a manner infectious diseases in their different manifestations, and Vols. XIII., XIV., XV. and XVI. alone make "The Twentieth Century Practice" well worth possessing. Among the contributors to Vol. XIII. are such writers as P. Brouardel, M.D., of Paris; Jules Comby, M.D., of Paris; H. C. Ernst, M.D., of Boston; Ernest Hart, D.C.L., M.R.C.S., London; J. W. Moore, M.D., F.R.C.P.I., Dublin, and Dawson Williams, F.R.C.P., of London. Volume XIII. is divided into several sections—one on ptomaines, toxins and leucomains; another on infection and immunity; a third on water-borne diseases; still another on the duration of the periods of incubation and infectiousness in acute specific diseases; and shorter sections on smallpox, vaccinia and mumps.

Under the section on water-borne diseases, written by Ernest Hart and Solomon C. Smith, of London, the etiology, etc., of typhoid fever is considered at some length. In referring to this, the authors go on to say that it would be incorrect to suggest that the etiology of typhoid fever is so simple an affair as to be expressed by the crude assertion that infection is necessarily the direct outcome of the ingestion of water directly polluted with typhoid excreta. It is well known that such a pollution will produce it; but in many cases, especially where the disease appears to be endemic, the relation is much more complex. There is every reason to believe that the microbe of typhoid fever plays a double role, and that, although it is best known as a parasite, it also exists as a saprophytic organism able to maintain its life for long periods quite independently of man. It has even been maintained that some such alternation of its phases of existence is necessary to the development of its infective power, and this hypothesis receives some support from the opinion held by many that fresh typhoid stools are not infectious, and that it is only after a certain period has elapsed, or in other words after the bacilli have had an opportunity of multiplying outside of the body, that their infective properties attain their full virulence. In any case, however, when the typhoid bacillus gains access to the body and becomes implanted in human tissues, it again takes on its parasitic life and sets up that definite train of symptoms, some the result of the absorption of toxic products found in the course of its growth, others the outcome of the active resistance of the tissues, the sum total of which go by the name of typhoid fever. This chapter on typhoid fever is thoroughly interesting and fully up-to-date.

Volume XIV. is devoted to scarlet fever, measles, German measles, chicken-pox, glandular fever, whooping-cough, cholera infantum, cholera nostras, Asiatic cholera, dengue, beri-beri, miliary fever and Malta fever. The chapter on scarlet fever is written by F. Forchheimer, of Cincinnati, Ohio. In discussing the treatment of this disease, the author divides it into prophylaxis, general hygiene and medical treatment. He says that too much stress cannot be laid upon the

prevention of throat troubles. Not only do we, by the measures recommended, prevent throat troubles themselves, but we prevent that which is of much greater importance, secondary infection. Hutinel has made the point that in one hundred cases of scarlatina he has had neither a death nor secondary complications, simply on account of the use of antiseptics as applied to the throat. While this statement may be a little too enthusiastic, certainly our results in scarlatina, when these hygienic methods are applied, are far better than they were in the pre-antiseptic days. As soon as throat trouble begins to develop in the form of spots or a membrane, active measures should be taken. This can be done most effectively by local treatment, which has been applied in a great many different ways—by gargling, douching, local applications in the form of a spray, or direct applications to the parts affected. The author thinks that gargling is not to be relied upon, and that serious objections can be made against douching on account of the unpleasantness when used in young children. The spray, however, can be used under all circumstances, even in the most refractory child. In using the spray, alkaline solutions, hydrogen dioxide or any of the milder non-irritating antiseptics can be used. The best method of all is the direct application, by means of a cotton swab, of the remedies that are to be used, to the part affected. The author thinks that, of those remedies, the one that comes first and foremost is the use of Löffler's iron toulol solution once or twice in twenty-four hours, the swab being held in contact with the diseased parts a sufficient length of time in order to insure the efficacy of the application. The only objections to this remedy are the pain that is produced and not infrequently a certain amount of irritation. Next to this in efficacy comes the application of hydrogen dioxide in the form of a 3 per cent. solution applied not oftener than twice in twenty-four hours. When the membrane spreads beyond the tonsils it becomes necessary to determine by culture the nature of the complication. In case it is due to the Löffler-Klebs bacillus, large doses of antitoxin should be injected as soon as possible. When this bacillus is not found, the serum of Marmorek, or equally good, the streptococcus serum as prepared by Park, Davis & Co., should be used immediately. It will be found almost astonishing, in some very bad cases, what good results will follow its use.

Volume XV. is full of information, although possibly not of such value to the practitioner as the preceding two, as it takes up such infectious diseases as typhus, plague, glanders, anthrax, foot and mouth disease, actinomycosis, rabies and pyemia. Among the contributors are Frank S. Billings, of Grafton, Mass.; Ismar Boas, of Berlin; Ditmar Finkler, of Bonn; I. McFadden Gaston, of Atlanta; N. G. Keirle, of Baltimore; S. Kitasato, of Tokio, Japan, and others.

Volume XVI. is the last one devoted entirely to infectious diseases, and is the most interesting of all. It devotes its pages to lobar pneumonia, cerebrospinal meningitis, dysentery, inflammation, erysipelas, simple, continued and relapsing fever, and typhoid fever. The contributors are J. W. Brannan, of New York; L. B. Edwards, of Richmond, Va.; O. G. T. Kiliani, of New York; A. Netter, of Paris; H. A. A. Nicholls, of Dominica, W.I.; L. Popoff, of St. Petersburg; A. H. Smith, of New York, and several others.

Dr. Andrew H. Smith, of New York, devotes quite a lengthy chapter to lobar pneumonia. He goes into the consideration of this disease in a most complete manner, and yet has written it in such a way as not to make it at all tiresome. In the treatment of pneumonia, Dr. Smith draws attention to the great value of mercury. At the present time we can scarcely accord to mercury the "antiphlogistic" property with which it was formerly credited, but from its sedative action when given in the sedative dose, we can understand that, when an agent so inimical to germ growth is taken into the blood and effused into the air cells along with the fibrin that is to act as a culture medium, it must have an effect to retard at least the activity of germ formation in that medium. Laboratory experiments show that the pneumococcus is peculiarly sensitive to mercury; and with so large a quantity of calomel diffused through the alimentary canal it is easy to conceive that enough mercury, probably in the form of the bichloride, should be absorbed and exuded with the fibrin to sensibly effect

the pabulum upon which the microbe feeds. Pieragnoli strongly recommended the employment of calomel in croupous pneumonia, his method consisting in the daily administration of calomel combined with opium, and in the avoidance of expectorants in the first few days of the attack. Smarkovsky, of Moscow, claims that calomel given in doses of 5 or 6 cgm. (gr. $\frac{3}{4}$ —1) every hour until a purgative effect is produced, is capable of jugulating croupous pneumonia and causing its abortion. We have not had the satisfaction of reading any more complete article on pneumonia, its etiology, symptomatology and treatment than that by Dr. Smith in Vol. XVI. of "The Twentieth Century Practice."

W. A. Y.

Treatise on Orthopedic Surgery. By EDWARD H. BRADFORD, M.D., and ROBERT W. LOVETT, M.D. Second revised edition. New York: William Wood & Co., 1899.

The first edition of Bradford's and Lovett's "Orthopedic Surgery" secured for itself a place in the confidence of the profession, and marked its authors as men holding a front rank among orthopedic surgeons. It is not unmerited praise to say that the second is a real revision, bringing it up to date and eliminating some of the defects almost inseparable from a first edition.

To say that it is brought up to date is to say much, when, in order to do this, it was necessary to search the literature of the advances made in this work since 1890. In the last decade some of the most important advances made in surgery are to be placed to the credit of the orthopedist. Notably are congenital dislocations brought well within the province of helpful, hopeful, practical therapeutics. Congenital dislocation of the hip was not successfully treated till within a few years past. In all lines of orthopedic work, the authors have traversed most thoroughly not only American, but English and European, literature, and have made this edition a veritable encyclopaedia.

Lack of perspicuity was one of the faults marking the edition of 1890, and, although the present one is a marked improvement in this respect, yet it must be said that not a little could be left out with advantage. The practical demands of to-day require that a specialist shall, from his superior knowledge of the subject, somewhat dogmatically lay down his facts and prescribe his treatment, and from his more intimate experience decide for his readers the proper course to pursue, instead of laying down numerous directions and leaving the searcher for definite information to wade through many suggestions, and finally being responsible for choosing the course to be pursued. Perspicuity can scarcely be said to be one of the elements of strength in the book.

In pathology, the authors have done well in making free use of the work done by Nicholls and others in connection with diseases of bone. The new illustrations and altered and additional text make the book most valuable here. Forcible correction of deformity arising from Pott's disease, a recent and important advance, receives fair consideration.

Original and valuable work done by the authors in the matter of the etiology of roto-lateral curvature of the spine is found here. Along with it, however, is a most bewildering collection of what has been written on this subject, some of which is valuable and to the point, much of which is useless, except as history.

To the writer, it seems scarcely orthodox teaching that the desired result after excision of the elbow, even for disease, is ankylosis. Few would take exception to this as applied to excision of the knee; but where function is so different, and movement so important, the aim should be to secure motion, not ankylosis.

The chapter on club-foot is a most valuable one. The cream of suggestions for treatment has been successfully gathered. Where much is so good, one hesitates to refer to minor defects. The fourth paragraph of the summary (p. 423) lays down the rule that osteotomy or wedge-shaped resection of the astragalus is necessary in resistant cases with bony deformity. The writer is convinced that less radical measures will succeed in nearly all, if not in all

cases. Numerous cases of a severe type in his own experience, and in that of others, shows that even in strongly resistant cases up to forty years of age no bone operation is necessary.

