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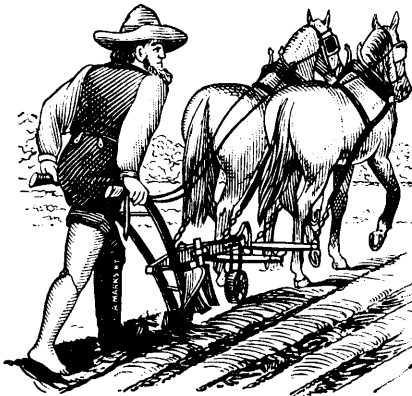
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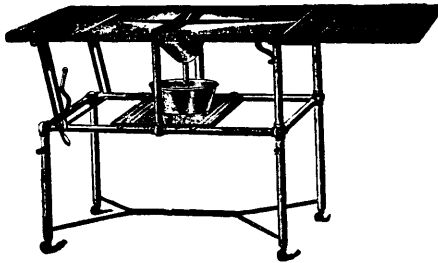
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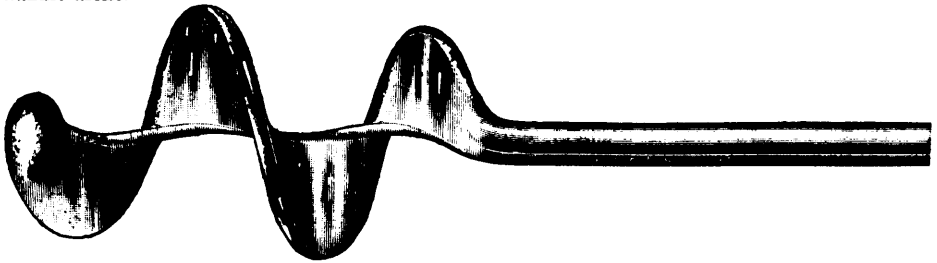
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|----------------------------------|---------|-------------------------------|--------|
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| Membership 31st Dec., 1881 ..... | 1,019   | Increase, 6 months .....      | 4,785  |
| Membership 31st Dec., 1886 ..... | 5,804   | Increase, 5 years .....       | 26,499 |
| Membership 31st Dec., 1891 ..... | 32,303  | Increase, 5 years .....       | 70,535 |
| Membership 31st Dec., 1896 ..... | 102,838 | Increase, 5 years .....       | 70,535 |

**THE INCREASES DURING 1896.**

|                                      |               |
|--------------------------------------|---------------|
| Increase in Benefits Paid .....      | \$ 195,941 73 |
| Increase in Assessment Income .....  | 228,932 00    |
| Increase in Total Income .....       | 347,901 19    |
| Increase in Net Assets .....         | 438,114 34    |
| Increase in Surplus Funds .....      | 455,110 92    |
| Increase in Assurance in Force ..... | 20,763,500 00 |

**THE MEMBERS AND THEIR ASSURANCE**  
At 31st December Each Year.

| Year. | Total Membership. | Assurance Carried. | Total Surplus. | Surplus per Capita. | Death Rate per 1000 |
|-------|-------------------|--------------------|----------------|---------------------|---------------------|
| 1881  | 1,019             | \$ 1,140,000       | \$ 4,568 55    | \$ 4 48             | 4.50                |
| 1882  | 1,134             | 1,276,000          | 2,967 93       | 2 61                | 11.00               |
| 1883  | 2,210             | 2,490,000          | 10,857 65      | 4 91                | 4.73                |
| 1884  | 2,558             | 2,923,000          | 23,081 85      | 9 02                | 4.23                |
| 1885  | 3,642             | 4,283,000          | 29,802 22      | 8 18                | 7.76                |
| 1886  | 5,804             | 6,764,000          | 53,981 48      | 9 30                | 4.85                |
| 1887  | 7,811             | 9,120,000          | 81,384 41      | 10 41               | 5.78                |
| 1888  | 11,800            | 13,714,000         | 117,821 96     | 9 98                | 6.43                |
| 1889  | 17,349            | 20,078,000         | 188,130 36     | 10 84               | 5.85                |
| 1890  | 24,604            | 28,498,000         | 283,067 20     | 11 54               | 5.18                |
| 1891  | 32,303            | 39,395,000         | 408,798 20     | 12 65               | 6.40                |
| 1892  | 43,024            | 53,243,000         | 580,597 85     | 13 49               | 6.25                |
| 1893  | 54,484            | 67,781,000         | 838,857 89     | 15 76               | 5.47                |
| 1894  | 70,055            | 86,506,500         | 1,187,225 11   | 16 94               | 5.47                |
| 1895  | 86,521            | 108,027,500        | 1,560,373 46   | 18 03               | 5.67                |
| 1896  | 102,838           | 128,791,000        | 2,015,484 38   | 19 60               | 5.50                |

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Amylamine, C<sub>5</sub>. H<sub>13</sub>. N.

Aselline, C<sub>25</sub>. H<sub>32</sub>. N<sub>2</sub>.

Hexylamine, C<sub>6</sub>. H<sub>15</sub>. N.

Morrhaine, C<sub>19</sub>. H<sub>27</sub>. N<sub>3</sub>.

Are the alkaloids derived from Cod Liver Oil, and which, separated from the oil, act directly and powerfully upon the nerve centres which preside of nutrition and provoke a denutrition and a rapid assimilation correlative to the waste. They are excitants of general nutrition, and favor organic resistance.

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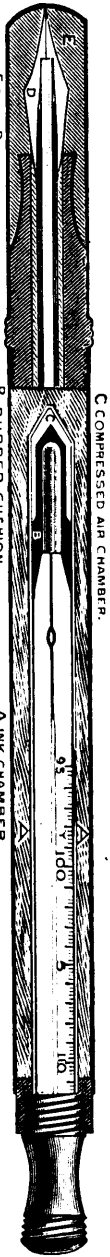
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Another of our novelties is our Pocket (hemorrhoidal) Syringe, which to all appearances is a fountain pen. The syringe is the same size, length and shape as a pen, and at one end has in it a cavity in which can be carried round a dozen or more tablets, each one of which on being dropped into two drachms of water makes a solution all ready for use. This instrument is one which will command a very ready sale and we ask the medical profession to look into its merits, and order it for their patients. The price to the profession is ..... **50 Cents.**

The tablets can be procured according to any private formula from any manufacturing druggist. We will be glad to send either of these articles direct to any physician on receipt of order.

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Does not purge, per se, but under its use the Liver and Bowels gradually resume their normal functions.

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In consequence of the membranous coating they are free from the objections to all Gelatine Capsules. They do not dissolve until they have passed the stomach, entered the bowel, hence, avoiding all nausea, eructations, and repeating from the stomach. Savarresse's Capsules have been Prescribed by the Faculty in England for 50 Years.

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 I have prescribed your Savarresse's Capsules of Copaiba, also of Sandal Wood, and find them most satisfactory.

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Savarresse's Capsules are undoubtedly the best forms in which the oil can be prescribed. The Capsules do not burst until they have passed out of the stomach, and consequently the nauseous eructations, common to all other methods of administration, are entirely avoided.

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**Directions for Use.**

Antidiphtheric Serum is the blood Serum of horses which have been immunized against diphtheria. *It retains its curative properties for more than one year if the vial be kept in a cool, dark place without being withdrawn from its case. This Serum contains no antiseptic and can, if necessary, be injected in large quantities without inconvenience, it is therefore quite unnecessary to concentrate it, so as to obviate injecting large quantities.*

**Preventive action.**—Administered by dose of 5 to 10 c. c. the Serum furnishes temporary immunity against diphtheria, such immunity lasting from 4 to 6 weeks. Preventative injections can, therefore, be given to persons exposed to contagion. The preventive power of the Serum supplied by the Pasteur Institute of Paris is at least 50,000 units; that is to say, that if a guinea pig be given an injection of this Serum equal to 1-50,000th of its weight, it will support, without reaction, an amount of virus or toxine capable of killing a control guinea pig in less than 30 hours. Antidiphtheric Serum, therefore, corresponds approximately to that of a *Serum of 150 Ehrlich's immunizing units per cubic centimeter*, and consequently the vial of 10 c. c. contains 1,500 units; and the vial of 20 c. c. 3,000 units.

**Therapeutic action.**—This Serum, when injected in sufficient quantity, cures diphtheria provided always that the disease has not progressed too far. The required dose varies according to the severity of the disease and the stage which it has reached. Ten c. c. are sufficient if administered early in mild cases; but if the case is severe or has already run for several days, 15 to 20 c. c. will be required. Exceptionally there may be required as much as 30 c. c., and even more in very severe cases, notably in those where the disease has extended to the larynx and bronchial glands. To renew the injection, the physician must be guided by the course of the temperature and pulse, as well as the general condition of patient. So long as the rectal temperature remains above 100, the case cannot be considered convalescent. Usually the false membranes become detached within 24 to 36 hours after the injection of the Serum if the dose has been sufficient.

When a child exhibits dyspnoea, tracheotomy may often be avoided by injecting at once 15 to 25 c. c., followed after 12 hours by a further injection of from 10 to 20 c. c., if the improvement is not sufficiently marked. It is preferable to inject at the outset a fairly considerable dose of Serum capable of stopping the disease rather than to give small doses at intervals.

The bacteriological diagnosis of diphtheria ought always to be made, since it is the only means of knowing with certainty if it is justifiable to treat the case with Serum and to determine what disinfecting measures to prescribe. But the earlier the Serum treatment is employed the more efficacious it is, and the injection should not be delayed under the pretext of waiting the result of the bacteriological examination, especially if the case appears serious and the temperature is noticeably high. It is known, in fact, that Serum injected at an early stage prevents septic diphtheria, but that it is powerless when the disease has already assumed a septic character, as shown by paralysis and irregularities of respiration and pulse. If, notwithstanding the injection of Serum, these symptoms appear, it is because intervention was too late or that the dose administered was too small.

**Occasional Unpleasant Symptoms.**—Following injections of antidiphtheria Serum an urticaria eruption is frequently observed, which generally appears in the week following the commencement of the treatment. This eruption may be accompanied by a slight use of temperature; it disappears without causing any noticeable discomfort. More rarely, indefinite eruptions (polymorphous erythemas), with febrile movement, occur. Exceptionally, especially when the false membranes contain streptococci as well as diphtheria bacilli, painful articular swellings accompany the eruption, and in this case the fever may be prolonged for several days. Adults are perhaps more subject than children to such feverish erythemathous manifestations. They are all transitory and have never proved serious.

*The antidiphtheric Serum is supplied in capsuled bottles of 10 and 20 c. c. bearing the label of the Pasteur Institut and the original mark.*

|                              |   |   |        |
|------------------------------|---|---|--------|
| Retail Price, 10 c. c. Vial, | - | - | \$0.85 |
| “ “ 20 c. c. “               | - | - | 1.50   |

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## The Northwestern Trust and Development Co.'s Business Undertaking.

**R**EALIZING the situation in the Klondyke and the unprecedented trade opportunity for money making there presented, the Northwestern Trust and Development Company has decided to **at once** equip an expedition for the relief of the isolated miners and in the straight **business interests of its own shareholders.** The supplies selected by the Company for the Klondyke trade consist only of such food products and other articles as will find an immediate market and can be disposed of at **most highly remunerative rates.** It is well to emphasize the fact that the undertaking will be conducted throughout on a strictly business basis.

### PROFITS.

After thorough investigation of every phase of the undertaking, as prepared by the practical experts in the employ of the Company—detailed explanatory statements of which are open to the inspection of shareholders—the Directors are satisfied that over \$300,000 of net profit can be promised on an investment of \$50,000 during the ensuing season alone.

Of this sum **\$126,624** will be derived from the sale of Merchandise.

**\$90,000** from the Transport of Passengers.

**\$62,130** from the Expressing of Valuables.

**\$156,30** from the Expressing of Gold Dust, under proper protection and guarantee, from the interior to the coast.

It must be remembered that these figures represent only the earnings upon the investment after deducting the cost of Field Equipment, Management and Maintenance.

Thus it will be seen, that based upon the most conservative estimate, the **net profit on one season's work**, exclusive of the revenue arising from the operating of the Telegraph line, will amount to over **\$300,000.** Cutting this figure in two, the enterprise would still yield over **300 per cent.** upon the capital invested.

The expedition will be accompanied by Dr. Geo. A. Baynes, a graduate of McGill University, of Montreal, President of the Company, a physician and traveler of wide business experience in both temperate and frigid climates. He will establish the business upon a permanent basis and supervise the Company's interests.

### THE TRANSPORT SERVICE.

Recognizing the fact that the only practical and available method of transportation to the Yukon in the winter months is overland from the coast by dog-train, with pack horses and horse-leds as auxiliary, the Northwestern Trust and Development Company has arranged for the despatching of an "outfit" so constituted, from some point on the Lynn Canal, **immediately.**

This "outfit" will consist of several large "brigades" of dog-trains, with the necessary complement of pack-horses, manned by Indian and half-breed drivers and packers, secured in the Canadian Northwest and protected by special contract. The entire transport service will be under the direct management of Mr. Walter R. Nursey, the well-known traveller, and for seventeen years an explorer in the far Northwest. (See *Chicago Sunday Tribune*, January 2, 1898, page 34.)

From Mr. Nursey's practical knowledge of the various methods of sub-Arctic winter transportation, gained through his carrying of the mails and the freighting of Indian supplies into the remote interior, together with his executive capabilities, his identification with the undertaking is a guarantee of its success.

### THE YUKON EXPRESS COMPANY.

The Trust Company will operate its Express business through the Yukon Express Company under Letters Patent from the Dominion Government, and having underwritten the stock of the Express Company, will retain a one-half interest in the same for the benefit of its stockholders.

**As the Company will operate under the laws of the Canadian Government,** ample police protection is assured, and it will thus be ready to enter into contracts for the carrying of the mails and Government supplies.

### THE YUKON TELEGRAPH CABLE COMPANY.

In like manner the Trust Company will also operate its telegraph business under Letters Patent from the Canadian Government, and will construct a Telegraph Line between the Lynn Canal and various points in the Canadian Northwest Territory.

In this connection it will interest shareholders to know that the Associated Press, through its chief executive officers in Chicago, has already promised in advance to enter into a contract for a daily service, which in itself alone will yield a most handsome revenue.

### SHARES.

**Application for shares may be made to the President and Directors at the offices of Company, 713, 714 Equitable Building, Chicago, Ill.**

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DOCTOR: We have a few plain, frank words to say to you, and we hope you will take the time to read them, sincerely believing it will pay you to do so.

No journal has ever found its way to the favor of the American medical profession as has THE ALKALOIDAL CLINIC; and the reason is that it gives what the profession wants, reliable, practical, up-to-date help in clinical therapy—help of the every-day kind that can be used. It is a monthly message of helpfulness from doctors to doctors.

We are now reaching over 20,000 wideawake, appreciative practitioners every month, and as we enter upon the work of our fifth year we respectfully solicit your subscription, and promise you the earnest co-operation, not only of those whose faces we show, but of many more faithful workers, in making the CLINIC for '98 a valiant, faithful helper to all who come into our circle. We want, and believe we deserve the support of every doctor whose eye this meets.

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## To the Members of the Medical Profession

**I**F the members of the medical profession do not, and cannot find time, to investigate and study the artificial conditions of sustenance which exists as they are in duty bound (which conditions are sapping the very vitals of the children and working classes who partake too freely of the broken reed that is permitted to supplant the staff of life, that laid the foundation to and is capable of supplying the back-bone, sinew, muscle and brains of the human race) it is because they are victims to the pernicious custom of eating bread and other articles of food composed of white flour, which is doing its cursed work to the rising generation, through its being deprived of the lime necessary to the natural growth of the bones, the silica necessary to the formation and preservation of the teeth, the nitrogenous properties to develop the muscular system, the iron for the nerves, and the phosphates which are absolutely essential to their brains, without which a natural susceptibility of brain, so necessary to the faculties of correct observation and reflection, is impossible.