Cutting of the plantar fascia (p. 377) may be more easily, efficiently and safely done by entering the tenotome much nearer the tubercle of the os calcis, and behind the arteries and nerves.

In their description of the fixation dressing applied after reduction of the femoral head in congenital dislocation, an error is made which has been made by several writers. If the limb be secured in a position of *inversion*, as here directed, it must result in turning the head of the femur *away from the acetabulum*. Eversion, or outward rotation, is the correct position to bring into coaptation with the acetabulum a head which had been twisted backward in its relation to the shaft, by lying for years upon the backward sloping surface of the ilium. This point is correctly stated by Lorenz, Vol. I., p. 261, of "Transactions American Orthopedic Association."

It would be a pleasure to say that the publishers had done their work as well as the authors had done theirs. In this respect, however, the book lover is disappointed. Their work, especially in illustration, is not up to the standard set by the best houses in recent years.

Taken all in all, this edition marks a real advance in the literature of orthopedic surgery.

B. E. M.

Operative Surgery. By JOSEPH D. BRYANT, M.D., Professor of the Principles and Practice of Surgery, Operative and Clinical Surgery, University and Bellevue Hospital Medical College, etc. Vol. I.: General Principles, Anesthetics, Antiseptics, Control of Hemorrhage, Treatment of Operation Wounds, Ligature of Arteries, Operations on Veins, Capillaries, Nervous System, Tendons, Fascial Muscles, Bursæ, and Bones, Amputations, Deformities and Plastic Surgery. With 749 illustrations, fifty of which are colored. D. Appleton & Co., New York Publishers; George N. Morang & Co., Canadian Agents. Third edition.

* With the plethora of newer books now on the market, one dreads the appearance of the ever-persuasive book agent as he enters one's door with something "every doctor must buy." After wasting many precious minutes upon these "knights of the grip," one is at last refreshed by a peep into Bryant's "Operative Surgery."

By reading between the lines in "General Considerations" one will readily learn that the author tries to impress upon the surgeon that he is doing his operation upon a patient as well as upon some diseased condition. He lays great stress, too, upon the necessity for punctuality at operations. Certainly the lack of punctuality on the part of some surgeons cannot be too strongly condemned.

The section on anesthesia is somewhat antiquated. He describes the stage of excitability in ether anesthesia, but either forgets, or is not aware, that this may be almost or entirely overcome by the previous administration of nitrous oxide gas. One is prone, too, to cross swords with the writer when he lays stress upon the usefulness of the "conjunctival reflex" as a guide in the administration of an anesthetic, for why should an anesthetist be allowed to "jab" his finger into a patient's eye indiscriminately, simply because the victim is not in a position to defend himself?

On the subject of the ligature of arteries, in which there is a most exhaustive description, the operator's knowledge of anatomy is greatly refreshed by a series of useful plates, as well as a *résumé* of the relations of many of the principal vessels.

There is, too, a description of methods of opening veins, and of how transfusion may be done, which will be useful reading to many.

Then in beginning the description of operations upon special regions, and for special purposes, there is a half-tone plate descriptive of the various instruments required, a study of which will be useful to one undertaking an operation for the first time.

Volume I. concludes with an exhaustive chapter on plastic operations, including those for skin-grafting, cicatricial contractions, facial deformities, hare-lip and cleft palate.

Throughout, the practitioner and student will find the work a most useful reference and guide. The book-making is excellent, and D. Appleton & Co. may justly be proud of the plate-making.

F. N. G. S.

Surgery. A Treatise for Students and Practitioners. By THOS. PICKERING PICK, consulting surgeon to St. George's Hospital; senior surgeon to the Victoria Hospital for Children; H. M. Inspector of Anatomy in England and Wales. London, New York, Bombay: Longmans, Green & Co., Publishers.

This is a book designed more particularly for the use of students, but no doubt the practitioner will find it a valuable addition to his library.

Mr. Pick, who, for many years, lectured to the students at St. George's Hospital, is eminently well qualified to produce a work that will be suitable to the needs of a student. As a consulting surgeon, too, his life's practice, as contained in the pages before us, should be a great benefit to the young practitioner, when he requires to fall back on the experience of someone of riper years. With the growth of surgical knowledge during the last decade it seems almost impossible for one to confine in a single volume a text-book of surgery, but by means of conciseness of expression and a certain dogmatic style, so essential in an impressive teacher, the author has succeeded in a remarkable manner. This is especially refreshing to one who, for some time past, has been wading through a number of works by American authors, in which the padding is the one great characteristic.

Like so many text-books, however, too much is left to the imagination of the student, and too much knowledge on the part of the student is taken for granted. For example, no student could take up the work and get an intelligent understanding of the process of ulceration by opening the book and reading that section alone. It seems to me that a large work could be written dealing with practical points not mentioned in books. The chapters on syphilis and on tuberculosis, while concise, are clear and instructive, and will give one a good working basis for study. Chapter XIII., on injuries and diseases of the abdomen, is excellent, and in a limited space gives the reader much valuable information in comparatively few pages. Did space permit, one might go more fully into the details of the work; suffice it to say, however, that the illustrations are good and assist materially in an understanding of the text. The publishers are to be congratulated on the book-making.

F. N. G. S.

The Surgical Diseases of the Genito-Urinary Tract, Venereal and Sexual Diseases. A Text-Book for Students and Practitioners. By G. FRANK LYDSTON, M.D., Professor of the Surgical Diseases of the Genito-Urinary Organs and Syphilology in the Medical Department of the State University; Professor of Criminal Anthropology in the Kent College of Law, etc., etc. Illustrated with 235 engravings. Philadelphia, New York and Chicago: The F. A. Davis Co., Publishers. 1899.

So enthusiastic a reception have Dr. Lydston's contributions to the subject of the surgical diseases of the genito-urinary tract received from time to time, that it was a wise move on his part to put his extensive knowledge, as a result of close study given to this department of surgery into the form of a book and thus enable the profession as a whole to benefit thereby. He has divided his book into ten parts, consisting of about forty-five chapters, and considers (1) the general principles of genito-urinary, sexual and venereal pathology and therapeutics; (2) venereal diseases of the penis; (3) diseases of the urethra and gonorrhoea; (4) chancre and bubo and their complications; (5) syphilis; (6) diseases affecting sexual physiology; (7) diseases of the prostate and seminal vesicles; (8) diseases of the urinary bladder; (9) surgical affections of the kidney and ureter, and (10) diseases of the testis and spermatic chord. The chapter

on syphilis is complete and thoroughly up-to-date. In the treatment of this disease he considers the pros and cons of the use of mercury, the action of mercury in syphilis, the effects of mercury upon the blood, the selection of mercurials, the untoward effects of mercury, the effect of the iodides, the untoward effects of iodine, new remedies for syphilis, the local treatment of syphilitic lesions, and the treatment of early syphilitic neuroses. The book is an exceptionally concise, and at the same time complete, consideration of the subject, and ought to find a ready sale among the medical profession of this country. We think, however, that had a better quality of paper been used the illustrations would have come up better and been more distinct.

Sajous' Annual and Analytical Cyclopedia of Practical Medicine. Volume IV. Infants, Diarrheal Diseases—Mercury. The F. A. Davis Co.

We regret that the fourth volume was not received until the month of November, 1899, as if it had arrived during the summer it would have been a real pleasure to have drawn the attention of the Canadian profession to the admirable article on the diarrheal diseases of infancy, by Dr. A. D. Blackader, of McGill University, Montreal. We do not remember having read in the recent literature of pediatrics an article which contains sounder information. In regard to the treatment of chronic diarrhea of infants we quite agree with Dr. Blackader's statement that nutrition may also in some instances be assisted by the inunction, over the abdomen or body generally, of cod-liver oil or cocoa butter, only we prefer olive oil in such cases.

The article on Insanity, by the late Dr. Rohé, is a useful general presentation of a difficult subject, and will be found interesting to practitioners. To those who knew the author only as a writer on hygiene, it will be a revelation of his many-sided ability.

Malarial fevers are very fully discussed in a well-written article by Drs. Wilson and Ashton. The latest literature on malaria is presented in a well-digested form. The colored plates representing the parasites of malaria are well done. The primal origin of the parasites is traced as far as medical research has gone.

Diseases of the liver and gall-bladder, save cirrhosis, are amply described by Professor McPhedran, of Toronto University. Needless to say the personal experience and full reading of the accomplished author make this article most instructive.

An important article on intubation by Professor Waxham, of Chicago, one on locomotor ataxia by Professor Pritchard, of New York, one on meningitis by Dr. C. M. Hay, of Philadelphia, and a creditable article on leprosy by Dr. Sajous, are the principal remaining attractions of this volume. J. J. C.

The Old Concession Road. By THOMAS LAIDLAW, Guelph, 1899. Illustrated, 35c.