They cannot, therefore, look at nature face to face and take due cognisance of what is right and what is wrong, but are like the divinity doctors of old, of which Christ says, "Eyes have they and see not, ears have they and hear not, neither can they understand." If the generality of medical men are living so far below that "sturdy manhood" that they do not see it to their interest to do their patients the justice of prescribing preventive remedies, that would bring about permanent benefit and so restore the community to a healthy, vigorous condition, it is because they are not doing justice to themselves, and if they are not true to themselves, how can they be true to their patients? who place their lives in their hands, to whom the public look for guidance.

The immortal poet, Shakespeare, says:

"To thine own self b: true,  
And it must follow, as the night the day,  
Thou canst not then be false to any man."

Why should not the primary causes of sickness and disease be grappled with in earnest, and the people's bodies sustained by nominally constituted food, as mine as been, so that they can resist sickness and disease, as I have done for over forty years, and am now stronger, more vigorous, both in body and brain, than at any period of my life, with a strong, healthy, handsome son, who is pronounced by society ladies as being a prince of children, who was not born till after I was sixty.

NOTE.—If the great sculptor, Michael Angelo, could not produce the perfect form and expression of face, of his statuary, without the observation of trifles, which he said constituted perfection, which is no trifle, how can man expect to attain to the perfect development of his body, or woman the contour and beauty of expression, without observing the trifles that form the constituents, on which the perfection of life depends?

Prof. HARTZ, President of the Chicago University, in his address before the successful students on receiving their degrees, said: "Though medical science had made rapid strides in alleviating human suffering, he trusted the day would come, and was not far distant, when human suffering could be prevented."

—THAT TIME HAS NOW ARRIVED.

**PROF. HART'S HEALTH FOOD COMPANY, TORONTO.**

**Sold in 7, 14, 28 lb. Sacks.**

**MICHIE & CO.**

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466 and 468 Spadina Ave.)

**And through all respectable grocers**

# TESTIMONIALS

GOVERNMENT HOUSE, Nov. 19th, 1897.  
 MY DEAR SIR,—I am desired by their Excellencies to convey to you their thanks for the Health Food Bread Cakes and Biscuits which you have kindly caused to be sent.  
 The parcel addressed specially to myself I much appreciate. I hope you may establish an agency in Ottawa.  
 I am, yours very faithfully,  
 PROF. HART, Rossin House.

GOVERNMENT HOUSE, TORONTO, 3rd January, 1888.  
 DEAR SIR,—His Excellency the Governor-General desires me to express his satisfaction with your Whole Wheat Flour, which has been in use at Government House, and was used in the making of the Christmas Cake.  
 His Excellency wishes you every success in the work which you have undertaken.  
 I am, dear Sir, yours faithfully,  
 PROF. HART,  
 Rossin House, Toronto.  
 DAVID BRISKINE,  
 Gov.-General's Secretary.

## Important testimony to the use of the Bread in England.

FROM W. T. S. HEWITT, Esq., D.C.L.,  
*Private Secretary to His Excellency the Governor-General.*  
 OTTAWA.  
 MY DEAR SIR,—I have great pleasure in stating that for several years, while living in England, I and my family (and, to my knowledge, a very large number of other people) regularly used your Whole Wheat (Health Restoring) Bread, and found it not only very beneficial to health, but extremely palatable. Indeed, when we came to Canada, we were quite disappointed to find that it could not be procured here.  
 I trust that your efforts to introduce in this country so valuable and health-giving a food may be entirely successful.  
 I am,  
 Scientific Food Specialist,  
 Rossin House, Toronto.  
 W. T. S. HEWITT.

## Patronized by the ROYAL FAMILY, for a quarter of a century.

The Duchess of Teck allowed no other food in the Royal Nursery but bread made of Prof. Hart's Flour and milk, so that the chief article of diet of the youthful Princesses, the Duchesses of York, who is considered to be one of the finest and most exceptional women in the world, was bread (Nature's "staff of life") made exclusively from Prof. Hart's Flour.

## PROF. HART'S BREAKFAST FOOD

is the most delicious and exceptional production from wheat ever offered to the public; in flavour. This preparation is not only more wholesome and nutritious, but is entirely free from the objectionable property of over heating the blood. It is, therefore, invaluable to all, more especially for children; should be used in all schools, hospitals, hotels and restaurants.  
**AN HISTORICAL FACT NOT GENERALLY KNOWN** as it should be in the interest of the health, happiness and length of life of the people, which was recorded by the water poet of the time, that **old Thomas Parr**, who lived to the great age of 152 years, and then died prematurely, "ate coarse wheat bread, and cheese, flavoured with an onion."  
 Milk, buttermilk, water, whey, and wig."

## PROF. HART'S HEALTH FOOD COMPANY, TORONTO.

## PRESIDENT MCKINLEY writes:

DEAR SIR,—I am requested by Mrs. McKinley to convey to you her grateful thanks for the Flour and Breakfast Food.  
 Yours truly,  
 W.M. MCKINLEY.  
 To PROF. H. W. HART.

## From the Wife of Dr. J. Hall, Presbyterian Minister, New York.

DEAR SIR,—I have much pleasure in writing to you about your Health Restoring Flour. I find it, by experience, to be all you described it, palatable, healthy, and nutritious. It makes delicious bread, pastry, puddings, cakes, gemp for breakfast, and pancakes. I have found it very good for saucers, thickening for soups and other food. *Some members of my family have derived extraordinary benefit from its use.* I wish much that every household would try it, especially where there are children and invalids.  
 I am, dear Sir, yours very truly,  
 To PROF. H. W. HART.  
 EMILY HALL, 712 Fifth Avenue.

## LUTHER LAFLIN MILLS, Lawyer, says:

CHICAGO, June 7th, 1897.  
 MY DEAR SIR,—The members of my family, including myself, have used, for several months, your Health Bread; and I deem it my duty, as it is my pleasure, to say to you that it has been of great physical benefit to us all. It is the most nutritious and healthful bread that I have ever eaten—a true and genuine "staff of life."  
 I regard it as, indeed, a blessing to humanity, and hope for its introduction into universal use.  
 Very truly yours,  
 To PROF. H. W. HART.  
 LUTHER LAFLIN MILLS.

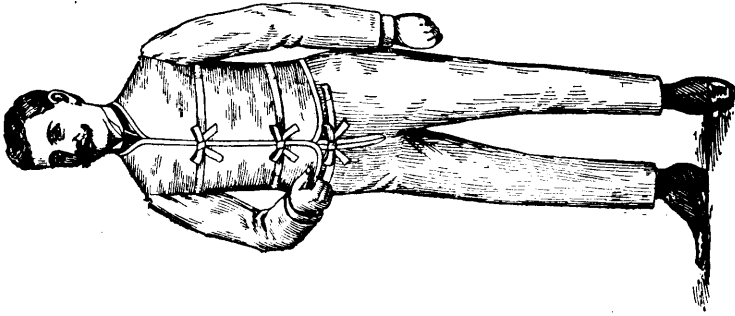
## Extract from letter of G. W. BALLOU, Esq., New York.

WALL STREET, NEW YORK.  
 "I only know that bread made from Prof. Hart's Flour has a wonderful vitalizing quality, and if in general use, ought to develop a race of intellectual and physical giants, able to crush out anarchy and other dyspeptic doctrines."

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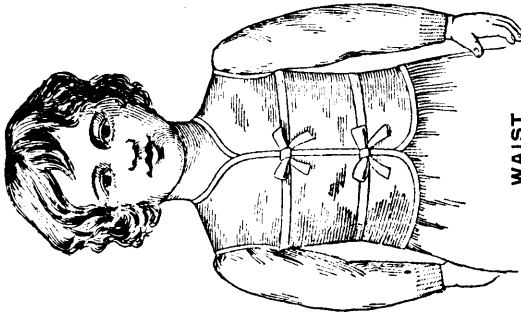
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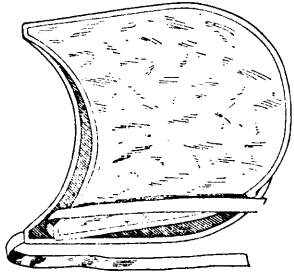
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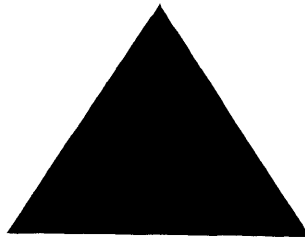


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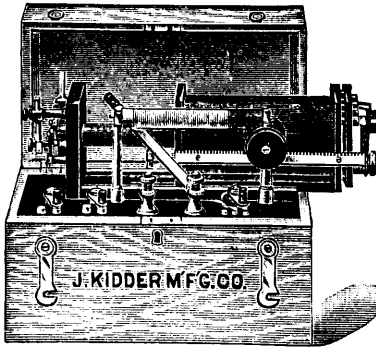
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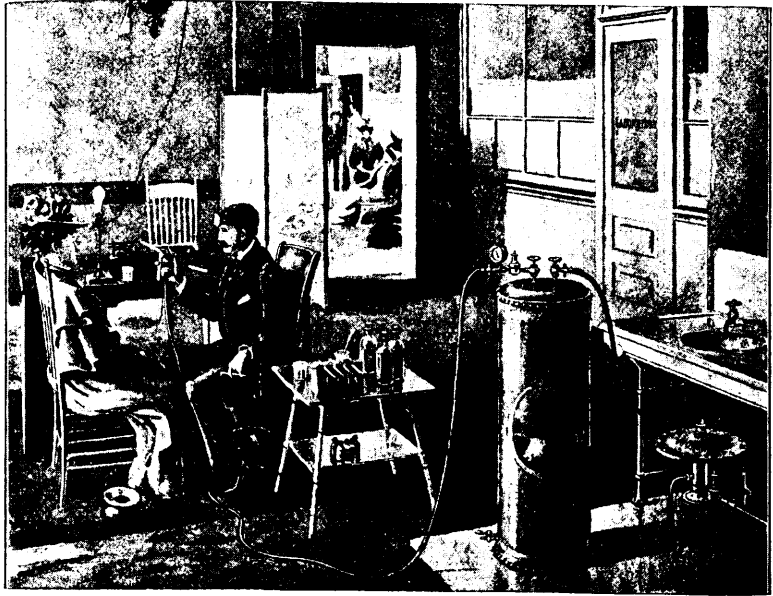
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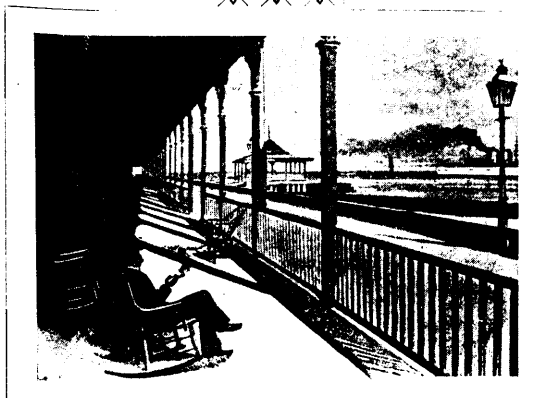
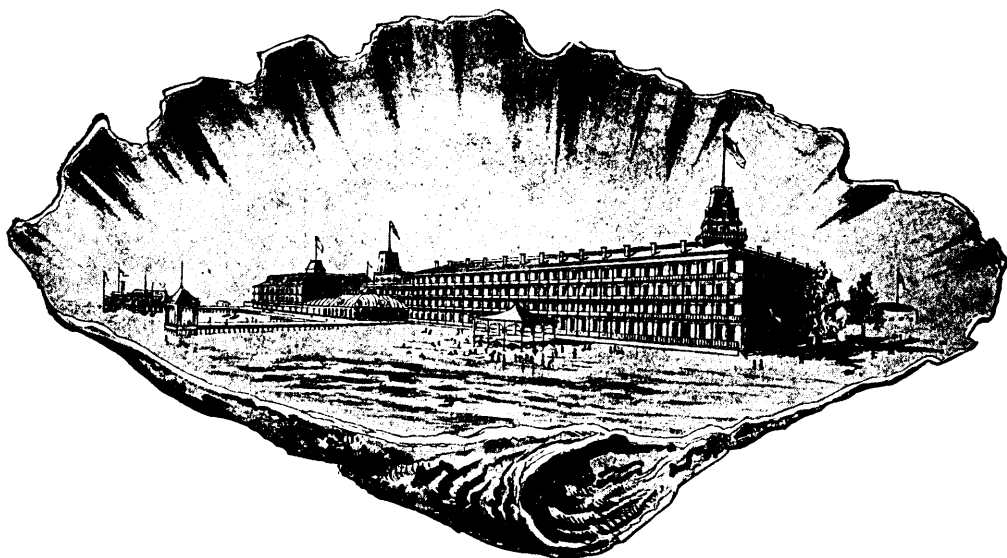
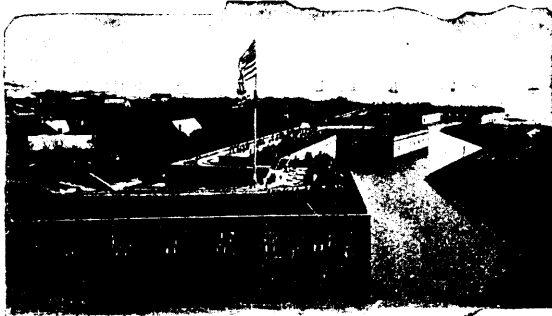
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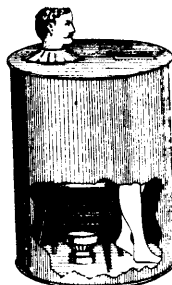
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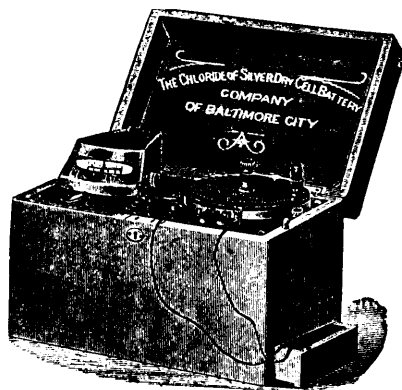
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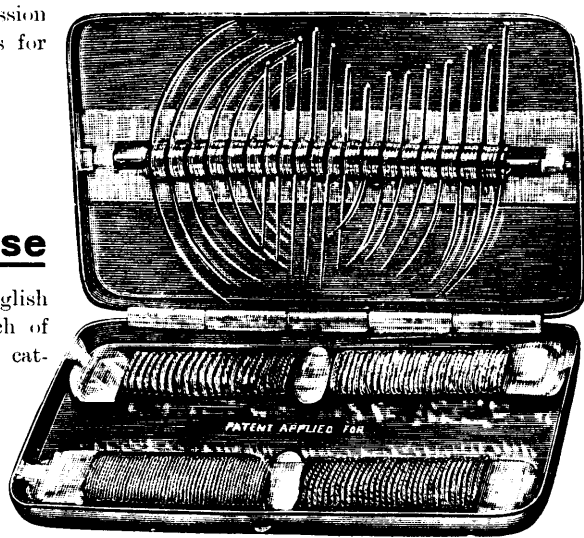
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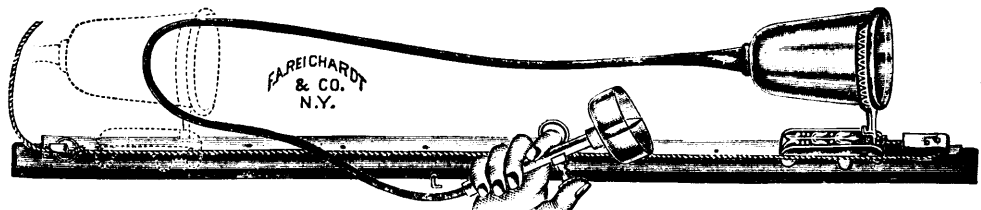
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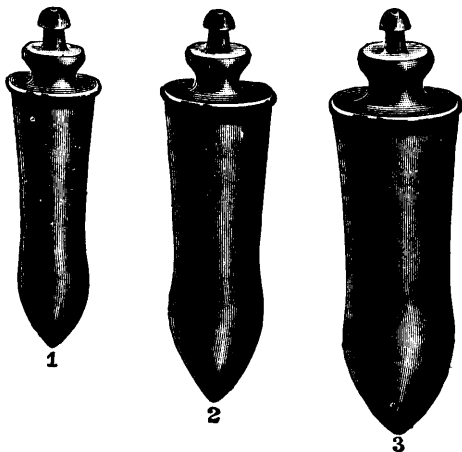
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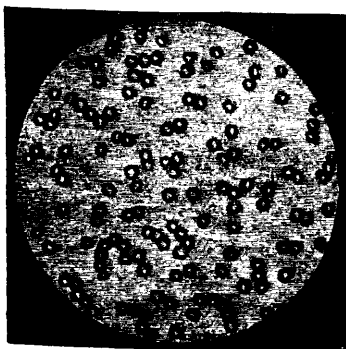
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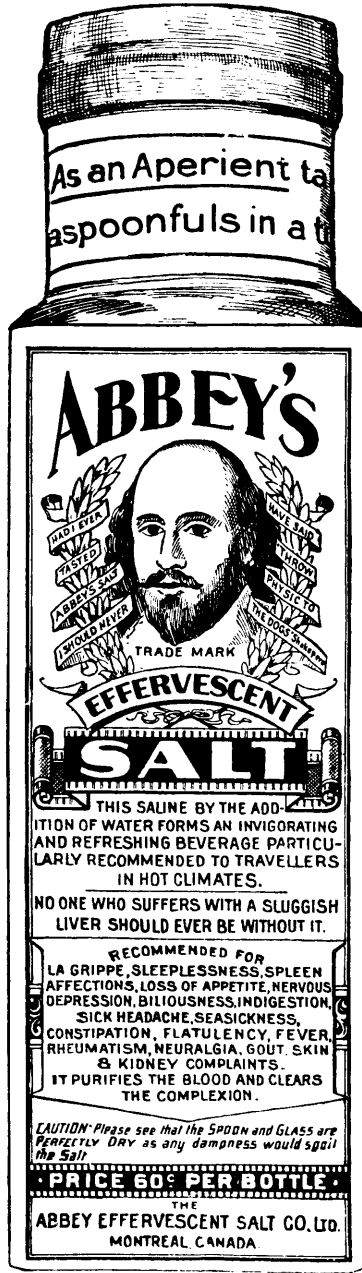
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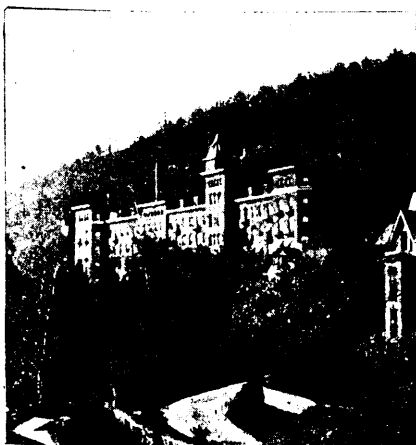