I remember once finding a copy of "Cavendish on Whist" in the theological library of an exemplary clergyman. There is always a certain momentary sense of refreshment in such surprises; and not more so in the case mentioned than when I recently came across a copy of "The Old Concession Road" in a package of medical books. No apology is necessary for its mention in the pages of any Canadian publication; for it is a labor of love, and from the pen of one of the most lovable and noble-hearted gentlemen of the past generation. The dainty little volume consists of a number of very distinct etchings in prose and verse descriptive of that simple pioneer life that has passed away,

"Sixty years have a dimming effect," the author remarks. "Even the Shorter Catechism has in many of its lines faded, though its starting-point, 'What is the chief end of man?' is, we suppose, written in indelible ink." In these essays, which remind one by their kindly humor of Charles Lamb at his best, Mr. Laidlaw describes "The Days of the Little Shanty," "The Sugar Camp," "The Sabbath in the Early Days" (I wish some of the votaries of the Lord's Day Alliance would read this, and they might get some idea of what keeping the Sabbath really means), "The Raising Bee," "Old By-Roads,"

and "The Old Log School House," besides other sketches which will evoke a responsive note. The little book is unhesitatingly commended as a precious fragment of pure literature, lost—more than lost, like the historical needle, in a haystack of pretentious mediocrity, plagiary, bosh and twaddle, with which litter the literary market is at present flooded. The prevalence and general acceptability of clap-trap speaks badly for the much-vaunted taste of the Canadian public. But if that public has not sufficient discrimination to value "The Old Concession Road," I give it up. E. H. S.

Saunders' Question Compend, No. 3. Essentials of Anatomy, including the Anatomy of the Viscera, arranged in the form of questions and answers Prepared especially for students of medicine by CHAS. B. NANCREDE, M.D., Professor of Surgery and Clinical Surgery in the University of Michigan; Emeritus Professor of General and Orthopedic Surgery, Philadelphia Polyclinic; Senior Vice-President of the American Surgical Association, etc., etc. Sixth edition, thoroughly revised by FRED. J. BROCKWAY, M.D., Assistant Demonstrator of Anatomy, Columbia University, New York. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899. Price, \$1.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

Saunders' Question Compend have taken but a short time to spring into favor, more especially, of course, among students of medicine. A great many are very much opposed to a student resorting at any stage of his work to the use of a question compend, as it is claimed that such leads to a system of cramming, which can only prove deleterious to the man and result in his gaining but a very cursory knowledge of his subject. That may be the case to some extent, but that during the few weeks preceding examination such a book may be of great assistance to the student cannot be doubted. "Question Compend No. 3," on essentials of anatomy, proves no exception to the rule, the sixth edition having been enlarged and added to in such a manner as to increase its usefulness in many respects.

Clinical Lectures on Neurasthenia. By THOS. D. SAVILL, M.D., Physician to the West End Hospital for Diseases of the Nervous System, London; Examiner in Clinical Medicine in the University of Glasgow, formerly Medical Superintendent of the Paddington Infirmary, Assistant Physician to the West London Hospital, etc., etc. New York: Wm. Wood & Co. 1899.

It was a wise move on the part of Dr. Savill to put his lectures, as delivered by him at the Paddington Infirmary and the Welbeck Street Hospital for Diseases of the Nervous System, into the form of a book, so as the more readily to give his friends far and near the opportunity of perusing what is the result of much study and original work on his part, even though the author has had exceptional opportunities for study in this specialty in the metropolitan work-houses and infirmaries of Old London. There is little doubt that the average medical man has too sparse a knowledge of nervous diseases, and more especially their prognosis, and is too apt to ever question the possibility of recovery in cases of the kind. It is strange that text-books on nervous diseases very frequently, indeed, omit any reference of any moment to neurasthenia. This will now be overcome by Dr. Savill having placed his book at the disposal of his professional brethren, a step which is sure to meet with approbation from all quarters.

Notes on the Modern Treatment of Fractures. By JOHN B. ROBERTS, A.M., M.D., Professor of Surgery in the Philadelphia Polyclinic, Mütter Lecturer on Surgical Pathology of the College of Physicians of Philadelphia. Thirty-nine illustrations. New York: D. Appleton & Co. Canadian Agents: The Geo. Morang Co., Limited, Toronto. 1899.

We think that the title alone of this book will make it sell, as there is no subject which will so appeal at once to the practitioner as the modern treatment of fractures. There are few duties to be performed by the medical man which

requires the exercise of so much judgment and common-sense as the scientific setting of a fractured limb. The book consists of nineteen chapters, and the author takes up such subjects as (1) the exploratory incision in the treatment of closed fractures and dislocations, (2) subcutaneous nailing in fractures with unusual tendency to displacement, (3) the prevention of deformity in fractures of the extremities, (4) subcutaneous tenotomy as an aid in the reduction of fractures, (5) false doctrine in the treatment of fractures of the extremities, etc., etc. Dr. Roberts' book will be found very useful in setting forth in an exceedingly lucid and succinct manner the latest views on this subject.

Saunders' Question Compend, No. 4. Essentials of Medical Chemistry, Organic and Inorganic. Containing also questions on medical physics, chemical philosophy, analytical processes, toxicology, etc., prepared especially for students of medicine, by LAWRENCE WOLFF, M.D., Demonstrator of Chemistry Jefferson Medical College, etc. Fifth edition, thoroughly revised by SMITH ELY JELLIFFE, M.D., Ph.D., Professor of Pharmacognosy College of Pharmacy of City of New York, etc. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899. Canadian agents, J. A. Carveth & Co., Toronto.

Chemistry is always a complex study for some students of medicine, and is often made more so for the beginner by too advanced or insufficiently lucid text-books. That "Saunders' Question Compend of Chemistry" fulfils the popular want is evinced by the fact that it is in its fifth edition. The question and answer method adopted meets with the approval of the majority of students, and is an excellent means of retaining the attention as well as of clearly discussing a subject, and the questions and answers have in this compend been so arranged as to conform to the principal text-books on the subject, such as Fownes, Atfield, Richter, Barker, Witthaus, as well as Holland, on the urine. It is invaluable as an introductory course to chemistry. E. H. A.

La Tuberculose Est Curable. Moyens de la reconnaître et de la guérir. Instructions pratiques à l'usage des familles par le Docteur Elisée Ribard, membre du conseil d'Hygiène du XVI^e arrondissement, attaché au service des Tuberculeux à l'Hôpital Boucicaut, avec préface de Docteur Maurice Letulle, Professeur agrégé, Médecin en chef de l'Hôpital Boucicaut. (1 vol. in-8 couronne de 170 pages, avec 14 figures dont une en couleurs et planches hors texte-broché. 2 frs. Georges Carre et C. Naud, Editeurs, 3 Rue Racine, Paris.)

A useful book for popular consumption, containing, *inter alia*, instructions to parents as to the recognition of the physical signs of the tubercular diathesis in their children. After giving proofs of its contagious nature, the author shows how the invasion of tuberculosis may be prevented. Instructions in the matter of suitable diet, exercise, bathing, etc., are also given. A number of interesting and instructive plates adorn the work, which is certainly deserving of professional and popular recognition.

The Medical Annual, Synoptical Index to Remedies and Diseases for the twelve years, 1887 to 1898. Bristol: John Wright & Co., Stone Bridge. New York: E. B. Treat & Co. Toronto: J. A. Carveth & Co.

To those who have been fortunate enough to secure for the past twelve years copies of "The Medical Annual," this Synoptical Index will be invaluable. Very often, indeed, the busy physician wishes to refer to all the information procurable upon the treatment, etc., of a certain disease, which, without an index of this kind, would prove rather troublesome and would mean a good deal of labor when consecutive volumes have to be consulted. With this book, however, all one has to do is to turn to the title in the index and there find at a glance the volumes and the pages of the same where reference is made to that particular subject. Not only that, but there is given under each heading, which are arranged alphabetically, "a synopsis of the suggestions respecting treatment which have year by year been made by the specialists who write the original articles, or which have appeared in the medical press." This work should be in the hands of every subscriber to "The Medical Annual."

Christmas in French Canada. By LOUIS FRECHETTE, George N. Morang & Co., Limited, Toronto.

It was a happy thought that brought the old saying, "A book is often chosen by its cover," to the mind of the publishers of this book at this busy Christmas time. A glance at the ornate green and gold binding, a look at the title, "Christmas in French Canada," a peep inside at the beautiful illustrations, clear typography and fine paper—a credit to any Canada publishing firm—and the suitability of this volume as a Christmas gift is assured to the purchaser. But the greater pleasure is surely in store for the recipient of this gift book in reading the short stories of life among the habitants. Those who have read the inimitable stories of Gilbert Parker, and the queer fascinating verse of Dr. Drummond, may think that the whole story of quaint French Canada has been told; but Louis Frechette thinks otherwise and tells another story, and he tells it wonderfully well.

W. A. Y.

Essentials of Physical Diagnosis of the Thorax. By ARTHUR M. CORWIN, A.M., M.D., Instructor of Physical Diagnosis in Rush Medical College; Attending Physician to the Central Free Dispensary, Department of Rhinology, Laryngology and Diseases of the Chest. Third edition, revised and enlarged. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899. Price, \$1.25 net. Canadian Agents: J. A. Carveth & Co., Toronto.

This small book ought to meet with a comprehensive sale. It is gotten up after the style of a compend, although not in the form of questions and answers. It is a guide to physical diagnosis, and will be found a most useful manual not only in the hands of a student, but also in those of the active practitioner, who frequently is none the worse for replenishing his store of knowledge which may have become a little rusty.

Mental Diseases. By DANIEL CLARK, M.D. Second edition. William Briggs, 1899.

We take great pleasure in welcoming the second edition of Dr. Clark's well-known volume on "Mental Diseases." So short a time having elapsed since the appearance of the first edition no material changes have been called for in the text of the second, though two most timely chapters, if we mistake not, have been added, which treat of "Legal Points in Relation to Insanity and Crime and Responsibility."