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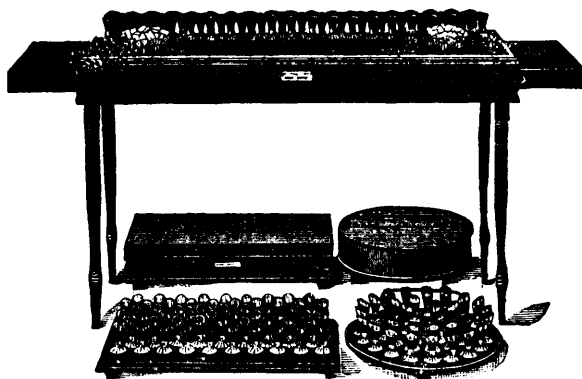
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## **Pneumonia Following La Grippe.**

BY M. E. CHARTIER,

Docteur en Médecine de la Faculté de Médecine  
de Paris. Membre Correspondant étranger  
de la Grande Encyclopédie, Section  
de Philologie.

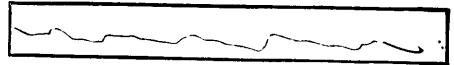
As a rule certain diseases prove more fatal, not only in given districts, but during certain periods of time, along particular areas of territory. We have La Grippe, decreasing in intensity for the present; it has been replaced by pneumonia, which is not only raging in the United States, but in European countries. The bacteriologists will have to explain this fact; the truth remains however, that the mortality from pneumonia in its various forms is now far in excess of any previous record.

Twenty years ago, and preceding the re-appearance of La Grippe in its epidemic form, pneumonia proved as dangerous as it does at the present time. Many cases fell under my personal observation, and I must admit that my Parisian confreres were at a loss, not for a remedy for the disease alone, but even for a logical line of treatment. Dujardin-Beaumetz became so skeptical that he prescribed stimulants, regardless of therapeutical conditions. The mortality in his ward at the Hotel Dieu proved that his patients fared no worse than the others submitted to the antiphlogistic remedies then en vogue.

At that time, I advocated in my treatise on therapy, the administration of sulphate of codeine in two to five centigrammes doses—one-

fourth to one-half grain. Codeine is the only remedy known to me possessing a marked and distinct effect upon the hypersecretions of the bronchial mucous membrane. What I then wished was an analgesic possessing antipyretic properties, which I could safely use. This I have since found in antikamnia and I believe it can be exhibited safely, especially on account of its not having a depressing effect on the cardiac system.

Experimental doses of from one-half to one gramme—seven to fifteen grains—of antikamnia administered under ordinary conditions did not develop any untoward after-effect. The following trace, taken with the sphygmograph was made ten minutes after the administration of one gramme—fifteen grains—of antikamnia.



Pulse, 112. Temp., 101 1-5 Fahr.

The above trace shows plainly that unlike other coal-tar products, antikamnia has a stimulating effect upon the circulation. In this particular case the temperature was sensibly reduced—102° to 101 1-5°. The analgesic effect of the drug was satisfactory.

My conclusion is that in the treatment of pneumonia, antikamnia is indicated as a necessary adjunct to codeine, on account of its analgesic and antipyretic properties and particularly because it acts as a tonic upon the nerve centres. The tablets of antikamnia and codeine containing four and three-quarter grains antikamnia and one-fourth grain sulphate of codeine, to my mind, present these two remedies in the most desirable form. I also find one tablet every hour, allowed to dissolve slowly in the mouth, almost a specific for the irritating cough so often met with in these complications. For general internal medication, it is always best to crush the tablets before administration.

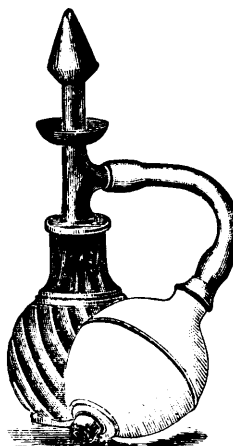
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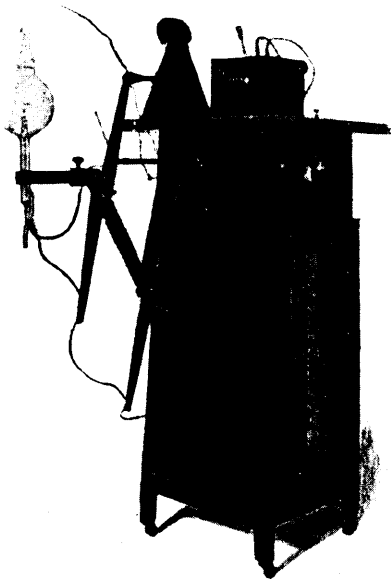
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VOL. III.

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## Original Contributions.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—*RUSKIN.*

### RECURRENT FUGITIVE SWELLINGS OF THE EYELIDS.

BY JAMES M. MacCALLUM, B.A., M.D.,

Oculist and Aurist to Victoria Hospital for Sick Children; Assistant Physician to Toronto General Hospital; Professor of Therapeutics in the University of Toronto.

EVERY ONE is familiar with the history of the patient who, on waking in the morning, finds great swelling of his eyelids—a swelling so quickly gone, leaving so little trace, that its existence is to the physician the subject of mild scepticism, or of indifference, if it disappears in a day or so without any treatment.

When, however, this œdema disappears, but to reappear after a few days, or it may be a few hours, it becomes both puzzling and interesting.

The clinical picture is that of a swelling without any pitting, not sharply circumscribed, but gradually fading away into the surrounding skin, without change in color, unless the vaso-motor disturbance has been unusually great, when it may have a whitish centre upon a base of deeper color, or may even be purplish, as in one of the cases narrated.

As a rule, there are no symptoms premonitory of its onset, but in some cases it is preceded by smarting, burning, and even pain; or the face may be reddish until the swelling appears. There is no rise of temperature prior to, or associated with, the attack.

A. A., female, aged seven years, took part in a church festival;



woke up next morning with great puffiness of the lids of the left eye, which disappeared in twenty-four hours. Two weeks later she had an attack of swelling of the same character, but upon the nose—no injury—of neurotic temperament.

Miss R., aged twenty-four years, school teacher. Puffiness, but no pitting, of both lids of left eye, with some slight discoloration of lower lid; conjunctiva slightly hyperæmic; swelling preceded the night before by some burning and smarting in the eyes. Has had repeated attacks at varying intervals—usually not longer than two weeks—now in the right eye, now the left, swelling never lasting for more than two days, usually being gone by night time. Inquiry revealed constipation and dyspeptic symptoms. Vision,  $\frac{5}{7}$  No. Hm.

E. H., male, aged sixty years. Swelling of eyelids and face. Says that the face feels hot and burning. On Friday afternoon his face was flushed. On Saturday night the swelling appeared. By Monday it had almost disappeared. No pain, no tenderness, no vomiting. Has had heartburn for some weeks. Had asthma about six weeks ago; never any hives. Has had three other such attacks. No erythema. Many years ago had a similar attack, which lasted for some twelve days. Has had "salt rheum."

E. T., aged twenty-five years—domestic. Woke up during night and found her right eye "stiff" By morning the swelling had completely closed the eye. Upper lid whitish, in portion corresponding to tarsal cartilage; rest of the lids reddish brown. No pitting; slight hyperæmia of the conjunctiva; slight photophobia and lacrymation. Has frequent attacks of hives, lasting a week or more; last attack four days ago. Has now a "mosquito bite," which has left the right hand greatly swollen. Flatulence, heartburn, constipation. Tactile sensation is less acute on right side than left. Bone conduction in right mastoid diminished. The swelling in the lids remained a day or two, migrated to the back of her hand, disappeared, and has not recurred.

Mrs. D. aged fifty-nine years. Twelve months ago noticed that right side of face and right hand were swollen. Had pain running up the arm and down the right side of chest and abdomen into the leg. Right side of tongue was large and felt heavy. As the swelling in the face began to diminish, pain was felt there, and then the leg swelled. During the attacks the swelling of the lids is so great as to prevent her opening the right eye. Swollen parts are first purplish; but as swelling subsides, are yellow, green, and finally all color fades away. During one attack she had a ring of rash, about two inches wide, around her waist, which has left some whitish scars. (Herpes Zoster?) Pain continues in head and face a long time after the swelling has disappeared. Has now had four such attacks within a year.

She now feels that another attack is coming on, for she has headache and a sense of numbness in the right side of the face. Examination shows diminished tactile sensation over the whol

right half of face, right hand, arm and leg. The sense of taste is affected, for quinine and sugar are not tasted when placed on right half of tongue, but quickly are on the left, although on that side taste is perverted, for sugar is said to be salt. Inhalation of Spts. Ammon. Aromat produces no sensation in the right nostril, but does in the left. Sight and hearing not tested. Two weeks later, taste and smell were normal. Four weeks later, and just after another attack, sensation was diminished on right side, from the face down to the foot, while right patellar tendon reflex was increased, a slight tap causing extension not only of the leg, but also of the foot.

That this fugitive and recurrent œdema is not due to inflammation in the structures of the lid, conjunctiva, eyeball or orbit, is at once manifest upon examination. Those few ophthalmologists, who mention its occurrence, have evidently been puzzled and do not advance any positive opinion as to its causation. Fuchs says that many of the puzzling cases of recurrent œdema of the lids are probably erysipelas of but slight intensity and extent; that others give warning of cardiac or renal disease, being forerunners of the œdema of the lids seen in these conditions—a hypothesis scarcely tenable. De Schweinitz says that fugitive and recurrent œdema "has been observed with migraine, at the time of establishment of menstruation, and spontaneously without apparent cause. Some instances are analogous to urticaria."

Fick seems to have been in doubt as to the nature of œdema of this sort, for he says: "Non-inflammatory œdema is also, as a rule, a sign of disease, though the disease may not always be so easy to find. *In some cases the œdema must be called the disease itself.* If a patient is seen with œdema of the lids, for which no local cause can be found, search must be made for some disease of the heart, kidneys or liver."

In two of the cases narrated the œdema was associated with disturbance of the nervous system, an association which, if sought for, might be more frequently observed.

That the nervous system plays a causal part in the production of such œdemas is shown by the well-known association, in tabes, of lightning pains with cutaneous ecchymosis, and less frequently with swellings which disappear in a few days—the œdemas and ecchymosis occurring in those parts of the body subjected to pain.

Other, and perhaps more familiar recurrent œdemas, due to nervous influences, are those about the hands, feet, or joints, in hysteria, and those of neuralgia and migraine. Gowers records a case of cranial neuralgia in which each attack was accompanied by great œdema of the scalp, which slowly disappeared some hours after the cessation of the pain, and Ormerod records paroxysmal headache, followed by œdema and ecchymosis of the eyelids. The case of Mrs. D. closely resembles one of neuralgia recorded by Gowers, in which attacks of pain in the tongue and face were attended by swelling of each part, which usually came on during the night, and sometimes occurred with very little pain.

Similar cedemas may occur in other nervous affections, cerebral apoplexy, syringo-myelia, nervous dyspepsia, hystero-epilepsy, neurasthenia, tumors of the spinal cord. These swellings are not true cedemas for they do not pit on pressure; the increased amount of fluid must be present not in the lymph interstices, but in dilated vessels. In the localized area the tonic influence of the vaso-constrictor nerves is suddenly removed and the vaso-dilators are then unopposed. This is seen in the redness which sometimes precedes the swelling, in the feeling of heat and burning. And yet, it is not always merely a paralysis of the vaso-constrictors, for there may be a whitish centre surrounded by a diffuse reddish areola.

Unusual dilatation or constriction is not the sole disturbance in the vessels. The vessel walls may allow exudation of blood, which passes through all the changes of color characteristic of extravasation. Whatever the remote cause, a blood state, a toxine, improper food, emotion, or disease of the nervous system, the direct mechanism of the phenomena is disturbance in some part of the complex vaso-motor system, the bulbar or the spinal centers, or in the sympathetic ganglia.

As Gowers says: "Vaso-motor disturbance means the deranged action of the vaso-motor centre for that territory, and it is as difficult to explain the disturbed action of the vaso-motor cells as of the sensory cells."

It is quite possible that these attacks may occur in patients with some error of refraction, but that error is not to be regarded as a causal factor, for its correction by proper glasses has no influence in preventing recurrence of the swelling. As long as there exists, anywhere, anything which may cause reflex irritation of the vaso-motor system, so long will the swellings recur.

These swellings have been described under the name of angeioneurotic oedema, but the term has generally been applied only to the more marked conditions, where the swellings have involved many and other parts of the body, and have been accompanied by severe gastro-intestinal symptoms. The minor attacks occurring only about the eyes are really of the same nature, and may or may not be associated with gastric or intestinal symptoms.

It is beyond the scope of this paper to enter into a consideration of the relationship which manifestly exists between many affections, commonly regarded as distinct, yet but links in the chain of vaso-motor disturbances—urticaria, angeioneurotic oedema, hay-fever, asthma, erythema, purpura, Raynaud's disease, exophthalmic goitre.

13 Bloor Street West, Toronto.

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DR. G. ARCHIE STOCKWELL, F.Z.S., for ten years the confidential medical adviser of Parke, Davis & Co., Detroit, has severed his connection with that firm and is now engaged in the same capacity with Henry K. Wampole & Co., of Philadelphia. We congratulate Mr. Wampole on securing so bright a mind as that of Dr. Stockwell, as what is Detroit's loss is Philadelphia's gain. W. A. Y.

## A CLINICAL CASE OF INTEREST.

BY R. J. MATTHEWS, M.D., TORONTO.

Katie —; age, eighteen years. Occupation, housemaid. Birthplace, Ontario.

Family History.—Father living and healthy; mother living, has some form of heart trouble. All grandparents lived to old age, and were very healthy. Patient has five brothers and two sisters all healthy.

Previous History.—Of the diseases of childhood has only had measles and whooping-cough, has never been strong but has no history of any definite disease. As a child she was so weak and miserable that she was unable to attend school. She kept much the same till she was seventeen, when menstruation occurred. Her menses came on once or twice, and then ceased. During this period she was very anæmic in appearance, had a variable appetite, was constipated, troubled frequently with headaches, and her breath was so short that she could not go upstairs without resting.

Present Condition.—General appearance waxy, with a clear, transparent skin, with a certain amount of the greenish color so characteristic of chlorosis, lips and conjunctiva of lower eyelids pale, tongue typical of the disease, nails anæmic, malar bones unusually prominent, weight constantly decreasing. Complains of pain between shoulders and cannot sleep at all at night. On examination of the heart there is intermittency, though the presence of no organic murmur. Pulse soft and flabby; sclerotics have a bluish-white appearance; tissues generally flabby and wanting in tone. There is a certain amount of œdema about the ankles and lower eyelids, with a tendency to swelling of the limbs after standing any length of time. Patient complains of coldness of extremities, and even a tendency to syncope after exertion, with spots before the eyes, noises in the ears, and neuralgic pains over the body. She is inclined to be low spirited and irritable. There is a blowing murmur in the arteries, particularly the sub-clavian, with a venous hum over the jugular vein.

Diagnosis.—Chlorosis.

Treatment.—After administering the usual treatment for anæmia with little or no result, alternating first one form of iron with another, and giving the usual increased amount of fresh air and good nourishment, I prescribed Pepto-mangan (gude) in table-spoonful doses.

She has now taken about three bottles and is very much improved. She can now do her work without tiring, has a much better color, her headaches are also better and menstruation has returned regularly.

## REPORT OF AN OPERATION FOR RELIEF OF COMPLETE PROCIDENTIA OF THE UTERUS AND BLADDER.\*

BY H. O. WALKER, M.D., DETROIT, MICH.

Mrs. I. St. C., aged thirty-two years, weight ninety pounds, was admitted to St. Mary's Hospital, Detroit, January 3rd. 1897, with the following history: Her father and one sister died of consumption: the remainder of the family are healthy. At the



FIGURE 1.

COMPLETE PROCIDENTIA OF UTERUS AND BLADDER. BEFORE OPERATION.

age of fifteen she was married, and a year later gave birth to a child, which died at the age of six months. Shortly after the death of the child she contracted syphilis, again became pregnant, and aborted at the end of the fifth month. In her eighteenth year she joined a circus, and did a great amount of horseback riding and trapeze performing, which line of work she followed for two seasons, then being compelled to discontinue it on account of severe pelvic pains. There was marked dysmenorrhœa and painful

\* Abstract from a paper on "Abdominal Surgery with Specimens," read at a meeting of the Michigan State Medical Society, held at Grand Rapids, May 13, 1897.

defecation, together with occasional attacks of diarrhœa. For the past fourteen years, she has followed the avocation of waitress and seamstress. She had acquired the opium habit, taking as much as half an ounce of the tincture during twelve hours for the relief of rectal tenesmus.

Physical examination revealed a complete prolapsus of the uterus and bladder, and an exaggerated rectocele. The labia majora were greatly enlarged and of a dense fibrous feel, the condition probably being that known as syphilitic elephantiasis. The



FIGURE 2.

COMPLETE PROCIDENTIA OF UTERUS AND BLADDER. AFTER OPERATION.

labia minora were also considerably hypertrophied. There was an eversion of the rectum, and a fistula upon the right side, extending into the rectum, about two and one-half inches from the anus. At this point, there was present also a rectal stricture, which scarcely admitted an ordinary-sized lead pencil. The surrounding parts were greatly excoriated by the discharges from the rectum and fistula. Figure No. 1 gives a fair representation of the condition.

On January 13th I operated in the following manner: First, I performed vaginal hysterectomy, which necessitated the greatest care to avoid wounding the bladder or rectum. No clamps were used, the arteries being tied with catgut as they presented. I then dissected up the thickened mucous membrane and removed it by

elliptical incisions, commencing at the meatus above and keeping close to the labium on each side, down to the upper border of the everted rectum. The cut edges were approximated with interrupted silkworm-gut sutures, leaving an opening, two-thirds of the way down, for such drainage of the peritoneal cavity as might be necessary. Forcible dilatation, with proctotomy of the rectal stricture was then done, and all the parts, except the peritoneal cavity, were liberally irrigated with 1-1000 bichloride solution, then thoroughly dried with sterilized gauze, the rectum packed, and the usual dressing applied and held in position by a large-sized T bandage.

Owing to the frequent evacuation of the bowels and the necessity for catheterization, the frequent removal of the dressings and their reapplication were required. The drainage tube was removed on the third day. The future history of the case was uneventful, the temperature never going above 100° F. at any time. At this writing the patient is able to walk about and do light work, the only trouble being some rectal incontinence. Liberal administration of the iodides was resorted to at intervals during the progress of the after-treatment.

Two methods of surgical treatment presented themselves as being applicable to the relief of this poor woman's condition, namely, the one adopted, and the other an abdominal section and the fastening of the uterus to the abdominal wall. I questioned the feasibility of the latter method, owing to the numerous adhesions existing and the extensive hypertrophy of the parts. The method resorted to has certainly justified the effort. Figure No. 2, from a photograph taken about a month ago, represents her present condition.

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DR. BRUCE RIORDAN has just returned from Chicago, where he attended a meeting of the Executive Board of the International Association of Railway Surgeons, which meets in Toronto, July 6th to 8th. The 1898 meeting is going to be by far the most successful that has taken place for many years, the promised attendance being very large. Arrangements have been made whereby a daily issue of the official organ of the Association, the *Railway Surgeon*, will be published. The local Committee of Arrangements will meet in a few days now, when full details, as to the comfort of the visitors, will be attended to.

DR. R. A. PYNE will, we understand, receive no opposition for the representation of East Toronto in the local Legislature.

## Surgery.

### PROPOSED NEW NOMENCLATURE FOR OPERATIONS ON THE ALIMENTARY CANAL.

A. ERNEST MAYLAND, M.B., Glasgow, surgeon to the Victoria Infirmary, in a masterly paper in *The Annals of Surgery*, Vol. xxvi. No. 3, Sept., 1897, points out the inconsistency of our present nomenclature for operations on the alimentary canal, and proposes the following in its stead :

1. Affix-tomy (τέμνω, "to cut").

For operations which consist in opening some part of the alimentary tract for exploratory and other purposes, and its closure at the same operation.

*Operations.*

|               |               |
|---------------|---------------|
| Œsophagotomy. | Cæcotomy.     |
| Gastrostomy.  | Colotomy.     |
| Duodenotomy.  | Sigmoidotomy. |
| Enterotomy {  | Proctotomy.   |
| Jejunotomy.   |               |
| Ileotomy.     |               |

2. Affix stomy (στομα, "mouth").

(a) Operations which consist in stitching some portion of the alimentary tract to the parietes and establishing a temporary or permanent opening.

*Operations.*

|                |                |
|----------------|----------------|
| Œsophagostomy. | Enterostomy {  |
| Gastrostomy.   | Jejunostomy.   |
| Duodenostomy.  | Ileostomy.     |
|                | Colostomy.     |
|                | Sigmoidostomy. |

(b) Operations which consist in establishing permanent openings between one segment of the canal and another. (In these compound words the proximal segment "where two different regions are united" should be named first).

*Operations.*

|                             |                      |
|-----------------------------|----------------------|
| Gastro-enterostomy {        | Gastro-duodenostomy. |
|                             | Gastro-jejunostomy.  |
|                             | Gastro-ileostomy.    |
|                             | Gastro-colostomy,    |
| Entero-enterostomy {        | Jejuno-jejunostomy.  |
| (Entero-anastomosis)        | Jejuno-ileostomy.    |
|                             | Ileo-ileostomy.      |
| Ileo-(or colo-)proctostomy. |                      |



## 3. Affix ectomy (εξτέμνω, "to cut out").

Operations which consist in the removal of some part of the alimentary canal.

*Operations.*

|                |                |                               |
|----------------|----------------|-------------------------------|
| Œsophagectomy. | Enterectomy    | } Jejunectomy.<br>Ileoectomy. |
| Gastrectomy.   | Cæcectomy.     |                               |
| Pylorectomy.   | Colectomy.     |                               |
| Duodenectomy.  | Sigmoidectomy. |                               |
|                | Proctectomy.   |                               |

4. After excision of any part of the canal its continuity may be established by (a) end to end junction; (b) lateral approximation (the ends are closed and openings made in the sides of the opposing coils; (c) lateral implantation (one end is closed while the other is fixed into a lateral opening of the occluded portion).

5. The methods by which the parts are secured together after incision or excision of any part of the tract are known mostly by the name of the materials used or the authors devising them;

Union by Czerny-Lembert, Halsted, Able, Mannsell, etc., suture;

Union by Murphy's button;

Union by Senn's decalcified bone plates;

Union by Robson bone bobbins, etc.

## 6. The affix rhapsy (ράφη, "suture").

Operations which consist in lessening abnormally enlarged or dilated sections of the tract by suturing together folds of the visceral parietes.

*Operations.*

|                |              |                |
|----------------|--------------|----------------|
| Gastrorrhaphy. | Colorrhaphy. | Proctorrhaphy. |
|----------------|--------------|----------------|

## 7. Affix plasty (πλασσω, "to form").

Operations performed for stricture of some part of the canal, the stricture being divided in the long axis, while the parietal edges are united in the transverse axis, thus forming a wider channel.

*Operations.*

|               |               |
|---------------|---------------|
| Pyloroplasty. | Enteroplasty. |
|---------------|---------------|

## 8. Affix pexy (πήγνυμι πήξω, "to fix").

Operations which consist in fixing by suture to the parietes some abnormally dilated or movable segment of the canal.

*Operations.*

|             |           |             |
|-------------|-----------|-------------|
| Gastropexy. | Colopexy. | Proctopexy. |
|-------------|-----------|-------------|

## 9. Artificial anus.

Operations for diverting the whole contents of the intestine through an artificial opening; performed by bringing a loop of bowel outside the parietes or breaking the continuity of the canal

by section and fixing the proximal extremity to the parietal incision.

*Operations.*

|                                      |   |                      |
|--------------------------------------|---|----------------------|
| Enteric anus—Ascending colonic, or   | } | Right inguinal anus. |
|                                      |   | Right lumbar anus.   |
| Sigmoid anus—Descending colonic, or  | } | Left inguinal anus.  |
|                                      |   | Left lumbar anus.    |
| Sacral anus—Transverse colonic anus. |   | B. L. R.             |

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**SOME TYPICAL FORMS OF CURVATURE OF THE SPINE..**

Mr. NOBLE SMITH, in a recent lecture, said that instances of severe ordinary lateral curvature are so extremely frequent that skeletons showing very severe deformity are quite a common feature of our pathological collections. I would ask, Is it possible that the spine can give way either posteriorly or laterally, irrespective of caries, to the extent of the many severe cases of deformity which exist without there being some undue softness of the bones or unnatural laxity of the ligaments? It is the exact pathology of those cases that require study.

It is of importance to deal cautiously with so-called "spinal weakness." Many a case of incipient spinal caries has been stimulated into severe activity by the "exercise treatment," whereas the plan I adopted in the following cases would have been more suitable whether the case had been caries or debility alone. It is well known that the spine may give way laterally or posteriorly from weakness. Such weakness is often attributed to want of power in the muscles alone, but this view of the cause of the trouble does not coincide with certain facts which I have observed.

During the last eighteen years I have measured the backs of many hundreds of patients, and have found that when the body has been well developed for the age and the individual has been robust the length of the back from the level of the shoulders to the level of the chair in sitting has been equal to a measurement taken from the spine between the scapulae round one shoulder back to the spine again. In a very large majority of the patients suffering from weak and crooked spines, the length of the back has been in excess of the shoulder measurement. The shoulders (which will generally be sloping downwards and forwards) should be brought back to a normal position at the time of measurement. The excessive length of back in proportion to the robustness of the body supports the view that weakness of the back is not so much due to muscular debility as it is to weakness of the spinal column itself—*i.e.*, weakness of the ligaments accompanied not infrequently by undue softness of the bones. Debility from illness, from insufficient nourishing food, and rapid growth have seemed to be the most frequent causes of such want of stability in the spine. This view is sup-

ported by a number of facts, the most noticeable of which are recorded in the following history of a typical case :

A patient (say a girl about thirteen years of age) possesses a spine measuring one and a half inches in excess of the shoulder circumference (as above described); there is inability to sit up straight without assistance (that is the patient stoops perpetually), there is a complaint of almost constant or very frequent aching in the back, and when sitting there is to be seen a distinct lateral curve in one particular direction. By means of treatment, directed to preventing the spine from falling into bad positions without interfering with muscular action and improvement of the general health, the back gradually becomes straight and strong. The length of time during which the treatment will have to be carried out depends chiefly upon growth. Perhaps a year or eighteen months may elapse before the child will have "outgrown" her want of physical robustness. This result, however, will be attained sooner or later, and when it has happened treatment may be thrown aside absolutely. Measurement will then often show an adjustment of the dimensions, so that the shoulder measurement will be the same as the measurement of the spine.

There are, however, some individuals who grow up without efficient treatment having been adopted for this condition, and although they may have been able to follow their vocations in life fairly well, yet they are liable to suffer greatly from their weakness. They may develop scoliosis and become very deformed or kyphosis, and if the latter deformity is produced the symptoms may closely simulate those of caries, in fact it may be very difficult to decide whether any inflammatory disease be present or not, and those who have had most experience will probably have the greater difficulty in forming an immediate diagnosis. Fortunately it matters comparatively little at first what the exact nature of the weakness may be, for the treatment should be the same for a certain length of time in both cases, and during that time we shall have an opportunity of studying the affection sufficiently to arrive at a more definite diagnosis. Certain it is that we had better err upon the side of excessive caution than assume too readily the absence of inflammatory disease.

I am not referring to cases in which hysteria plays a prominent part, although it must not be forgotten that even hysterical patients may have real disease or real weakness, and when such a combination exists efficient treatment of the spine helps materially in overcoming the hysterical element.

The relief from pain in these cases greatly depends upon one's ability to support the ribs from contact with the crest of the ilium. The spine in the last recorded case was greatly rotated in the lower lumbar region, and I was only just beginning to succeed in relieving this contact at the date of that last visit. I give this case as one of the most difficult I have had to deal with, and it shows that even under such adverse circumstances a deformity can be stopped from increasing and relief given to the patient's suffering.

With regard to the plastic felt jackets which are so commonly used in the present day when a support is required, I would remark that they are not satisfactory in their mode of action; they press on the chest but do little towards holding back the shoulders; they interfere with the use of the muscles, they interfere with the evaporation of perspiration, and they fail to give efficient support. The following figures show the ineffectiveness of the ordinary felt jacket in controlling the position of the spine and the immediate effect of applying the adaptable metal splint.

The metal splint has the following advantages: 1. It leaves room for action of the muscles. 2. It develops the chest and does not press upon it. 3. It prevents the spine from subsiding into bad positions. 4. It forms a fixed basis from which to supply pressure upon the lateral curves. 5. It enables the surgeon to see the effect upon the spine while the apparatus is *in situ*. 6. It is made of steel, the lightest material for the purpose, which is so tempered that it can be bent into any form by the surgeon himself. 7. It is comparatively light and is so helpful to the patient that a weak child can do more with it on than without it. It may be accepted as an axiom that whatever position the spine is held in by means of the adaptable metal splint that position will in time become permanent.

F. N. G. S.

A NEW DRESSING FOR GRANULATING WOUNDS.