The personality of the author is almost as familiar to the legal as to his own profession, and in the long list of celebrated trials, covering some years, he has figured prominently in the criminal courts, great weight having always been given to his evidence.

MAGAZINES RECEIVED.

"Mr. Dooley's" neighbor, "Molly Donalhue," makes her debut in the *Christmas Ladies' Home Journal*. She is ambitious to reign as social queen of Archey Road, and is quite as interesting and witty as "Mr. Dooley," the philosopher of her author's creation. Rev. Cyrus T. Brady draws on his experiences as missionary to write of "What Christmas Means in the Far West," giving pictures of rare pathos and of irresistible humor. The letters that passed between Gail Hamilton and Whittier are published for the first time. They give some delightful glimpses of the social side of "the Quaker Poet." Ian Maclaren writes on "Shall the Old Clergyman be Shot?" and Albert W. Smith (the American Lewis Carroll) contributes more of his wonderfully funny nonsense verses. Dan Beard interests the boys with a Christmas novelty, and an exquisite carol by George W. Cable is timely for Christmas rendering. There are two notable page pictorial features, "The Nativity," from the brush of W. L. Taylor, and "Coming home for Christmas," by A. B. Frost. The holidays are considered in all their phases, and the wants of the home and home-makers are anticipated. By The Curtis Publishing Company, Philadelphia. One dollar a year: ten cents a copy.

**REPORT OF DEATHS FROM ALL CAUSES AND FROM CONTAGIOUS DISEASES IN ONTARIO FOR
THE MONTHS OF AUGUST AND SEPTEMBER, 1899.**

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

AUGUST, 1899.

Total Population Reporting.	Total Municipalities Reporting.	Total Deaths Reported.	Rate per 1000 per annum from all causes.	Scarlatina.	Diphtheria.	Measles.	Rate per 1,000 per Annum.	Whooping Cough.	Rate per 1,000 per Annum.	Typhoid.	Rate per 1,000 per Annum.	Tuberculosis.	Rate per 1,000 per Annum.
2,225,326 98%	730 94%	2,088	11.4	8	25.	5	0.03	16	0.09	55	0.3	172	0.9

SEPTEMBER, 1899.

2,205,308 99.2%	738 95%	1,967	10.3	10	21	8	0.04	55	0.3	190	1.0
--------------------	------------	-------	------	----	----	----	----	---	------	----	-----	-----	-----

Population of Province 2,293,182
Registration Divisions of Province..... 777

Selected Articles.

**THE ETIOLOGY AND TREATMENT OF NEURASTHENIA. AN
ANALYSIS OF THREE HUNDRED AND
THIRTY-THREE CASES.**

BY JOSEPH COLLINS, M.D.,

Professor of Nervous and Mental Diseases in the New York Post-Graduate Medical School; Visiting
Physician to the City Hospital;

AND

CARLIN PHILLIPS, M.D.,

Assistant in the Clinic.

NEURASTHENIA, or nervous exhaustion, is the name given to a complex of symptoms constituted principally by head pains and pares thesia, insomnia, a peculiar mental state made up of depression, fear, anxiety, anticipation, and distrust; myasthenia, rhachialgia and paresthesia, disordered digestion and vasomotor disturbances, dependent upon disorder of the nervous organization, without recognizable change. In brief, neurasthenia is a neurosis without organic basis. Many theories have been propounded to explain the occurrence of the phenomena of the disease, but none of them is entirely satisfactory. The most universally accepted one seems to be that the manifestations of neurasthenia are expressions of persistent enfeeblement of neural energy. This enfeeblement is dependent upon nutritional change in the entire neuron, or in that part of it whose function is to convert the forces of reconstruction into neural energy and store it up. That an individual part of the neuron is thus concerned has not yet been satisfactorily proven, although it seems highly probable. To discuss this theory satisfactorily, it would be necessary to consider the origin of nerve force. Such a discussion would carry us into a recital of speculations and facts that are beyond our present purpose.

Etiology.—A satisfactory knowledge of the causation of neurasthenia can be obtained from careful study of the cases of this disease that come under observation. We have therefore taken all the cases that have been encountered in the private and dispensary practice of one of us in two years, and subjected them to careful study, with the view to determining the predisposing and exciting causes of neurasthenia. The statistics are based on three hundred and thirty-three cases. Although about four hundred cases were to hand, it seemed advisable to take this number, because of the

case with which the percentage might be contrasted with one thousand cases.

Number of cases, 333.

Sex: Males, 183 (55 per cent.); married, 96 (29 per cent.); single, 87 (26 per cent.). Females, 150 (45 per cent.); married, 102 (31 per cent.); single, 48 (14 per cent.).

Age: Oldest, 67; youngest, 6; average, 33.3; most frequent decade, third.

Frequency according to decades: 10-20 years, 6.6 per cent.; 20-30 years, 39.6 per cent.; 30-40 years, 27 per cent.; 40-50 years, 16.2 per cent.; 50-60 years, 8.4 per cent.; 60-70 years, 2.1 per cent.

Occupation: Housewives, 94 (28 per cent.); tailors, 37 (11 per cent.); clerks, 26 (8 per cent.); indoor occupation, 264 (79 per cent.).

Nationality: United States, 145 (43.5 per cent.); Russia, 69 (20.7 per cent.); Germany, 34 (10.2 per cent.); Ireland, 34 (10.2 per cent.); Austria, 15 (4.5 per cent.); England, 8 (2.4 per cent.); France, 2 (0.6 per cent.); variable, 25 per cent.

Attributed causes: Overwork, 27; masturbation, 26; worry, 18; fright, 10; childbirth, 12; sorrow, 11; traumatism, 8; previous disease, 7; alcohol, 4.

An examination of the above statistics shows that the disease is more frequent in men than in women, although the preponderance of males is not so great as that given by almost every other writer. It occurs more frequently in the married than in the single, married women being considerably in excess of married men. This may be taken to mean that the entailments of marriage—*anxiety concerning the material welfare of mate and offspring, incompatibility of partners, dread and depression attending sickness and death, the assumption of marital and maternal obligations, etc.*—are contributory to the occurrence of this neurosis.

Consideration of the ages of the patients shows that infancy and senility are practically exempt. The youngest patient was six years old; the oldest, sixty-seven. The average age was 33.3. The most noteworthy feature is the occurrence of the disease during the years of fullest maturity, from twenty to forty. The epochal periods of puberty and the menopause do not seem to be particularly associated, and this is especially true of the former, with the occurrence of neurasthenia. The statistical information on this point goes to strengthen the belief that we have had for some time.

That the occurrence of neurasthenia has a very important relationship to occupation is shown by the fact, that about 80 per cent. of the cases were in persons who worked indoors. This is a remarkable circumstance, considering the fact that the material of the clinic, from which the majority of these cases came, is not predominantly made up of those who work indoors.

Nearly one-half of all the patients gave their nationality as American. This number, of course, includes many who should be classified as German-, Irish-, and Russian-Americans. The frequency with which the disease occurs in Jews is attested by the

fact that, although the clientèle is not conspicuously foreign, more than 20 per cent. of the entire number of cases occurred in Russian, Polish, and Austrian Jews. Indeed, it is highly probable that upward of 40 per cent. of the entire number was of this race. The proportion of Germans and Irish is about equal. The Latin races are not well represented, but this is due to the fact that we see very few of these people in the clinic.

Heredity would seem to play an important rôle in the occurrence of neurasthenia, for upward of 50 per cent. of the cases gave the history of the occurrence of nervous disease or diathesis in the immediate ancestral or collateral family. No distinct frequent relationship between the occurrence of neurasthenia and what is known as the arthritic or rheumatic diathesis could be made out. Special reference is made to this point, because the modern French writers lay great stress upon the rôle played by the neuro-arthritic diathesis in the causation of neurasthenia.

Although the patients were all interrogated as to the attributed or exciting causes of their symptoms, specification of such causes could be got only in one hundred and twenty-three cases. The remainder averred that they were quite ignorant of the factors that could be held responsible for their sickness. Of these one hundred and twenty-three cases, overwork and masturbation are apparently responsible for the same number, while mental factors, particularly emotional, such as worry, fright, and sorrow, were posited as the cause in about one-third of all the cases; physical injury and acute disease were believed to be the exciting agencies in a number of cases. Perhaps the most remarkable feature of the statistics bearing on the matter of the exciting causes of neurasthenia is that alcohol and tobacco were not admitted or noted to be causative of the disease except in very few instances. This is in fullest accord with previous personal experience and belief based thereon. Some writers have claimed that excessive indulgence in alcohol, tobacco, tea, coffee, narcotics, and other intoxicants plays a leading rôle in the causation of neurasthenia. With full appreciation of the perniciousness of these substances upon the nervous organization, and recognition of their great potentiality for mischief to this and other systems of the body, we repeat that they manifest their peccant activity upon the economy in other ways than in the causation of neurasthenia.

The effect of overwork and of masturbation (under which are included for convenience sake other irregular forms of sexual indulgence) is generally recognized as being very important. Our statistics corroborate this view. In estimating the relationship of overwork to the occurrence of neurasthenia, it must not, however, be forgotten that in many cases it is not alone the physical and mental work which has to be reckoned with, but their mental, moral, and emotional entailments—which, indeed, are oftentimes more responsible for the occurrence of neurasthenia than the work itself.