A. ERNEST GALLANT, M.D., New York, in a paper in *The Annals of Surgery*, Vol. xxvi., No. 3, Sept., 1897, makes reference to a paper read before the Section on Surgery of the New York Academy of Medicine, by Prof. William Waldo Van Arsdale, June 12th, 1893, and reported in the *New York Medical Journal*, Vol. lviii., page 115, 1893, on a new dressing for granulating surfaces, composed of

R Bal Peru . . . . . 3 p.  
 Ol Ricini . . . . . 3 j.

This has been tried on 69,364 cases with good success.

Dr. Gallant, in his paper, says: "This is mildly antiseptic; it will keep for any length of time; the oil remains sweet; any powder may be used on the wound; the odor of iodoform is modified. Bal Peru is irritating to the skin if used in solutions over 10 per cent. in strength."

Method of applying it is to moisten the gauze with it thoroughly and apply over the wound, this causes the gauze to act as a sponge and absorb all secretions from the part up to the point of saturation. This action is continuous. Do not pack cavities firmly, as this action is interfered with and contraction is retarded. Cover with gutta-percha, oil silk, oil muslin, paraffin paper, etc., and bandage.

The advantages claimed for this dressing are:

1. Continuous drainage.
2. Retention cannot occur, and there is no scabbing, no pain, no redness and no swelling, and if these are present they quickly subside.
3. Bacterial growths are reduced to a minimum, therefore the production of ptomaines practically ceases, and as no pressure is applied no lymphangitis or systemic absorption occurs, and there is no fever.
4. Epithelial growth goes on more rapidly than under any other dressing.
5. No eczema occurs around the margins of ulcers, and there is entire absence of the irritation met with when antiseptic dressings are used.
6. Removal is painless, bleeding does not occur as it does not adhere to the granulations.
7. The granulations are never profuse, and quickly shrink after the dressing is properly applied.
8. Infrequent dressings—twice a week being usually sufficient.
9. Irrigation, disinfection or scraping of abscess cavities may be avoided.

The dressing simply drains the wounds and keeps them clean, it does not actively prevent suppuration.

The occasional growth of the bacillus pyocyaneus in the dressing is not prevented. This bacillus is certainly harmless to wounds, and does not delay healing.

The varieties of the bacillus foetidus are more important and could be prevented by the use of bichloride gauze 1 in 500.

The green and violet pyoktannin gauze, with the balsam mixture, did not always prove satisfactory.

We have used this dressing and can recommend it. Besides possessing the before-mentioned advantages, it is economical both of material and the surgeon's time.

B. L. R.

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## Surgical Pathology.

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### ON THE PATHOLOGIC ANATOMY OF TRAUMATIC HERNIA.

BY THOMAS H. MANLEY, M.D.,

Professor of Surgery, New York School of Clinical Medicine.

MR. BLAND SUTTON has called attention to the lamentable state of the abdominal walls which may succeed laparotomies, and alleges that sometimes the hernial protrusion following may occasion the afflicted much more distress than the state for which the original operation was performed. And recently (London *Lancet*, Nov. 22, 1897) Mr. Alban Doran contributed a valuable report on the same topic.

It is, therefore, evident that whenever we proceed to open

widely the cavity of the peritoneum, we should not overlook the possibility of ventral extension at any time, recent or remote, after recovery.

But why should this troublesome sequela follow at all, if proper provisions are observed to prevent it?

In order to answer this, we must briefly review the anatomy of the parts involved, and the pathologic processes which come into play.

First, it should be remembered that the fixed and floating viscera of the abdomen are held in position by contractile tissues. Secondly, that these are largely supported in position by the abdominal walls, which laterally and anteriorly are so clothed by a muscular investment as to preserve a firm uniform support. Thirdly, both of these supports are powerfully influenced by incessant, by intermittent pneumatic pressure from above, and a varying pressure through gaseous distension of the intestine.

An incision or a laceration through any area of the muscular walls of the abdomen leaves a dead line, a defective gap. Muscular tissue once destroyed is never reproduced, the hiatus is filled with connective tissue. Experience has proven, that the less there is of this tissue the more certain and secure is the bond of union, and hence we have come to discard drainage in all non-suppurative states and endeavor in all cases to secure primary union.

In the young, vigorous, male adult of firm muscle-fibre, the contractile properties of the mesentery are quite ample to hold the intestines up, without the auxiliary muscular support from the abdominal walls. But in the child-bearing female, in whom intra-abdominal pressure is enormously augmented, both by the gravid uterus and its contractions in labor, the entire ventral areas are put on a severe strain with a tendency to yielding in defective situations. The tendency to cœliac incisions is greatly increased after middle life, when degenerative changes have begun, and when herniæ of every description are most numerous.

In those pot-bellied females whom we sometimes see after confinements, if they have suffered a laparotomy early in life, hernial protrusion is almost certain to follow. Doran denies that the manner of closing the incision has anything to do with the ultimate tendency to a giving way of the scar, and in this he is no doubt correct; nor have we any evidence that a forcible separation of the muscle-fibres in their long axis gives us any guarantee against prolapse, not provided by proper approximation.

It has been sought to obviate the tendency to these eventurations by the small incision; but we are not certain of this, and moreover, as our results after intra-abdominal operations depend on precision and exactness of detail in technique, with celerity of action, we must not be chary about making an opening, which will permit unhampered manipulation.

In our next contribution certain aspects of the morbid anatomy and pathologic changes of certain complicated types of post-operative eventurations will be considered.

## Pharmacology and Therapeutics.

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### FORMALDEHYDE.\*

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BY O. HASENCAMP, M.D., TOLEDO, OHIO.

Professor of Principles of Medicine and Electro-Therapeutics, Toledo Medical College, Physician to St. Vincent Hospital, etc.

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FORMALDEHYDE is a colorless gas, prepared by subjecting methylalcohol to oxidation. It has a pungent odor, and its chemical composition is  $\text{CH}_2\text{O}$ . It combines with hydrogen sulphide and with volatile compounds derived from ammonia, and therefore acts as a deoderant. It is readily absorbed by water and a saturated aqueous solution containing 40 per cent. of the gas forms a convenient method for applying it to its different uses. In this form it is placed on the market under the name of formalin, forinol and formaldehyde.

Formaldehyde is equally active in gaseous as in liquid form. It forms in aqueous solution a stable, colorless, volatile fluid, practically non-poisonous, of a pungent odor, not inflammable, and is miscible with water in all proportions. It is an escharotic, and one of the most powerful antiseptics known. Formadehyde solution is most convenient for use in medicine and surgery, and in the form of gas it can be used for disinfecting rooms; cars, ships, with their contents, clothing, mail, books and other articles can also be readily sterilized by this method, which is generally done by using a special generator or lamp for producing the gas. It seems peculiarly adapted for this kind of disinfection on account of its harmless character and the freedom from damage of articles exposed to its action.

The *Medical News*, October 10th, 1896, reported that at the twenty-fourth annual session of the American Public Health Association, held in Buffalo, N.Y., September 17th, 1895, three very suggestive papers were read upon "The Use of Formalin as a Disinfectant," by Prof. Franklin C. Robinson, of Bowdoin College, and Drs. J. J. Kinyoun and E. A. de Schweinitz, both of Washington. A lamp for its generation was exhibited by the last named, and all papers cited remarkable instances of its penetrating and sterilizing powers. In one experiment infectious matter was introduced into the filling of mattresses, also smeared upon their surface and lightly rolled up inside them, and in both cases complete sterilization was effected by a comparatively short "charging" of the room with the vapor. It certainly seems as if this agent bids fair to become

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\* Read before the Northwestern Ohio Medical Association, at Defiance, Ohio, December 11th, 1896.

the chief reliance in house and car disinfection. A 1 per cent. solution requires less than fifteen minutes to kill the bacillus anthrax and spirillum cholerae, between fifty and sixty minutes to kill the staphylococcus pyogenes and the bacillus typhosis. A 1-1000 solution will thoroughly disinfect soiled or infected clothing if allowed to remain in the solution about twelve hours. Dr. Walter has made experiments to determine the bactericidal power of formalin. His conclusions, as published in the *Zeitschrift f. Hygiene und Infectious Krankheiten*, Vol. xxi., p. 241, 1896, are as follows: (1) A solution of formalin 1-10 000 checks the development of the bacillus anthrax, cholera, typhc. diphtheria, and staphylococcus aureus. Very dilute vapors of formalin have the same action. (2) A 1 per cent. solution of formalin kills pure cultures of pathogenic germs in an hour. This action is still more marked in dilute alcoholic solutions. (3) A 3 per cent. solution of formalin disinfects the hands perfectly. Further experiments are required to determine any possible injury to the skin from its use. (4) Formalin powder disinfects without injury in twenty hours cloth and leather goods. (5) A 1 per cent. solution of formalin is an instant deodorizer of fecal matter. A 10 per cent. solution renders such matter sterile in ten minutes.

Formaldehyde solutions can be used to disinfect rooms by placing about in the room in flat dishes or spraying the air with a 1 per cent. solution. This will render the air pure and odorless in the sick room without injury to the patient or the most delicate fabric in the room. In ophthalmological practice it has perhaps been used more than in any other branch of medicine. It has the peculiar property of rapidly diffusing itself through the tissues, which gives it an advantage over bichlorid of mercury, because the latter coagulates the albumen near the surface, which prevents its further penetration into the tissues. Excellent results are reported in its use in infecting corneal ulcers and conjunctivitis. As a collyrium it can be used 1-1000 to 1-2000, and ulcers can be touched up with a solution 1-100 to 1-500. In the stronger solutions it is a mild caustic, and in the weaker solutions a mild stimulant. It has also been used in dentistry in acute pulpitis. Formaldehyde kills the sound pulp completely, without any more pain than accompanies the use of arsenic paste, with the advantage that the tooth can be filled at once without further cleaning as it renders the remaining pulp antiseptic.

Formaldehyde has a wide field in preserving and hardening anatomical and pathological specimens. It has many advantages over Muller's fluid and alcohol. It penetrates, hardens and preserves tissues without shrinking. Another advantage is its cheapness and the ease with which it can be used. The tissues retain their natural appearance even to retaining their original color and transparency. Even in preserving specimens of the eye the crystalline lens does not become opaque for a long time. Dr. W. H. Wilder presented a paper and some beautiful specimens



before the American Medical Association in May, 1895. His method of preserving eye specimens was as follows: Immediately after enucleation the eye ball is washed and immersed in a 5 per cent. solution of the standard 40-per-cent. solution. In three or four days they are hard enough to bisect. If the vitreous is to be saved they had best be frozen before cutting. The part to be preserved is then treated accordingly to Priestley Smith's method, by placing it for twenty-four hours in a 33 1-3 per cent. and then in a 50 per cent. solution of glycerine and water. After this it is mounted in a glass cup of glycerine jelly made according to formula of Priestley Smith in 1884. To prevent the softening of this jelly it is well to first expose to the fumes of formaldehyde under a glass bell, which permanently solidifies it, and then seal the jar with a glass cap.

Flowers are said to be preserved in the fumes of formaldehyde and to retain their natural color. Formaldehyde is also used in the preparation of microscopical specimens. Dr. Cullen, of Johns Hopkins Hospital, in the *Canadian Practitioner*, describes a rapid method of staining fresh tissues by the aid of formalin. By its use a piece of tumor from the operating room can be examined and stained within fifteen minutes. The tissues take up the stain as well as when hardened by any other process. Urine can also be preserved by a weak solution of formaldehyde. It has the advantage that it does not stain or injure the hands or instruments in working with it. It has been used in treating tuberculosis, but I have had no experience with it. Dr. Hamaide, in the *Bulletin of the Academie de Medicine*, describes an inhaler for this purpose, which consists of two flasks, one holding a liter and the other 250 c. c. carbonic acid is generated in the first by means of bicarbonate of soda and tartaric acid, and passes into the other flask which contains a solution of formol, producing vapor for which it is the vehicle. The 40 per cent. solution of formaldehyde is used; 100 grs. of hot water are poured into the small flask, to which the formol is added from 160 to 180 drops. This produces a solution of 2 to 10 per cent. The vapors of formol are said to have been found very effective in pulmonary tuberculosis, accompanied by bronchial dilatation or pulmonary gangrene. They subdue coughing spells, and diminish rapidly and notably the quantity of fetid expectorations. The odor can be disguised with 40 to 50 drops of Austrian pine.

I have used it in the treatment of gonorrhoea in three cases with good results. I used the 5 per cent. solution, instructing the patient to still dilute it if it caused pain. In all three cases the discharge changed rapidly from a purulent character to a thin discharge and entirely ceased in about three weeks. In surgery it has been used to some extent; surgical dressings and material can be sterilized with it, and Hlavacek gives a valuable method of preparing catgut, in the *Wiener Klin. Rundschau*, February 8th, 1896. During the past few months I have used it in surgery

and also a preparation of formaldehyde and gelatine called formol-gelatine, as introduced and recommended by Dr. C. L. Schleich, of Berlin, in an elaborate and very interesting article, entitled: "Concerning a New Form of Antiseptic Dressing of Wounds," published in *Therap. Monats*, 1896. No. 2 is a product obtained by the action of vapors of formaldehyde on gelatine. The cells of the body disintegrate formol-gelatine into its chemical components, developing a continuous, minimal current of an antiseptic in its most potent form, which acts upon the wound and penetrates into all the interstices of the tissue. When placed in contact with uninfected tissue it is able to form a solid scab on primarily sewed wounds in a few hours, unaided by any other measures of disinfection. It checks acute purulent processes if the production of tissue and the development of formaldehyde vapors proceed undisturbed. In the presence of abundant necrotic material, however, the activity of the cell may be supported by pepsin muriatic acid digestion, by dusting the powder on the wounds as usual, and moistening same with the following mixture: Pepsin, 5 grs.; muriatic acid, 3 grs.; distilled water, 4 oz. I have used formol-gelatine on a number of wounds with excellent results. One was the gunshot wound of the hand, caused by a 22 flobert ball, making a punctured wound. I washed the wound with formaldehyde solution 2 per cent., and filled the wound with formol-gelatine. I dressed it again in a week, and the wound was nearly healed, and in two weeks it was entirely closed. I also used it on a crushed finger and several fresh cuts, followed by rapid healing. The last case I applied it on was a chancreoid, which healed rapidly from the time I applied formol-gelatine, and in twenty days the ulcers were healed completely. In formaldehyde we have without doubt a valuable remedy, and future trials with it may even extend its usefulness.

A. J. H.

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### STRONTIUM AND ITS SALTS\*

BY ALEXANDER B. BRIGGS, M.D.

THAT the profession have in strontium salts, remedies of great therapeutic value is my firm belief, and my experience with them in practice during the past two years has very materially strengthened my faith in them. It has been a surprise to me in conversation with quite a number of my colleagues, to find that they are so seldom prescribed. That they have been of such signal help to me in my professional work, and that so little has been said and written about them of late, is my only excuse for bringing the subject before you to-day.

There seems to be an impression that there is more or less

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\*Read before the Washington Co. (R. I.) Medical Society, July 8, 1897.

danger in the use of the strontium salts from their toxic effects; this is wholly an error, as has been proved by the researches of such men as Professor Germain See, Dr. Constantin Paul and Dujardin-Beaumez, who found that, in every instance where conflicting reports and toxic effects have been reported from their use, they were due to the presence of barium, which is found in the commercial product. When I have prescribed these remedies I have always used the pure salts (Paraf-Javal) or their solutions prepared by P. Chapoteaut, of Paris. At present I think strontium and its salts are unofficinal in the pharmacopœia, but nevertheless, the discovery of their therapeutical properties, and the good results in therapeia that have followed their administration, would warrant us in the belief that as they become better known and more often prescribed, they will become more highly appreciated.

The salts that I have most frequently used are the bromide, iodide and lactate and I will speak of them in the above order.

Bromide of strontium is a colorless, transparent salt, occurring in hexagonal crystals. It is somewhat deliquescent. The dose is from five grains to one drachm. It is not incompatible with the bromides of the alkalies, and it is soluble in both water and alcohol; it can be administered with all the alcoholic tinctures and most fluid extracts. Its indications for use are those of bromide of potassium, and while it is a perfect substitute for the potash salt, its prolonged use even in large doses does not seem to produce the untoward results so often noticed in the use of the former salt. The gastric disturbances, the cutaneous eruptions so often noticed in the use of the potash salt, are not seen when the strontium salt is used; again, the depressing and systemic agitation from the prolonged use of potash, which all have encountered in practice, I have never seen from the strontium bromide.

In cases of epilepsy and other spasmodic neuroses, where the potash salt has been given for a long time, the patient thereby becoming insusceptible to its action, the strontium salt may be substituted with safety and great advantage.

In many diseases of the stomach, the bromide salt will be found of especial benefit. In three obstinate cases of vomiting of pregnancy in which I have prescribed the drug during the past year, two received signal benefit, while in the third case it seemed to have no marked effect upon the vomiting, as the stomach would not retain the remedy; in this case it appeared to have some reflex effect upon the vomiting centre, when given in drachm doses per rectum every six hours, and it was so administered for several days in connection with other treatment.

In one case of hyperæsthesia of the stomach that accompanied and followed ulceration for several weeks after I was satisfied the ulcer had healed, the neuroses promptly yielded to ten grain doses of the drug, given one half hour before food, and there was no return of this most distressing symptom.

A patient suffering from exophthalmic goitre about a year ago,

consulted a specialist in regard to a severe tinnitus aurium from which she suffered: bromide of potassium was prescribed in full doses. At first the patient seemed to get some relief from the remedy and it was continued for several months: during this time the patient developed severe mental excitement with true delusions. Suspecting the remedy, it was discontinued and in a few days the mental excitement subsided with a marked increase of the tinnitus. At this time, strontium bromide was substituted with fully as good effect upon the symptom, and the patient has continued to take it during the past three months, with no return of the mental excitement; the delusions continue however.

We are occasionally consulted by a class of patients that are plethoric; who complain of a general feeling of lassitude, frontal headache, constipation, a disposition to sleep all the time, various skin diseases: the urine is loaded with urates and frequently the heart's action is feeble, due to commencing fatty degeneration; these patients are sometimes fat, other times lean, but are always overfed. Any or all of these symptoms may exist, but will surely be relieved by the use of bromide strontium administered before meals, accompanied by a restricted diet.

In other cases of digestive disorders accompanied with acid fermentations, and the formation of the gases of decomposition with chronic diarrhoea, the bromide has given me excellent results.

Strontium iodide occurs in colorless, transparent, hexagonal crystals, having a bitter saline taste, freely soluble in water and alcohol. Like the bromide salt it is incompatible with solution of the sulphates and carbonates of soda, potash and lime, but is not incompatible with other iodides.

Iodine of strontium is an excellent tonic and alterative and may with safety be prescribed in any case where the potash salt is indicated. In quite an extended use of the drug, I have never known it to induce the gastric irritation or palpitation of the heart so common in the administration of iodide of potash in full doses. Its effects in catarrhal asthma, chronic bronchitis and cardiopulmonary affections have been most satisfactory. The drug is quickly eliminated by the kidneys, the strontium seeming to supplement the action of the iodine by its own peculiar action on the functions of nutrition.

In connection with the above, I wish to report the following case:

Mr. B., age about seventy, has had a catarrhal bronchitis accompanied with asthma for the past ten or fifteen years. At the time the strontium salt was prescribed he presented the following conditions: catarrhal bronchitis of both lungs with paroxysmal attacks of asthma, bad cough with profuse expectoration, has been unable to lie in bed for over two years, body emaciated, appetite poor, urine scanty, no sugar or albumen present, marked artero-sclerosis oedema of both feet and legs: pulse one hundred to one hundred and twenty per minute, mitral insufficiency with dilation of the

heart, takes little food. For several weeks, from one to three pints of water had exuded from the feet and legs every twenty-four hours. The patient had been treated with iodide of potassium at various times, always with considerable relief, but he had been unable to continue the drug for any great length of time or in anything like the full dose on account of the gastric irritation which it produced. We began the treatment with ten grains of strontium iodide every six hours, subsequently the dose was increased to twenty grains. Within one week all the symptoms had improved. The cardiac functions were better performed, the asthmatic attacks had subsided, and within one month the patient was able to move about the house. The remedy has been continued about every other month during the year, and I have seen the patient at work in his garden within the past week.

From my observations of the action of the iodide of strontium, I am satisfied that it is safe to prescribe it as a substitute for the potassium salt, and while the dose is about the same, the remedy can be pushed to a dose far beyond the limit of safety with the potassium salt and that without fear of producing symptoms of intolerance.

Strontium lactate is a white granular powder, odorless, and has a slightly bitter, saline taste. Soluble in about four parts of water and freely soluble in alcohol; dose from five to sixty grains. Cases are reported where as much as one hundred and sixty grains have been administered with no untoward effects. The lactate has been often prescribed for Bright's disease both in acute and chronic forms, with excellent results. Constantin Paul concludes that it is indicated in parenchymatous nephritis, the rheumatismal and gouty forms, but is not useful in interstitial nephritis. Dujardin-Beaumez confirms these statements and says that when he had administered the remedy in cases of albuminuria, he has obtained uniformly a reduction in the quantity of albumen passed; that while it affects the most important symptoms favorably, it does not remove the pathological condition. The remedy possesses the advantage over other drugs in the treatment of this disease, in that it promotes the appetite, aids digestion and assimilation, and can be administered for a long time continuously with no bad effects.

In two cases of albuminuria of pregnancy, in which I have made use of the lactate, the most gratifying results have followed. In one case where there was severe headache, insufficient urinary discharge, general dropsy and the symptoms of uremia present, and where diuretics, purgatives and diaphoretics had signally failed to give relief, the lactate was substituted in fifteen grain doses every four hours, with a marked diminution of all the symptoms and with a decrease of more than one-half the amount of albumen excreted within forty-eight hours. The improvement in the general condition of the patients was noted from the beginning of the treatment.

In several cases of cystitis in the aged, due to hypertrophy of the prostate, the drug was given in connection with buchu with

marked amelioration of the symptoms. Although the lactate does not seem to possess any diuretic properties, nevertheless its action upon the urinary organs seems to be salutary in the extreme.

Professor Germain See, in the treatment of affections of the stomach, considers the strontium salts as far superior to the alkaline carbonates.

Bartholow states that the phosphate of strontium appears to rather improve the appetite, promote the activity of assimilation and increase the body weight. The phosphate more especially is a reconstituent, an agent having the power to increase the nutritive energies. Recently the salicylate of strontium has been highly extolled in the treatment of rheumatism. I have, however, had no experience with the drug.

For a number of years I have been satisfied that many of the untoward symptoms that follow the use of the potash salt in full doses, are due as much or more to the potash which they contain, as to the iodine or bromine. As we all know, potassium is always a poison, even in small doses when often repeated. In bromide of potassium, potash constitutes one-third of the salt, and when given in large doses it cannot fail but exert its toxicological effects.

Well known authorities have long ago demonstrated that there was far less danger in the use of the sodium than the potash salts.

If we have in the strontium salts, remedies that can be used in full doses and for a long time without the unfortunate effects that sometimes follow the use of the potash salts, it behoves us to give our patients the benefit of the fact.

A. J. H.

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## Medico-Eleemosynary Institutions.

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### ONTARIO INSTITUTION FOR THE DEAF AND DUMB.



THE instruction of the deaf enlisted the sympathetic efforts of philanthropists at a comparatively early stage in the history of this country, as the following list of Canadian schools for the deaf will show:

1. Catholic Male Deaf and Dumb Institution for the Province of Quebec, Mile-End, near Montreal, P.Q., opened 1848. Rev. Alf. Belanger, C.S.V., Director.
2. Catholic Female Deaf and Dumb Institution, Montreal, P.Q. (595 St. Denis Street), opened 1851. Sister Philip of Jesus, Superiress.
3. Halifax Institution for the Deaf and Dumb, Halifax, N.S., opened 1857. James Fearon, Principal.
4. Ontario Institution for the Deaf and Dumb, Belleville, Ont., opened 1870. Robert Mathison, M.A., Superintendent.

5. Mackay Institution for Protestant Deaf-Mutes and the Blind, Montreal, P.Q., opened 1870. Mrs. H. E. Ashcroft, Superintendent.

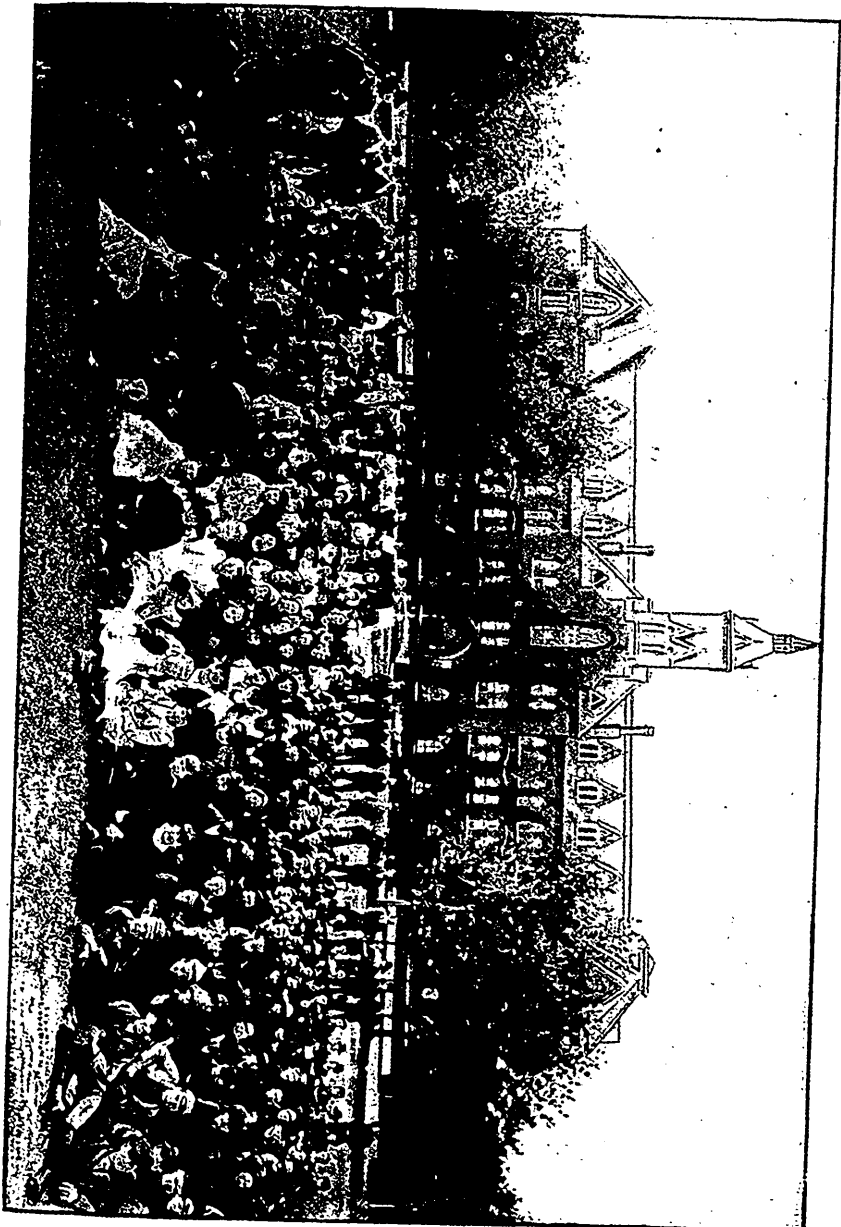
6. Fredericton Institution for the Education of the Deaf and Dumb, Fredericton, N.B., opened 1882. Albert F. Woodbridge, Principal.

7. Manitoba Deaf and Dumb Institution, Winnipeg, Manitoba, opened 1888. D. W. McDermid, Principal.

The most important of these schools, both on account of the value of the buildings and grounds, as well as the number of pupils, is the Ontario Institution for the Deaf and Dumb, at Belleville, Ont. It is simply a school for the education of the deaf, and children who are mentally deficient to such an extent that they are incapable of material advancement are not admitted.

A great many people have, unfortunately, a very erroneous idea as to the mental and moral characteristics and capabilities of the deaf. The first efforts towards educating the deaf were made in Spain and France some one hundred and fifty years ago. Previous to that time they were universally regarded as quite incapable of receiving instruction. In course of time, however, doubt and opposition vanished before the light of demonstrated results, and now every civilized nation in Europe and America provides facilities for the education of the deaf, although even to this day not a few people class the deaf with imbeciles and idiots. This is no doubt partly due to the seeming stupidity of the uneducated deaf, caused by their absolute dearth of verbal language, the consequent and necessary paucity of their expressible ideas, their inability to make hearing people comprehend even such ideas as they may wish to express and the shyness arising from their realization of this incapacity.

As a matter of fact, however, the deaf are in all respects similar to hearing people, with the one exception of their deafness; and even this deprivation is not so great as it seems, since it is to a considerable extent compensated by the abnormal development of some other senses. Of course there are among the deaf some stupid ones, and a few even more than stupid, just as there are, and in quite a large proportion, among the hearing; but in natural ability and mental capacity the deaf are fully up to the average of hearing people, and there cannot be found in any public school in Ontario a brighter lot of boys and girls than those at this Institution. The spectacle of these children assembled in the chapel, or in the class rooms, or on the playground, is an interesting and inspiring one. The loss of the one sense has induced the superlative development of the other senses, and their acuteness of observation, vivacity of manner, mobility of expression and lightning-like rapidity of movement, is a revelation to those unaccustomed to associate with them. In a great majority of cases the deaf are eager to learn, and they acquire knowledge with wonderful facility in view of the fact that they are deprived of the chief medium for its acquisition. In point of morals the deaf are perhaps superior to the hearing, not that they possess less inherent evil, but because their deafness, and



INSTITUTION FOR THE DEAF AND DUMB, BELLEVILLE, ONT.  
OFFICERS, TEACHERS AND PUPILS.



partial isolation, renders it more difficult for them to learn and to practise evil habits. As a rule the deaf are very susceptible to religious influences, and are much more reverent than hearing people, which is doubtless due to the fact that they do not hear sacred things so flippantly and familiarly spoken of as other people constantly do.

The educated deaf communicate with hearing people chiefly by writing, but with each other they converse principally through the medium of signs, and these they use with astonishing facility, the average deaf person being able to express his ideas in signs more rapidly than a hearing person can in words. The sign language is wonderfully and often eloquently expressive of the common sentiment and experience of life. It is, however, best adapted to convey concrete images, and is comparatively impotent to express abstract or abstruse ideas.

One of the many erroneous ideas prevalent relative to the deaf is that those classed as deaf-mutes are dumb in the sense in which they are deaf. They are deaf because of some defect in the organ of hearing. Many people think they are mute because their organs of speech are defective. This is by no means the case. With very rare exceptions the organs of speech in the deaf—even of the congenital deaf—are as perfect as in the hearing. They cannot talk simply because they do not know how. The process of learning to talk is by hearing others talk, and imitating them. If a hearing child were brought up under conditions which precluded it from ever hearing the sound of speech, it would be as mute as a deaf child, except to the extent to which it might imitate the sounds of animals and birds, and for exactly the same reason. On the other hand, if all the deaf children in Ontario had their hearing restored to them, doubtless all of them would in a short time be able to talk as well as other people. The older deaf persons, however, would have more difficulty in learning to talk, perhaps those well up in years could not learn at all, for the reason that their organs of speech would probably have become atrophied from life-long disuse. One of the most interesting processes in the education of the deaf is that of teaching such of them to talk as are capable of learning. This is a difficult and tedious task, however, and not always a satisfactory one, for, while perhaps twenty per cent. of them could be so taught, their speech, except in rare cases, is not easily understood by those unaccustomed to it, and is as a rule by no means pleasant to hear, since, being deaf, they have no guide by which to modulate their voice. This same defect is seen in people who lose their hearing late in life. In almost all such cases the voice, as years pass by, becomes more and more monotonous, indistinct and expressionless.

There are in Ontario, according to the census of 1891, about 2,500 deaf people, being about 9.97 to every 10,000 inhabitants, as compared with 5.74 in Great Britain and Ireland, 8.75 in Germany, 6.60 in France, and 24.52 in Switzerland. The causes of deafness are manifold. Of the 1,113 pupils who have been enrolled at the

CONVENTION OF GRADUATES OF THE ONTARIO INSTITUTION FOR THE DEAF.