Of the various causes that have been enumerated, some are all-important in one case, some in another. They are not by any means of equal neurasthenia-causing capacity, and no one can say beforehand whether one of the above-mentioned factors, or all of them, will cause neurasthenia in a given individual. It depends entirely upon the individual and upon his resistance capacity, which in every one is subject to unexplainable variations. Certain individuals are so vulnerable that the equilibrium of their nervous systems is quickly upset by the occurrence of any of these causes; while others have a nervous organization so stable and so susceptible to the aid of reconstructives, that they resist successfully one and all of them during an entire lifetime. Therefore, we say that the etiology of neurasthenia depends more upon the individual than upon anything else. Thus it is that heredity plays such an important rôle in the occurrence of neurasthenia. If one is born with a nervous system that is deficient in the capacity to produce neural energy or, what is the same thing, to maintain a proper equilibrium between production and expenditure of such energy, such a person is far more liable to develop neurasthenia as the apparent result of any of the exciting causes that we have mentioned, than is another person whose inheritance is a stable nervous organization.

It is not our purpose to speak of the symptoms of neurasthenia, except to say that the following summaries show the relative frequency in percentages of symptoms that are so constant in neurasthenia that they may be called *stigmata*.

1. Physical symptoms: Static depression, 22.2 per cent.; variable depression, 19.5 per cent.; lacking mental concentration, 13.8 per cent.; mental confusion, 10.8 per cent.; undefinable fear, 8.4 per cent.; irritable, 7.5 per cent.

2. Headache: A leading symptom in 55.8 per cent. (occipital, 10.8 per cent.; frontal, 8.1 per cent.; vertical, 7.8 per cent.; diffuse, 26.7 per cent.).

3. Sensory symptoms: General pains, 30.3 per cent.; vertigo, 14.1 per cent.; pains in the back, 12.3 per cent.; acroparesthesia, 12 per cent.; paresthesia, 11.1 per cent.; epigastric pains, 5.7 per cent.

4. Sleep: Insomnia, 70 per cent.; undisturbed, 30 per cent. The classification includes two forms; First, great lassitude and profound mental torpor after eating followed by restlessness and sleeplessness after one or two hours' sleep; and second, wakefulness and other phenomena of disturbed sleep without introductory somnolency.

5. Motor symptoms: Myasthenia, 37.2 per cent.; twitchings, 2.7 per cent.; tremor (as a complaint), 3.3 per cent.

6. Vascular symptoms: Palpitation, 22.8 per cent.; hot flashes, 9.6 per cent.; pseudo-angina, 1.5 per cent.; epistaxis, 0.9 per cent.; polyuria, 4 per cent.

7. Digestive symptoms: Stomachic indigestion, 18.3 per cent.; intestinal indigestion, 13.3 per cent.; poor appetite, 22.2 per cent.;

good appetite, 26.7 per cent.; variable appetite, 21 per cent.; appetite not noted, 30.1 per cent.; constipation, 27.3 per cent.; stools regular or loose, 28.8 per cent.; stools not noted, 30.1 per cent.; coated tongue (noted), 6.6 per cent.

8. Sexual symptoms: Nocturnal emissions, 19.1 per cent.; impotence, 3 per cent.; loss of "vital" fluid on urination and at stool, 5 per cent.; premature ejaculation, 1.2 per cent.; persistent masturbators, 1.5 per cent.; extreme prostration after coition, 10.2 per cent.

9. Initial symptoms: Headache, 27 per cent. (vertical, 3.6 per cent.; frontal, 3.2 per cent.; occipital, 6.6 per cent.; diffuse, 12.6 per cent.). General pains, 8.7 per cent.; myasthenia, 7.5 per cent.; epigastric distress, 7.5 per cent.; insomnia, 5.1 per cent.; melancholia, 3.3 per cent.; vertigo, 4.2 per cent.; palpitation, 1.8 per cent.; pains in the back, 1.8 per cent.; acroparesthesia, 1.5 per cent.; unclassified, 26.4 per cent.

10. Physical signs: Reflexes—knee jerk exaggerated, 22.2 per cent.; knee jerk diminished, 3.3 per cent.; knee jerk normal, 74.4 per cent.; absence of the pharyngeal, 8.7 per cent. Tremor—of fingers, 30 per cent.; of eyelids, 8.4 per cent.; of lips, 6 per cent.; of tongue, 1.8 per cent. Weight—loss of flesh in 30 per cent. of the cases.

Stigmata of degeneracy noted in 14.4 per cent.

The Treatment of Neurasthenia.—In discussing the etiology of neurasthenia, we reached the conclusion that the individual who developed the symptom complex was, after all, the most important element. In speaking of the treatment, we shall say that individualization is more necessary to insure success than in almost any other disease. Although there are certain agencies of reconstruction—such as diet, hydroiatrics, massage, rest and exercise, environmental and climatic change, etc.—that are beneficial in every case, their application, at least their most successful application, is scarcely ever the same in two cases; so that which is said concerning treatment must be taken to signify that it is susceptible to variation in its applicability to each case.

Prophylactic Treatment.—Considering that the occurrence of neurasthenia has been shown to stand in close and definite relationship to certain previously enumerated predisposing and exciting conditions, it is readily apparent that prophylactic treatment is an important consideration. We are not of those who believe that neurasthenia is a disease of the epoch, or that its occurrence is of modern times. Nevertheless, to a certain extent it is a sign of the times. There can be little doubt that, although the exciting factors of neurasthenia have existed in all times, the predisposing causes are predominantly of more recent date. Neurasthenia has increased in frequency as social, political, and economical conditions have made the struggle for existence more violent and the prospects of a quiet life more perilous. So long as such conditions exist, and so long as mankind assumes voluntarily or compulsorily

to cope with them, just so long will neurasthenia continue to occur, unless by process of evolution the human species becomes more capacious to resist these factors. As there seems to be little chance that evolutionary progress will hurl itself into the breach, it becomes necessary for the individual, that he may withstand the strife, to adopt measures that will contribute to the fortification of his neural resistance and equilibrium. Such fortification is the more necessary to him who is handicapped by heritage with an unstable nervous organization. The preventative treatment of neurasthenia should be begun simultaneously with the development of the individual. Parents who are cognizant of neuropathic positions should strive to maintain their health, so that they may bring forth sound progeny. The same attention should be given to pregnancy and to the early years of childhood that is bestowed on the hysterical and epileptic. The physical and moral education of the child should be conducted so as to result in the harmonious development of the individual's *psyche* and *soma*, and particularly the development of general equilibrium of the organism. From the beginning measures should be taken to increase the physiological resistance of the nervous system and to fortify the energizing capacity by bringing the systems of the body to the highest possible point of development; a high degree of physical health is incompatible with the development of the neurasthenic state. Outdoor life, in the country if possible, with its superabundance of air and sunlight, and opportunity for physical exercise, is naturally more conducive to the development of resistant physique than the life of a crowded city, with its enforced limitations in all these directions. Unfortunately, such environment is possible only for the few; but, nevertheless, much can be done in the way of securing some of the advantages of the country by the utilization of the parks and the aquatic and territorial environment of every large city. Children born of neuropathic parents should be given physical education first, and mental education afterward. It is unfeasible to reform the methods of education which have been found to be of greatest benefit to the greatest number, in order that the few whose inherited shortcomings are an unstable nervous organization may be benefited; but such individuals should not be required to conform to pedagogical formulary at the expense of the development of their bodies. Outdoor exercise should be supplemented by gymnasium practice, which will develop physical strength and endurance. Moreover, children of nervous parents should have greater care bestowed upon their personal hygiene and alimentation than those sprung from healthy parents. They should be accustomed early to habits of bathing, especially in cold water, so that they may receive the tonifying and sedative benefit of such application, which contributes so much to the prevention of fatigue and exhaustion. Luxuries of diet, stimulants and sedatives must be absolutely excluded.

The moral education of such children is quite as important as

the physical education; in many instances, indeed, it is more important. Unfortunately, it is almost universally neglected. It is difficult to state in a few paragraphs a formulary that shall encompass the proper bringing-up, from a moral point of view, of the children of nervous parents. It would seem almost unnecessary to attempt to do so, not only because this is beyond the province of the physician, but because parents have their own views on the matter. Nevertheless, the physician may do much by emphasizing how necessary it is to inculcate habits of obedience and self-repression, eradication of egotism and selfishness, restraint of temper and capriciousness, and the development of moral courage and of physical and mental self-confidence. Bad instincts should be thwarted by suggestion, by precept and by example. Inclination toward bad humor, sadness, pessimism, egotism and superciliousness should be combated early, and the youthful person taught that sentiments of insociability, if allowed to develop, are more potent to produce personal unhappiness than almost any other factor. He should be taught to accept adverse decisions without black looks or mean resentment; to take banter as well as to give it: to control a hasty temper, and to stamp out a sulky one; to bear failure and disappointment with a smiling face and a determined will. Too great care cannot be directed toward the harmonious development of such an individual's emotional life. Premature knowledge of sex, which, unfortunately, they often gather from literature, the theatre and the pulpit, is not infrequently the means of awakening morbid and introspective tendencies.

The period of puberty in the boy and in the girl should be jealously guarded. Children who are carefully apprised of the pitfalls of masturbation, with which the years from twelve to twenty are beset, will be most apt to go through this period without injurious experiences.