Belleville Institution since its erection in 1870, 433, or nearly 40 per cent. of the whole, were congenital deaf-mutes; the others became deaf through illness or other causes. Scarlet fever is the most prolific source of this affliction, 77 having lost their hearing from this disease, 28 from brain fever, 21 from spinal fever, and 51 from various other fevers. Other spinal diseases were responsible for 42 cases of deafness in addition to 24 caused by cerebro-spinal meningitis. Simple colds caused 43 cases of deafness, measles 37, falls 22, vaccination 18, whooping-cough 15, inflammation of the brain 12, fits 10, and various other complaints from 9 to 1, while in 156 cases the causes were unknown or undefined.

Of those who became deaf after birth, 120 lost their hearing when one year old, 132 between one and two years of age, 117 between two and three, 63 between three and four, 40 between four and five, and so on down to 2 between fourteen and fifteen, while in 121 cases of those not born deaf the age was unknown.

The relationship of the parents of these 1,113 children was as follows: First cousins, 57; second cousins, 25; third cousins, 20; distantly related, 26; not related at all, 957; unknown, 38. These figures tend to controvert the prevalent idea that near blood relationship of parents is a chief cause of defects in children.

The numbers of deaf-mutes in families were as follows: Two families contained five deaf children in each, 5 families contained four each, 14 families contained three each, 71 families contained two each and 899 families contained one each. It might be well to say, in relation to the above statistics, that, while in the main no doubt correct and reliable, yet in not a few cases parents have been known to give false information, so that it is difficult to obtain strictly accurate data.

One of the illustrations accompanying this article is a photograph of the officers, teachers and pupils ranged in front of the main building of the institution. The other is a picture of the convention of deaf-mutes of Ontario, which was held in Brantford in 1896.

The duty of physicians relative to the deaf seem clear and well defined. There is reason to believe that there are in Ontario a considerable number of deaf children of school age who are not attending the institution, due either to the ignorance of the parents, their indifference to their children's welfare, or their selfish refusal to part with them. Every such case is doubtless known to the family physician, whose duty it is, in the interest of the child, to report the case to the Superintendent of the Institution, and to use his personal influence to induce the parents to send the child there at once. The condition of the uneducated deaf is a sad one indeed, and their sense of isolation terrible beyond the power of words to express; and every lover of humanity, as all physicians should be, should put forth every effort to induce or compel parents of the deaf to send their children to the institution, where they will be assured, not only of a good education, but of a comfortable home and the most kind and careful attention to every detail of their physical, mental and moral welfare.

G. F. S.

# The Canadian Journal of Medicine and Surgery

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VOL. III.

TORONTO, FEBRUARY, 1898.

NO. 2.

## Editorials.

### CHRISTIAN SCIENCE vs. MEDICAL SCIENCE.

THAT a great many people are afflicted with suppositious diseases is quite true, and that they are sometimes relieved by a faith-cure or by suggestions is also well known, otherwise it would be difficult to understand how the members of the Christian Science Church can contend that "since they had come to Christian Science, they found that God was sufficient; but that, prior to that time, they had been continually taking drugs and paying doctors' bills." What their diseases were is not specified; but evidently they were not amenable to ordinary therapeutic agents, for the complainants.

grew weary of paying for pharmacal and non-pharmacal preparations, which did not cure them, and elected to pay their money to a church, whose special office it is to heal "the ills that flesh is heir to." Their present condition of contentment and freedom from bodily ills contains a warning to the unwary clinician. Real diseases depending on the action of a contagium, a toxin, a chemical poison, or a degeneration of tissue, the Christian Scientists cannot cure and they know it well. When patients with functional complaints, such as fall to the lot of this healing church, appear before the physician, why prescribe useless medicines? Either the physician believes the patient's tale of woe or he does not. If the former hypothesis be true, then the diagnosis is faulty and the treatment by drug a failure. If he does not believe in the patient's representations, he should not waste good medicine in a sound stomach, when it is really a morbid imagination which requires treatment.

Would it not be more in keeping with science, if he were to hand over such a case to a specialist in hypnotism? Certainly this would seem to be a correct procedure, unless the physician is himself a hypnotist having such influence over his patients that, no matter what medicine he prescribes, the result he has expected invariably follows. This healing power is, however, due to faith in the physician and is only another form of suggestion.

The difficulty with many well-read, honest physicians is, that, being always serious themselves, they take the complaints of men and women in a thoroughly serious way, and so, through lack of discernment, prescribe for real diseases and imaginary ailments the same or apparently the same formulæ.

Now, however, when a church, with a total adult membership of 385 persons, an annual income of \$7,237.40, and a Sabbath-school, having an attendance of 65 children, flaunts its contempt for physicians and modern pharmacy in the daily papers, it is high time for practitioners to revise their therapeutics. Among some of the questions they might try to solve, it might be appropriate to ask themselves, since a large number of *bona fide* patients go or are brought to the hospitals, if it would not be profitable to devote more time to studying the idiosyncrasies of the patient, and less to reading about the action of medicines, and, again, if they would not be more successful, were they to cease treating some patients with good allopathic remedies, who could really be cured by some form of suggestion.

J. J. C.

THE NEW THEORY OF SEX DETERMINING.

WONDERS will never cease. During the past month the wonderful cable has been ticking a wonderful message, and across continents it has speeded and been recorded in all the daily newspapers. This message is from a scientist, Prof. Schenk, a man we should respect, a student, sincere, and we believe as much in earnest over working out his problem of "Sex Determining," as if he had discovered a panacea for all the ills that flesh is heir to. He has robbed the fairies and storks of their poetic mission. Little lives will come no longer, as Wordsworth taught us,

"Not in entire forgetfulness,  
And not in utter nakedness,  
But trailing clouds of glory do we come  
From God, who is our home,"

but will simply be little Moses, the product of brown bread and walnuts, or little Queenie, the assimilation of ice cream and chocolate caramels.

Alas! the disappointment if one walnut too little has been prescribed and a tiny queen asserts her right to reign, and despite the experiences of Hall Caine accompanies her breathing by a weeping solo, and the poor little expected Moses is lost forever to fame, and there is one "briefless" lawgiver less.

We are promised all the formulas of Prof. Schenk's treatment soon. After all, is science kind to us in revealing such prosaic details, and possibly giving a wider scope for blame to long-suffering physicians, in fact making them in a certain sense the arbiters of human destiny? All through the centuries the Divine Intelligence has been praised or blamed for the sex of the clay casket into which He breathed the wonderful vital principle we call soul. But from this time the credit or censure shall be given to oats, nuts, and barley! All, be they patrician or plebeian, must bow to the new deities. Well, it means much this new theory. "The Auld Kirk Lights" will have to revise their doctrine of election, or things will surely get "dreadfully mixed."

The responsibility of the physician, if this theory should prove a verity (so far, we are agnostics or know-nothings on the subject) is overwhelming to contemplate; to aid others in determining a life that may prove a dead failure and curse the day it was born, is not pleasant business. But we suppose this duty will belong to

Specialists, and so, the gods be praised, the old general practitioner need not have this new sin laid to his charge.

Soon everything we held sacred will become so material that the halo of reverence that has shrouded life will disappear, and perchance we may forget to strain our ears to catch an echo of the song the angels sang, heralding the birth of an Infant, the only music in His wondrous life. Few words tell the story of the most successful and brightest human life, and fewer still of the earthly life of The Perfect Man—"acquainted with grief." W. A. Y.

### MEDICO-LEGAL ASPECTS OF EMBALMING FLUID.

THE composition of embalming fluid is likely to prove of interest to physicians, now that it is beginning to be mentioned in connection with trials for poisoning by arsenic. There are different kinds of embalming fluid. The following are two of the common formulæ, used in its preparation:

|       |                                        |          |
|-------|----------------------------------------|----------|
| (1) ℞ | Arsenious acid . . . . .               | ℥ vi.    |
|       | Mercuric chloride . . . . .            | ℥ x.     |
|       | Alcohol . . . . .                      | f ℥ ix.  |
|       | Sol acid carbolic, 5 per cent. . . . . | f ℥ cxx. |
|       | Red aniline . . . . .                  | q.s.     |
| (2) ℞ | Pulv. Alum . . . . .                   | lb. v.   |
|       | Arsenious acid . . . . .               | grs. c.  |
|       | Water . . . . .                        | ℥ xxxij. |

Arterial embalming consists principally in the removal of blood from the vessels of the body, followed by the injection into an artery of a quantity of embalming fluid, sufficient to fill the arterial system. A limited form of embalming, practised in a good many cases, consists in the introduction of a certain quantity of fluid by the aid of a trocar and canula into the thoracic or abdominal cavity, or into both these cavities, the arterial injection not being attempted. In other cases the fluid is injected through the nostrils into the naso-pharynx, thus reaching the eyes, maxillary and frontal sinuses, and afterwards finding its way into the lungs and stomach. When the arterial system is filled with an arsenical fluid, it follows of necessity that arsenic will be introduced into the tissues of the stomach, liver, spleen, kidneys, and other viscera. Assuming then that an individual has been done to death by arsenic, it would

be in the interest of the murderer that the corpse should be embalmed arterially with a fluid such as one of the above, because for obvious reasons the subsequent discovery of arsenic in the viscera by a chemical expert would be of no legal value in showing that arsenic had been administered with criminal intent during the lifetime of the deceased. The proof that the deceased had been poisoned with arsenic would then rest on evidence of the symptoms, exhibited during the illness, which preceded death, and the post-mortem appearances of the mucous membrane of the stomach and intestines. Another important point is that the majority of the undertakers do not know the composition of the embalming fluids used in their business, as they purchase these articles from jobbers, who keep the formulæ secret. The arsenical fluids being cheap and reliable are most used.

Then there is nothing to excite suspicion in connection with embalming, which has, in fact, become quite common in Ontario. A good authority states that in cities and towns an average of 60 per cent. of the corpses of adults are prepared for sepulture in this fashion; in well settled country places, 40 per cent. These facts being known, it ought to follow, that a fluid quite as effective for the embalmer's purpose and devoid of objectionable qualities, from the legal standpoint, should be introduced. We understand that unobjectionable embalming fluids can be obtained at reasonable rates, and we have also been informed that such fluids are now used by Toronto undertakers.

At a joint meeting of Canadian and American executive officers of Health Boards, undertakers and baggage agents, held at Cleveland, Ohio, June, 1897, Mr. Hohenschuh, a prominent undertaker, stated that he had in every-day use, for embalming purposes, a fluid which is cheap, readily used, and wholly free from poisonous metals. This is a 40 per cent. aqueous solution of formaldehyde, which is now commonly used by sanitary authorities for disinfecting purposes. As an evidence of the suitability of this agent for embalming purposes, Mr. Hohenschuh stated that the body of a sheep, which had died of anthrax, and had subsequently been embalmed with formaldehyde, had been kept without offence for over two years.

This information is of sufficient importance to merit the attention of the Provincial Board of Health, and should Mr. Hohenschuh's statements be substantiated, it would be proper to advise the Provincial Government to introduce legislation, declaring the



use of arsenical or other dangerously poisonous fluids in the embalming of dead bodies to be illegal.

As an evidence of good faith the formula of every embalming fluid, used or sold in Ontario, should be sent to the Secretary of the Provincial Board of Health.

J. J. C.

### EARNEST HART, M.R.C.S., D.C.L.,

Editor of the *British Medical Journal*.

MEDICAL journalism throughout the world has sustained an irreparable loss in the death of Earnest Hart. For few, indeed, and benighted, are the portions of this Globe where the *British Medical Journal* has not been read and appreciated.

As editor of this journal, Mr. Hart deserves unlimited praise. When he became the editor its circulation could only boast of a few hundred; with his vacated editorial chair he has left an unrivalled medical journal, whose circulation is about twenty thousand—a credit to his ability, an honor to his name, and a boon to medical men throughout the world.

As a philanthropist, sanitary reformer, and *littérateur*, Mr. Hart has taken a high place among his peers. As a politician, he has done much useful work in the lobby of the House of Commons.

His ideas of medical journalism and journalists are unique. A few quotations from one of his addresses on this subject may prove of interest, as clearly setting forth in a concise manner his views:

“THE IDEAL QUALITIES OF THE JOURNALIST.—The ideal journalist needs to cultivate many qualities which it is not always easy to combine. He should have rapidity of initiative and promptness of decision, for slow deliberation is the grave of opportunity. He needs quick and catholic sympathy; for this is a great source of power; but a corresponding capacity for just indignation is its necessary correlative and qualification.”

“POWERS, PRIVILEGES AND PAINS.—With its privileges and responsibilities come many pains. Journalism entails much sacrifice. An editor needs, and must have, many enemies; he cannot do without them. Woe be unto the journalist of whom all men say good things. A man, says Oliver Wendell Holmes, whose opinions are never attacked, is beneath contempt. For every real thought on every real subject knocks the wind out of somebody. . . . Editorial work, like all other good work, is largely one of self-sacrifice. It is the grave of literary reputations and the despair of

literary ambition. In writing leading articles, as Washington Irving found in voluminous correspondence, "your mind is torn from you in strips and ribbons," which are scattered to the wind, and your thoughts leak out in dribbles which barely moisten the earth."

"LITERARY STYLE, ETC.—That brings us to the subject of literary style in medical journalism, which may be dismissed, however, in very few words. An editor is often asked by young writers: 'What style would you recommend me to adopt? and what advice can you give me for writing in your journal?' I don't know what your view may be, but it has always seemed to me desirable to recommend the avoidance of style, and to advise those who seek counsel on style, consciously to avoid it and to try chiefly to say what they have to say as clearly as possible, and to seek mainly the accurate expression of precisely the shade of meaning which it is intended to depict. It is a golden rule to think out clearly and precisely what there is to say, and to say it shortly and without ambiguity. People who are anxious about style are generally those who have little or nothing to say, and they are precisely those who take longest in saying it. It is generally difficult to say nothing without saying it at great length, and medical stylists are among the bores of the profession and the terrors of the medical journalist."

"We journalists need not be so much afraid of making a mistake from time to time. As your ambassador said not long since, at the Mansion House, London, to the great delight of his hearers: 'The man who never made a mistake never made anything.' We can all try to make as few as possible, but it has been truly said, that genius consists not in never making a mistake, but in never making the same mistake twice over."

As to the personality of Mr. Hart, he was of Hebrew ancestry. His wife had studied medicine in Paris, and we find during his late years he had great sympathy with the medical education of women. Although he showed great appreciation and capacity for the enjoyment of life, his hours were too full of work, and he found little time for recreation. One hobby he cherished—the study and collection of Japanese works of art.

The splendid stoicism of the man showed itself in the way he endured the amputation of his leg, and the calm courage with which he looked forward during his last days to death. Quietly the grim monster claimed him—he fell asleep like a tired child.

## PUBLICITY IN CRIMINAL TRIALS.

RECENTLY Canadians have been startled by the trial of a woman for procuring the death of her husband by the administration of arsenic, and the effect on the public mind has been all the more unpleasant because the trial was held in the ordinary way, women as well as men being present in the court in considerable numbers. The expert evidence given by physicians and a chemical analyst were listened to by the audience, and a perilous knowledge acquired, altogether unnecessary for their instruction or future happiness. On the following day, through the activity of the daily press, the evidence given in the little court-house at Cayuga was carried into thousands of homes. To what good? None, certainly, except to gratify an unhealthy and perhaps dangerous curiosity. Some readers of such evidence may have been tempted to commit such a crime, and may have refrained, not from the dread of guilt, but simply because they did not possess the requisite skill in administering the drug, in selecting the food or drink in which it may be most conveniently given or a knowledge of the dose that may be used at one time, so as not to excite the suspicion of friends or, perhaps the medical attendant. We hope that the growth of modern civilization and the teaching of Christianity will triumph over the suggestions of evil, which must necessarily rise in many minds from the acquisition of such dangerous knowledge. And yet are the men and women of our day so very different from the people of the last century, when poisoning was secretly taught in France by Signor Exili. That gentleman found very apt pupils in Madame de Brinvilliers and others, who, for revenge or with the hope of gain, were anxious that certain inconvenient persons should go over to the silent majority. In our days, owing to the development of life insurance, a great many persons are interested in the deaths of other persons, and it is not in keeping with propriety, that justice should light the way to crime, by showing with what facility and certainty death may be caused, through the administration of deadly drugs.