The prophylaxis of neurasthenia in the adult is in reality the avoidance of those causes which we have found from examination of our statistics to stand in relationship to the development of this neurosis. In the majority of cases the physician is not in position to advise persons who develop the disease how to arrange their lives and labors that they may avoid the occurrence of neurasthenia. He may, however, do much to prevent the recurrence of the attack. Once neurasthenia has occurred, and been recovered from, it is very liable to relapse. If it be kept in mind that it is not so much physical and mental work or overwork that produces neurasthenia as it is worry, anxiety, depression, and their entailments of sleeplessness and disordered digestion, the individual may be shown how to avoid a relapse, even without curtailment of the activities which are necessary for his existence.

Treatment of the Attack.—The treatment of neurasthenia after the disease is developed requires for its successful issue a deeper insight into the understanding of mankind than almost any other

bodily or mental disease. The physician who has the good fortune to inherit or acquire such capacity will be immeasurably more successful in aiding his patients to recovery than he who is devoid of it and at the same time master of physiology and materia medica. Nothing is more certain than that the patient's mind requires as much or more treatment than the body and its functions. The truth of this is apparent from many reasons, but from none more definitely than a knowledge of the important rôle played by the mind, the stress and abuses of it, in the development of neurasthenia, and the diverse manifestations of mental asthenia throughout the course of the disease. The introspectiveness, anxiety, undefinable fear, painful anticipation, keen realization of incapacity despite the pressing needs for action, the mental depression with its association of morbid thoughts, sleeplessness and perpetual unrest, are all undoubtedly benefited and sometimes overcome by the use of physical therapeutic agencies; but they are much more surely and frequently eradicated by the simultaneous utilization of the proper kind of psychical or moral therapy. Such psychical treatment does not consist alone in the confidence which the successful physician inspires in his patients, nor in the maintenance of authority, manifest by the patient's obedience to instructions and amenability to suggestion. Much less does it depend upon the utilization of means that appear to the patient to be supernatural, such as hypnotism. On the contrary, such mental treatment may be one of the most important therapeutic attributes of the physical means which experience has shown to be so serviceable in the treatment of neurasthenia. These measures are powerful agencies for suggestion, and as the neurasthenic is in a psychophysical state of increased suggestibility, they furnish fruitful soil for all kinds of suggestion. Next to the influence of the physician, the most important measures in the treatment of neurasthenia are the following:

- (1) The general hygiene of the neurasthenic;
- (2) dietetics and alimentation;
- (3) hydrotherapy and balneotherapy;
- (4) electricity;
- (5) rest, exercise and massage;
- (6) climatotherapy;
- (7) mode of treatment, disciplinary or moral hygiene.

General Hygiene.—The general hygiene of the neurasthenic patient entails a severance from associations and environment that are apparently causing or maintaining the neurasthenic condition, avoidance or removal of all factors that tend to emphasize or to remind the patient of his infirmities, and procurement of surroundings that will contribute to mental equanimity, general quieting of the mind, and restoration of nutrition. Without these, the treatment of neurasthenia, especially if the disease be of a severe type, is often foreordained to failure. The physician who strives for the fulfilment of these indications before attempting the methodical treatment of the patient will have immeasurably greater success than he who neglects them. In many instances, unfortunately, the patient's social and financial state offers an insurmountable

obstacle. In dispensary practice, where neurasthenia is seen more frequently than are all other kinds of nervous diseases, the problem that has to be continually contended with is to devise a plan of treatment that will replace such indications. That such a one has not been found accounts for the fact that the treatment of neurasthenia among the poor is still woefully unsatisfactory.

Isolation and Discipline.—The indications just mentioned require for their fulfilment relatively complete isolation, which usually cannot be obtained at home, unless it is possible to set apart a portion of the house for the the exclusive use of the patient and the attendant. Even when this is possible, there are many reasons why the patient is much more auspiciously lodged in a boarding-house, hotel, or house conducted for the reception of such patients. Such isolation acts beneficially in many ways; it severs the patient from the sympathizing family and solicitous friends, who are ever ready to indulge him in numberless selfish acts and deeds which are invariably detrimental, and to interrogate solicitously concerning the manifold real and imaginary ailments constituting the symptom complex. Moreover, it removes him from surroundings that not only remind him of his illness and incapacity, but that tend to make him more self-centred and selfish. It serves to interrupt injurious customs, to break up pernicious habits, and, more than all, to impress him that something is being done earnestly to bring about his recovery. Many patients, especially women and their friends, are firmly convinced when such a step is proposed that its application is tantamount to driving them mad. They argue that such a plan may be adapted to others, but, considering the peculiarities of their mental constitution, and certain essential requirements for the continuance of even a miserable existence, the step is unfeasible beyond debate in their own case. Oftentimes this is the first opportunity for the physician to display that insight into the human character which we have previously spoken of as being so essential in the treatment of this disease, and his capacity to inspire confidence and secure obedience. He knows from experience, and from the statements of others, that such relative isolation is rarely, if ever, injurious to even the most sensitively-organized person, and is almost invariably conducive to the quietude, peacefulness, rest, and bolstering of nutrition, which are essentials in bringing about restoration of health. Very rarely does the step increase the patient's introspectiveness and tend to exaggerate the consciousness of his symptoms, anxieties and fears. Naturally, it is not necessary that every neurasthenic be subjected to isolation. In many cases it will be sufficient to insist that the patient withdraw for certain times during the day to the quietness of the individual chamber; to give over certain occupations or duties calling for the expenditure of energy that cannot be spared; or to postpone the time for arising until mid-day. In the average severe case, however, no compromise in the matter of isolation should be made. It is an essential feature in the rest cure, which

we shall speak of later in the treatment of neurasthenia, but here we are considering it apart from any other component of treatment. Isolation may be carried to excess, both in point of completeness and in duration. There can be no doubt that prolonged isolation, if not contracted by other means, is of itself sufficient to cause neurasthenia. The lesson to be learned from this is that individualization is very necessary in the treatment of neurasthenia, even in advising concerning the general hygiene.

The Securement of Sleep.—The next most important measure in the general hygiene consists in securing a proper amount of sleep, and as insomnia is one of the most constant stigmata of neurasthenia, this is not infrequently a difficult thing to accomplish. In many cases the use of measures that contribute to the improvement of general nutrition and physical repose—such as hydiatics, electricity, massage, gymnastics, exercise, or enforced rest—help materially in overcoming the insomnia, especially if they are aided for a short time in the beginning by the administration of sulfonal, trional, chloralamide, or one of the other modern hypnotics. As a rule, the patient has already exhausted the sleep-producing capacities of such drugs before coming under treatment; but, despite this, when given under the auspices that we are describing, they rarely fail to have a degree at least of the desired effect. Oftentimes the physician is too insistent upon securing prompt effects from the administration of sleep-producing medicines, or from the utilization of measures that contribute to somnolency, such as massage, the cold pack and drip sheet. It should not be forgotten that absolute physical rest absolves the necessity of so much sleep as is necessary under ordinary circumstances. Moreover, physical measures that contribute to sleep may not succeed fully after the first few applications, while success crowns their repeated use. Of the hydiatic measures, the most important in securing sleep are the cold wet pack, the prolonged warm bath, the drip sheet, and the wet compress known as the Neptune girdle. The latter, which consists of a bandage of coarse linen which reaches around the entire lower part of the trunk, fastened in front so that the abdomen has a double covering, is wrung out of water of 60° to 65° F., and covered with a dry bandage. Applied on retiring, after the parts have been bathed with cold water, this simple means is often very serviceable in contributing to sleep. The prolonged warm bath, temperature 95° to 100° F., the patient being kept in from twenty to forty minutes, is likewise very serviceable in bringing about relaxation of mind and body preparatory to sleep. The drip sheet—which is applied by throwing a linen sheet, which has been loosely wrung out of water at 65° F., around the patient, who is standing in a foot tub of comfortably hot water, and with a Turkish towel wrung out of iced water about the head; then bringing the sheet in apposition with every part of the skin by a few quick rubbings of the attendant's hand; the sheet being then removed and the patient dried, and the

reaction supplemented by light massage or rubbing—is oftentimes very serviceable in overcoming insomnia. These hydiatic measures should be tried in succession. When one does not succeed, it is very likely that another will. Some neurasthenic patients have no difficulty in going to sleep early in the evening, but awoken after a profound, unrefreshing sleep of two or three hours, to remain awake for the rest of the night. In such cases, especially in women, prolonged and severe massage of the entire body, of about an hour's duration, sometimes succeeds in causing the patient to sleep. In others the hydiatic procedures above mentioned are successful. Occasionally the administration of from six to twelve ounces of warm milk, plain or peptonized, seems to have an effect in bringing about mental and physical composure, which tends to the occurrence of sleep. In cases of this kind one has to decide the advisability of preventing the patient from going to sleep immediately after the evening meal, so that the regular time for going to sleep will find the patient more ready.

Dietary of Neurasthenics.—The dietary of the neurasthenic patient will depend largely upon the state of his digestive functions and upon the type of neurasthenia. Certain neurasthenics, whose fears, thoughts, and anxieties are predominantly of their viscera, and in whom careful physical and chemical examination shows no considerable abnormality, either of the digestive system or its contents, are made more self-centred and hypochondriacal if any considerable stress is laid upon the diet or attempt made to modify or regulate it. Such patients should be advised to satisfy their appetites for food as if they were rugged individuals, and to partake especially of coarse, green vegetables, which will have an effect to produce large and ready evacuations. They should be urged likewise to drink freely of water. In other patients there will be found slight derangement of the digestive function—such as temporary excessive acidity or diminished acidity of the gastric juice, stomachic and intestinal fermentation, sluggish vermicular action, flatulency, etc.—which readily respond to the administration of the indicated symptom medicines, particularly if general treatment for the neurasthenic state be applied at the same time. Patients when first coming under observation frequently dwell upon the fact that they have been under the treatment of a number of physicians, usually specialists, for the relief of first one symptom and then another, and they produce a package of prescriptions to attest the amount and variety of medicines that they have taken to overcome what seems to them, and apparently also to those who have treated them, their ailments. The failure of such local treatment is easily understood. It is like attempting to repair a shattered fence without first renovating the foundation.

In some neurasthenic patients the general asthenia is manifested predominantly in the digestive tract, and we have to deal with a gastro-intestinal atony, whose prolonged existence leads to dilatation of the stomach and the intestines. The results of such condi-

tions are that the viscera are unable to pass the ingesta along with appropriate facility and thoroughness. This, in connection with the existence of deficient secretion of the digestive juices, which is indirectly dependent upon the atony, leads to fermentation and to the formation of substances which when absorbed into the system are injurious. Such fermentation and auto-intoxication cause symptoms which the patient believes to be of great seriousness, thus adding to the mental depression, and strengthening the conviction that this disease must be an unrecoverable one. The indications for local treatment in such a case are to be determined by the administration of a test meal, that it may be observed how long it takes for the stomach to pass the food into the intestines, and that the contents of the stomach may be removed for analysis to show the relative proportions of the constituents of the gastric juice. After this information has been obtained, and after the stools have been subjected to scrutiny to determine whether they contain undigested foodstuffs, or are of shape and size pointing to impaired activity in different parts of the large bowel, the physician is in position to decide what local or symptomatic treatment is required. An enumeration of the various substances that must be used to fulfil special indications in individual cases would not be profitable. The most important measure in overcoming the gastro-intestinal asthenia, which is primarily at the bottom of all the digestive disturbances, is the utilization of the physical measures which experience has shown to be so valuable in the treatment of neurasthenia. The patient should be assured, repeatedly and convincingly, that no organic disease or irremediable condition is present. Careful observation should be made to determine the foodstuff that disagrees with the patient, and this, with all substances that are very difficult of digestion, should be eliminated from the diet. As a rule, a mixed diet is best for the neurasthenic patient, but meat should not be given more than once a day, and then only the most digestible forms. Cereals, such as rice, sago, cracked wheat; green vegetables, such as spinach, string beans, and celery; peas, fresh beans, and potatoes, prepared in purée form, can usually be taken by almost every neurasthenic patient. As a rule, white vegetables are to be avoided. Bread is to be taken in moderation, and preferably in the shape of bread made from the whole grain, toast and zwieback. Not infrequently regulation of the amount of bread is of the greatest importance, as a considerable proportion of these patients have starch indigestion. There is a general impression, both among the laity and the profession, that fats have a special capacity to nourish the nerves. Aside from the fact that they are the most important carbon constituent of food, and therefore require greater oxidation for their combustion, there is no ground for such belief. Care must always be had in estimating the amount of fats that can be given to a neurasthenic individual, because they not only have a tendency to disorder the digestion, but by causing satiety they stand in the way of other and more important foodstuffs, such as

the vegetable proteids. Sufficient fats can usually be given in the shape of milk, butter and cream. Patients who believe they have an idiosyncrasy for one or two of these substances may be able to take the other. The most eligible way of administering cream is by giving cream toast, which is prepared by taking a piece of thoroughly toasted bread, sprinkling it with a few drops of water and a pinch of salt, and then pouring over it a thick layer of cream, fresh from the icebox. Neurasthenic patients can usually take this once or twice a day without interference with their appetite or digestion. When the patient can tolerate it, milk, or some preparation of it, should be given to supplement regular meals. Personally we have found the most advantageous time to administer milk to be one-half hour before eating, or two hours after a meal. When it is given a half-hour before a meal, and the patient is instructed to keep absolutely quiet until meal-time, it very often seems to have no effect whatsoever in depressing the appetite. Many writers on neurasthenia contend that three times a day is sufficiently often to feed neurasthenic patients, but such is not our experience. Many of these patients have their only minutes of well-being for a short time following each meal, while, on the other hand, they are usually much depressed by going without food for several hours.

The Interdiction of Stimulants.—The physician's course in determining whether or not alcoholic drinks, tea, coffee, tobacco, etc., shall be taken, is shaped very largely by the patient's habit and reaction to these substances. If the development of the neurasthenia stands in any relationship whatsoever to such indulgence, they should be absolutely excluded. If, on the other hand, the patient has been accustomed all his life to taking a small quantity of light wine or beer at meal-times, and if it is apparent that such indulgence contributes to help the appetite and digestion, the indications are favorable to the continuation of such habits. Nevertheless, it may be stated, as a general rule, that all of these substances tend to derange digestion rather than to contribute to its restoration, and they should therefore be avoided. Malt liquors especially seem to possess the capacity to ferment. I have not been able to convince myself of the reputed reconstructive and nutritive qualities of any of the malt extracts. They may assist sometimes in creating an appetite, but they can be satisfactorily replaced, and without any of their disadvantages,—by the use of simple bitters.

The dietary indications that have thus far been spoken of are applicable to the neurasthenic individual who is not afflicted with other disturbances of the gastro-intestinal tract than those enumerated. Unfortunately, from five to ten per cent. of all neurasthenic patients present some graver form of gastro-intestinal atony and its accompaniments, which require very particular treatment, as the disorder of general nutrition which they condition is obstinately opposed to recapture of the neutral equilibrium. The most uncommon of these graver forms of digestive trouble is that

known as hypochlorhydria, associated with slight or considerable dilatation of the stomach. When this condition occurs in elderly persons, associated with the neurasthenic state, it is one of the most difficult to overcome. It should be treated by regulation of the diet, by cutting down the animal proteids and increasing the vegetable proteids and easily digested starches, by the administration of milk in connection with some alkali, such as bicarbonate of sodium in from twenty to sixty grain doses, preferably at bed-time, and by the administration of alkaline drinks, such as natural Vichy. Intestinal fermentation should be counteracted by the occasional administration of small doses of calomel, followed by one or more doses of Carlsbad salts, and by the interrupted administration of ichthyol, one of the bismuth preparations, resorcin, etc. A useful formula is the following:

℞ Menthol. salicylat.,
 Pulv. rhei.....āā ℥iiss.
 Ichthyol..... ℥i.
 M. ft. caps. No. xxiv. S. One capsule t. i. d.

The most important elements in the treatment are regulation of the diet and the administration of a suitable amount of alkali. If the condition be one of hypochlorhydria, such alkaline administration would be decidedly injurious. In addition to the general treatment to overcome the myasthenia, the galvanic current may be applied to the stomach through the abdominal parietes, or preferably by the intragastric method of faradization or galvanization. In our experience the latter method has shown itself of greater service than the former. Very little benefit is to be obtained from the use of some constituents of the digestive fluid, artificially prepared, such as pepsin and pancreatin. If they are used at all, it should be for only a few doses. Many neurasthenic patients come to the physician with the history that they have been in the habit of washing out the stomach regularly for many months. On general principles it may be said that benefit will follow immediate cessation of such custom. Moreover, it may likewise be said that the only condition that justifies repeated lavage of the stomach is one of chronic gastric catarrh, with an accompaniment of considerable secretion of mucus. Even in such a case its use should be alternated with intragastric electrization, and frequently intermitted and replaced by the administration of copious draughts of warm or hot water.

Constipation is an accompaniment of the disease in the majority of instances. In about 5 per cent. of all cases there is a history of symptoms that leads to the diagnosis of mucous enteritis, the prominent accompaniments being irregular diarrhea, with variable amount of mucous discharge. To overcome the constipation is usually not a difficult task, if the physician keeps in mind that the two prominent elements entering into its causation are sluggishness of vermicular action—a manifestation of the myasthenia—and a

deficiency in the watery constituents of the stools. To overcome these it may be necessary to employ, in addition to the general treatment for neurasthenia, abdominal massage, such drugs as strychnine and belladonna that are known to have special action to cause contraction of unstriped muscular fibre, and laxatives, on the one hand; while the second factor in causing constipation is thwarted by having the patient take freely of water, and of substances that lend bulk to the stools. If this is not sufficient, our own experience has taught us to rely upon enemas of olive oil or cotton-seed oil, administered to the patient in the knee-chest position, through a tube which is carried beyond the junction of the rectum and colon. From six to eight ounces of oil are introduced very slowly, and after the patient has become somewhat accustomed to the procedure there is no difficulty in retaining it. It should be repeated about every fifth day. The phenomena of mucous enteritis are best combated by the use of the Neptune girdle externally, and by copious flushings of the large intestines with plain water, or with water to which some alkali or antiseptic, such as boric acid, has been added. These cases require careful selection of the diet and regulation of the amount that can be profitably administered. In some cases in which the taking of food is immediately followed by a desire to go to stool, with the voidance of a small amount of feces and a large amount of mucus, the occasional administration of one of the bromides is beneficial.

Neurasthenia occurring with excessive formation of uric acid, or relatively defective elimination of this substance, requires special dietary treatment. A narration of the details of such treatment will not be made here, as it differs in nowise from the most approved dietary treatment of any of the manifestations of the uric-acid diathesis. The most important thing to be borne in mind is that a too rigorous insistence on an anti-uric-acid diet may prevent the recuperation of nutrition upon which recovery from neurasthenia is dependent.

(To be concluded next month.)

TIME LIMIT.

OCCASIONALLY a letter is received in which the writer gravely says he is taking so many journals he cannot read the half of them, etc., the polite phrases being framed as an excuse for discontinuing his subscription, which is all right and in perfect accord with the privilege of every man who knows and attends to his own business, with which there is no occasion whatever for argument. It serves, however, as an introduction to the claim made that he has not time to read half the journals he is taking.

The time was, and is not so very far back, when the ordinary general practitioner of medicine thought he was doing entire justice

to himself, his profession and his clients if he took a single medical journal. Conditions and times have greatly changed within the last twenty years. A medical education costs more than twice as much time and money as it did then, and the literature of medicine has quadrupled within the period. Friction and competition have increased in a similar ratio, so that the men who are ambitious to be at the front find themselves obliged to purchase new and improved instruments of precision, new books, and to take more than one or two medical journals. The man who has little business is always the one most crowded for time, and the little business he has is his boss.

The men who do the most work and accomplish great results always have time at their command and always boss their business. They are rarely crowded, and seldom in a hurry. Visitors are received and made to feel a welcome that is not an intrusion, that time is easy, no fret or fidget; work is either going on or there is a timely rest. Such men take, and read, from ten to twenty or more journals. They don't pretend to read every article, but they carefully read those in which they are interested, and scan more or less closely the advertising pages. In the latter many useful hints are found; here they find reference to the tools of latest pattern and design, hence do not pretend to pass them by.

The known men in the profession are the very ones who can be most easily and successfully approached for any given purpose, whether it be to write an article or to deliver a lecture, go on a journey or engage in a new enterprise. Their engagements are rarely pressing, and are always so dovetailed in time as to leave ample margins, and at the same time always fit in the right places.

The man who hasn't time to read half of the two journals he is taking is either fussing about a call he has to make or fretting because another doctor was called where he expected to officiate as chief factotum. In either instance his hours are so jagged that he has little or no time to read, and that which he does read is not remembered.

Two things are never realized by the man who hasn't time: one is that there are even and exactly sixty minutes in every hour, and the other is like it, in which he fails to understand in its true bearings that there are neither more nor less than one hundred cents in every dollar.

The busiest men in the medical profession always attend the national, state and local medical societies. They are the ones who read papers, take part in the discussions, and then attend all the social functions. Not once are they disconcerted by pressing business engagements, a reason for which is found in the fact that just at that time affairs are so arranged that pressure does not come.

The men who can't get off to attend such meetings are worried and perplexed for, fear some rival will profit by their absence, instead of swapping time and business with such rivals, through

which both would prosper and be better thought of. The world is wide and there are other pebbles on the beach.

In joint stock corporations there are not infrequently two classes of stockholders—those who hold preferred and those who hold common stock in the concern. The first class receive a stipulated dividend, not usually a large one, but it is assured out of the first earnings of the company. The common stock dividends are more precarious, and may be either smaller or larger than those paid to the preferred class. As a rule preferred stock is preferred by investors—preferred because it is preferred and has less liability of loss.

Most current periodicals have two classes of subscribers—preferred and common. The preferred are preferred because they pay approximately in advance, are constituted of the men who have time to read and press their business, and do not allow their business to boss them. They go to association and society meetings, know there are sixty minutes in every hour and one hundred cents in every dollar. They know who and what is going on in the world, and are themselves right in the van. In the language of the Alabama congressman they know where they are at. They know the publication they want, know the price of it, and the advantage of prompt payment, not only to themselves, but to the publisher, and get the lowest spot-cash rate.

The non-preferred, or common subscriber, who is bossed by his business, and hasn't time to read either books or journals, says to himself he will pay, if convenient, when a certain patron pays his bills, or when his ship comes from over the deep, blue sea, and acts accordingly, so that dun follows dun. To meet time engagements and risk of absolute losses, where the patron has not paid nor the ship escaped foundering on unseen shoals, the subscription price is advanced, so that the delinquent has to pay interest for a withheld small sum.

The writer knows very well that there are unforeseen circumstances which make men do as they can and not as they desire, which obliges them to curtail on the necessaries of life as well as on luxuries which they crave, and with whom no fault can be found. They remind the writer of a recent conversation with a successful man in another profession, in which he said he believed men, most men, had a call—providential call—to some pursuit; by which he meant that Nature, more or less according to the loudness of the call, fitted them, and in which they generally achieved some success in life. Often a call was heard and accepted, whereas it was intended for another. There are men who enter the ministry erroneously, but perhaps honestly, believing they are providentially called, when they heard only an echo that should have gone to another. He believed there were calls to enter the medical and other professions. In this opinion he was right. Every physician knows perfectly well that there are those in his profession who are not only unfitted by nature for their occupation, but are

actually unhappy in it, and may generally be classed as failures. Fortunately, there is an elasticity in the well-rounded, well-balanced man, which enables him to surmount obstacles and to adapt himself to spheres of influence, even in a life-work where and when he would have wrought much more easily and been of a more pronounced success in another calling than the one which circumstances threw him into.—*Lancet-Clinic*.

ARGONIN, HOECHST PATENTED.*

AN IDEAL THERAPEUTIC AGENT FOR THE TREATMENT OF GONORRHEA.

AN ideal therapeutic agent for the treatment of gonorrhoea should possess the following characteristics: it should not only destroy the gonococci, but at the same time it should alleviate the irritation of the mucous membranes, without giving rise itself to the slightest symptoms of irritation. None of the substances hitherto employed in the treatment of this disease fulfils the whole of the above requirements.

The introduction of argonin marks a decided advance; the remedy destroys gonococci very rapidly without producing any irritation. Argonin should be carefully dissolved by warming it with water. Fifteen grams of argonin contain an amount of silver equivalent to that in one gram of silver nitrate. Meyer has already reported on the anti-bacterial properties of argonin, in the *Zeitschrift für Hygiene*, 1895; its clinical application was introduced by Jadassohn (*Archiv für Dermatologie und Syphilis*, 1895). We have employed the substance in the concentration of 3:200, and injected 10 c.cm. of this solution five times daily.† The injected fluid was retained five minutes in the urethra. By this method we treated twelve cases of gonorrhoea as early as possible in the course of infection. Of twelve cases observed, in nine the gonococci permanently disappeared in from two to six days; one case afforded special interest in that gonococci were readily detected after four weeks' treatment with *injectio composita*, but permanently disappeared after two days' treatment with argonin. In one of the other cases gonococci were still found after ten days' application of argonin; in another the gonococci reappeared as soon as the argonin treatment was interrupted; a third case was removed from our observation after fourteen days. Not a single complaint of irritation was heard from any of the patients. The secretion persisting after discontinuance of argonin treatment was quickly overcome by the use of zinc sulpho-carbol, etc.

* Physicians desiring further literature on argonin may secure it from Leysieffer, Pollack & Co., Montreal.

† Of late Jadassohn has employed 2½-3 per cent. solution of argonin.

We are inclined to agree thoroughly with Jadassohn that argonin possesses pre-eminent gonococci-destroying qualities, and does not occasion irritation. It is therefore specially adapted for the early treatment of gonorrhœa.—Dr. A. Lewin, in the *Berlin klinische Wochenschrift*.

STYPTICIN IN HEMORRHAGE.

DR. GOTTSCHALK, of Frankfort, reports (*Brit. Med. Jour.*, No. 1828, p. 7) the results from the use of stypticin in forty-seven cases of hemorrhage. It may be given hypodermically (in urgent cases), or per os in solution or gelatin pearls. Dr. Gottschalk finds that 0.05 gm. ($\frac{3}{4}$ grn.) may be taken five or six times a day without any untoward effect. It has a great advantage over hydrastinine and other uterine hemostatics, in that, as might have been expected from its source, it possesses a well-marked and potent sedative action that is both local and general, and hence specially indicates its use in dysmenorrhœic affections. Stypticin promptly checks hemorrhage resulting from pure uterine subinvolution—that is, that due to muscular atony and not to retention of membranes, etc. In fungous endometritis it is a valuable adjuvant to the curette; and it is very useful when the patient objects to curetting, and particularly in those cases in which this treatment does not stop the hemorrhage. It is also useful in bleeding caused by fibroids or the climacteric. In purely congestive menorrhagia it is well combined with hydrastinine. In menorrhagia the drug is best given four or five days before the period, 0.025 to 0.05 gm. ($\frac{3}{4}$ to $\frac{3}{4}$ grn.) four or five times a day, and continued until bleeding ceases; this not only diminishes the hemorrhage, but also renders the use of much smaller doses sufficient.

In violent hemorrhage stypticin should be given hypodermically, according to the following formula:

Stypticin	1 gm. (15 grn.)
Distilled water	10 gm. (150 min.)
Inject daily 2 c.c. (30 min.) into the gluteal region.	

Stypticin is powerless to control the bleeding of uterine polypi, and is contra-indicated in threatened abortion, or, indeed, in any of the hemorrhages of pregnancy, as it has a marked power of stimulating uterine contractions. This may be induced by it directly, or it may result indirectly from the anemia produced by its vaso-constrictor action.

In all of Dr. Gottschalk's experiments no other treatment than that of stypticin was adopted.

Stypticin (chemically, Cotarnine Hydrochlorate) is obtained from the opium alkaloid narcotine by the action of oxidizers. Its formula is $C_{12}H_{13}NO_3 \cdot H_2O \cdot HCl$, and it occurs as yellow crystals or powder, readily soluble in water and in diluted alcohol.