There is, however, one consoling feature in this blazon of crime through the court and the press, and it is that, though the knowledge of how to commit murder by arsenic may through the newspapers reach the eyes of thousands of readers, the antidote to such knowledge accompanies the poison, for the conviction must grow

that the associated sciences, which discover the use of poison as the lethal agent in any given case have vastly improved in recent years. Formerly, symptoms passed unrecognized, which nowadays would excite suspicion and lead to an inquiry. The existence of a sound knowledge in pathology, microscopic anatomy and toxicology must, therefore, be taken into account and read side by side with the history of the poison used to kill and the fact that it did actually cause death. Even supposing every precaution to be taken, and the competence of physicians to recognize symptoms of secret poisoning during the life of the victim or after his death acknowledged, the conviction must still grow on us, that it would be more politic if such a trial for murder by poison were conducted in camera. We are all imitative; vice or virtue, like good or bad manners, are more or less catching, so that a popular mania, even for forbidden things, is sometimes hard to control. In our day there is the morphine mania, which promises to become a great scourge. Then our readers also know that there are other popular, harmful manias, whose recent growth has been so great as to be a menace to our race.

Admitting the fact, then, that the development and growth of popular manias are, as it were, ordinary occurrences of human life, it is reasonable to conclude that, during trials for criminal poisoning, judges should not permit the dangerous knowledge of expert scientists to become the common property of the curious and the evil-minded, but, when the occasion arises, should not hesitate to exclude the general public or, at least, request the reporters to withdraw from the court.

J. J. C.

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### THE DEAF MUTES OF ONTARIO.

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WE are indebted to our correspondent "G. F. S." for the very instructive and interesting article on "The Ontario Institution for the Deaf and Dumb," which appears this month: the cuts for the accompanying illustrations are kindly sent by Superintendent Mathison. In one of the statistics, we notice that twenty-four cases of deafness are credited to cerebro-spinal meningitis, and twenty-one to spinal fever. These were, probably, all cases of cerebro-spinal fever, which as prevailed in an epidemic form, from time to time, in different districts of the United States and Canada.

The statement that eighteen cases of deafness were due to vac-

ination ought to be supported by any available evidence, and the unsupported assertions of parents or friends should be accepted with a due allowance for error or prejudice. If the truth of this charge can be demonstrated, it ought to be accepted as a valuable contribution to medical science. If the contrary is the case, it is mischievous, and may do harm by serving as ammunition for the army of anti-vaccinationists.

The statistic showing that in the Belleville cases blood kindred in the parents has not been largely operative in the production of congenital deafness in their children is noteworthy, as it is in opposition to the recorded experience of observers in other countries. Citations from American, Canadian, English, Irish, French, Belgian, German and Swiss reports could be given, showing a consensus of opinion among authorities on the influence of consanguine marriages in developing deaf-mutism in the children born of them.

It would be interesting to learn what the opinion of the Belleville Institution authorities may be as to the advisability of permitting marriage between former pupils. From the statistics of other schools, it appears that the law of heredity is adhered to in intermarriage of the deaf, and that such intermarriages are a fruitful cause of deafness, some authorities contending that an average of about 5 in 100 of the children born of deaf-mute parentage will be deaf-mutes, over against 1 in 1,500 of the general average of the community at large.

Even, however, if we accept these data it would be rather inconsistent to counsel the State to place restrictions on the intermarriages of deaf-mutes, whose infirmity may be due in the first place to a constitutional taint, unless we are prepared to take a similar stand against the intermarriages of the scrofulous, the tubercular and the syphilitic.

There can be no doubt that scarlatina is a direct source of deafness, because the inflammation which it causes in the nasopharynx of the patient occasionally extends through the Eustachian tubes to the middle ears, producing perforation of the tympana, and partial or complete loss of the ossicles. In other cases of scarlatina, the inflammation which extends to the middle ears, is not destructive in character; but a chronic, proliferating inflammation of the middle ears is established and deafness results. It can be affirmed, however, that in the treatment of cases of this disease the regular and methodical application to the naso-pharynx

of the patient of suitable gargles, sprays or washes would largely prevent such disasters. Should an inflammation of the middle ears occur, the patient should be treated by an otologist. After the termination of the disease the patient's hearing ought to be tested. Suitable treatment of the throat and nose should also be practised in cases of measles, whooping-cough, and all severe inflammations of the throat. The enforcement by the municipal health authorities of isolation and disinfection during outbreaks of the above mentioned diseases would also tend to reduce the proportion of cases of acquired deafness.

Parents should be cautioned against injudicious methods of cleaning the ears of infants and young children, particularly by screwing into their ears the twisted corner of a towel. The use of the ear-scoop should be forbidden, and only the gentlest syringing advised in suitable cases.

These details, touching some of the causes of acquired deafness in children, are mentioned here with the hope of aiding in the reduction of this terrible evil by preventive measures. Occasionally cases of catarrhal deafness are cured by treatment. Two pupils of this class were treated successfully at Belleville during the past year. Generally speaking, however, it may be said that, where the organs of hearing are so injured that deafness results, the mischief is irreparable. Certainly in congenital deafness treatment is useless.

By education, however, much has been done to remove the disabilities of the deaf and raise them to a high level of intelligence. To place the deaf on the same plane of power and learning as the hearing, is an object to be striven for by the teacher; but, owing to the impediments imposed by the pupil's deafness, the progress and development of deaf children must necessarily be slower and more tedious than is the case with hearing children.

Only an educator of the deaf, and an eloquent one at that, can give adequate expression to the changes produced by instruction in the mind of a deaf-mute. Rev. Dr. W. W. Turner, of the Hartford Asylum, writes: "The most intelligent deaf-mutes, after a careful inquiry made at different stages of their instruction, uniformly testify that they never had any idea of God or of their own soul previous to instruction; that they either had never thought on the subject, or, if they had, concluded that all things ever had been, and that death was the termination of existence."

To stretch forth a helping hand to such unfortunates, to lead

them, step by step, from the darkness of their prison into the sunlit world of thought; to place them in right relations to their fellow-men and the duties of life is indeed a very noble office. We cordially hope that the good work done at the Belleville Institution during the past twenty-eight years may continue, and that the results of its future may even surpass the very brilliant record of its past and present.

J. J. C.

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### ON THE INSTABILITY OF DOCTRINAL PATHOLOGY.

To the observing, reflective mind of every one who has passed through even but a few decades of experience in medicine, there is nothing more striking than the ever-changing dogmas of pathology. We have been led to this reflection by an important contribution, appearing in the *Edinburgh Medical Journal* for October ('97) on the subject of "Experimentation on the Spines of Lower Animals."

During the course of these researches the experimenters removed in sections, and completely, the whole spinal cord. But in none of these cases was there disturbance with digestion; there was no vesical paralysis, nor were the rectal reflexes in abeyance.

In the case of a pregnant bitch, she gave issue to a litter of pups, after the whole dorso-lumbar segment of the cord was removed. Irritation of the bladder or the rectum produced prompt contraction, although they periodically emptied their contents unaided. In the face of the "principles" of neural pathology, this seems a most remarkable contradiction. Where, indeed, are the spinal ganglionic centres, presiding over the motor nerves of the bladder, the uterus and rectum?

Authors have most certainly, with great care and minuteness defined the various sensory and motor areas of the spinal cord. And, of late years, these areas have been so elaborated and differentially designated, that the study of the brain and cord and their topography has become one of the most complex and difficult, for the student in anatomy. Long since, as far as traumatism are concerned, at least, the writer has repeatedly been able to demonstrate that the doctrine of "cerebral localization" has no foundation; and it appears now, from many recent clinic reports, that it is a most fallacious guide in pathologic conditions within the cranium.

The recent experiment referred to again revives our belief in the rather ancient doctrine of the duality of the nervous system; i.e., that the cerebro-spinal and sympathetic systems are separate,

and yet one; as the one evidently can reciprocally perform the functions of the other. Here we have the spinal neither cord cleared away, yet sensation nor motion is completely destroyed. How can we pretend to speak of "arm and leg centres" in the cerebrum, or say that this organ is the centre of the spinal senses, while, as a matter of simple demonstration, it may be entirely ablated in the pigeon, after which the biped freely moves the wings, walks and suddenly jumps on the firing of a pistol.

No, in all candour, it should be confessed, that, while many able hands have taken up the subject of cerebro-spinal pathology and much rich fruit has been the yield of patient and extensive research, it yet remains in an exceedingly obscure state.

The whole subject of cerebro-spinal localization rests on little more than vague speculation, and hence until a firmer basis is laid for it, it would be as well, though somewhat humiliating confession, not to designate it an established "doctrine."

T. H. M.

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**THIS, AT LEAST, THE DOCTOR CAN CLAIM AS AN ORIGINAL IDEA.**

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"DR. JOHN FERGUSON, the new chairman of the High School Board has made a discovery. He hastens, therefore, to enlighten his misguided fellow-citizens. The system of co-education of the sexes at the Collegiate Institutes, is, according to the Doctor, all a mistake. Parents, too, have found it out, and, if the Doctor is correct in his statement, object to sending their daughters to the high schools to be educated with the boys. This information will come as a surprise to many people, who have fondly imagined that the present system was altogether satisfactory, and on the lines of progress. Dr. Ferguson, however, suggests that an institute be established, to be devoted wholly to the education of girls. Even if it is true that there are parents who prefer sending their daughters to private colleges, it is still true that there are a greater number who have no such scruples, and who believe that there are advantages in the system of mixed education as better fitting, both the boys and girls, for the battle of life, after they have left the colleges. So far there does not appear the slightest evidence, outside of Dr. Ferguson's own imagination, that there is any necessity whatever for the change which he suggests. It would most probably be an expensive experiment, and one which would be found to be entirely unappreciated by the general public."—*Editorial Evening News, Feb. 3rd.*



## Items of Interest.

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### KEATS.

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WE all know something of Keats as a poet, but of his life as a medical student little has been said. We are indebted to the *British Medical Journal* for the following sketch:

"The history of Keat's medical education still needs elucidation. The main facts are sufficiently clear, but it has not yet been marked out in detail. He left Clarke's school at Enfield in 1810, when he had just completed his 15th year, and he was apprenticed at once to Thomas Hammond, a surgeon of Edmonton, where his mother was living after her separation from her second husband, William Rawlings. Keats was bound apprentice for the usual term of five years, and often revisited his old school, to which his master was the doctor. It is said that his fellow apprentices looked upon him as an idle, loafing fellow who was always writing poetry, and that after a time master and pupil quarrelled and the indentures were cancelled. This happened in the summer or autumn of 1814, and Keats entered as a student at the United Hospitals of Guy and St. Thomas, then located in the Borough. For the first winter and spring after leaving Edmonton he lodged alone at 8 Dean Street, Borough, and then for about a year, in company with some fellow students, over a tallow-chandler's shop in St. Thomas's Street. Thence he went, in the summer of 1815, to join his brothers in lodgings in the Poultry, over a passage leading to the Queen's Head Tavern. He was appointed dresser to Mr. Lucas, Surgeon to Guy's Hospital, March 3rd, 1816, and on July 25th, 1816, he was admitted a Licentiate of the Society of Apothecaries. The books of the Royal College of Surgeons make no mention of his name, so that he probably never attempted to obtain the diploma of that body. The statement that he quarrelled with his master Thomas Hammond is probably correct, for Keats was headstrong and pugnacious; but it is probably incorrect to assign the cancelling of his indentures to any such cause. Keats was merely following out the ordinary curriculum of a medical student of the time. The regulations of the Apothecaries' Society required attendance upon lectures as well as mere apprenticeship, and it was customary for a master to forgive his apprentice the latter part of his time to enable him to attend a general hospital. Thus Mr. Watson, Secretary to the Court of Examiners at the Apothecaries' Hall, states expressly in his evidence given before the Select Committee on Medical Education in 1834, that 'Although an apprentice is usually bound for five years, very few serve their masters for the full time;' and this is exactly the course taken by Keats. He was not a genuine practitioner of medicine, nor could he become one, for by nature he was otherwise inclined."

The world need not be sorry that he abandoned the scalpal to take up the pen to achieve such beauty out of words as expressed in his "Ode to Autumn," and the radiant musical charm shown in the "Ode to a Nightingale," and the "tenderness of passionate fancy" in the "Ode to Psyche," and the depth of feeling in that to "Melancholy." Neither his thoughts nor his heart were set on a medical career. While a student attending a medical lecture, he says:

"The other day, during the lecture, there came a sunbeam into the room, and with it a whole troop of creatures floating in the ray; and I was off with them to Oberon and fairyland." "My last operation," he once told Charles A. Brown, was the opening of a man's temporal artery. I did it with the utmost nicety, but, reflecting on what passed through my mind at the time, my dexterity seemed a miracle, and I never took up the lancet again."

"Whom the gods love die young"—In Rome, in the twenty-sixth year of his age, of consumption, he died. W. A. Y.

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#### DUCHENNE.

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FRANCE has done honor to herself by placing a monument to Duchenne in the Salpêtrière. This honor is due to one of the greatest clinicians and medical observers of this century. Duchenne made use of electricity for the purpose of studying nerve and muscle, and by so doing threw a new light upon the whole subject of neuropathology, which not only enabled him to demonstrate much previously undreamt of, but "enabled others to proceed along the paths which he indicated." Not only did he throw light upon pathological conditions, but added much to the knowledge of the physiology of movement, and action of the muscles of the body and face. A selection of his works has been translated by Dr. Poore.

W. A. Y.

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DR. G. S. RYERSON, of Toronto, has retired from political life.

DR. J. M. COTTON, of Lambton Mills, has moved into Toronto, and has taken the house occupied by the late Dr. Strange, on Simcoe Street.

WE fear that, judging from the last editorial on The Victorian Order of Nurses, appearing in *The Canadian Medical Review*, the editor is inclined to change his former views on that subject. Surely he was not one of the number who DINED at Government House.

## The Physician's Library.

*Degeneration.* By MAX NORDAU. Ninth edition. New York: Appleton & Co.  
*Genius and Degeneration.* A Psychological Study. By DR. WM. HIRSCH.  
 Second edition. New York: Appleton & Co.

Prof. Max Nordau is an exceedingly versatile writer. Indeed he possesses in a marked degree the peculiar aptitude, and some say the peculiar faults which are supposed to be inseparable from the journalistic profession. Like Cicero, one of the unrecognized fathers of journalism, this German writer is said to be ready and willing to write a profound treatise upon any given philosophical subject at a moment's notice. It is of such a book, written by him, that I am here concerned.

It has been darkly pointed out that Herr Nordau has written plays. More recently he has certainly written short stories, and the inference is that no possible weight can be attached to the philosophical conceptions of a man who has sufficient imagination to have written plays and stories. Universities look at him askance. The medical profession do not take him up with alacrity. Meanwhile his "irregular" work is being read all over Europe and America with an interest which heretofore no "regular" volume of erudition, countenanced by the universities, has been able to inspire, and with the result moreover that that phase of psychiatry with which Prof. Nordau treats has been popularized and brought clearly before the minds of those who are most affected by the matter, I mean the general public.

Both the subject in general and the book in particular deserve fair treatment; and it is not fair to waive the book aside unread with the mere remark that the author is a melancholy pessimist, or a superficial scribbler straining after sensation. The book, as a matter of fact, has two sides upon which it may be viewed, a scientific and a literary side.

Morel, of Rouen, appeared with his treatise upon mental, moral and physical degeneration more than forty years ago, and since that time there have not been wanting many succeeding works upon the subject, and notably the recent contributions of Lombroso. Coming in the footsteps of these men, and at this late day, Nordau cannot certainly be regarded in the light of a forerunner in a new province of science; nor has he in the work before us deduced any striking side issues, or to any extent amplified or deepened existing aspects of the subject. Indeed, it cannot even be claimed for him that he has summed up the main factors of the question as it stands to-day with anything like completeness, though he brings to bear a bewildering wealth of fact in support of his deductions.

Furthermore he has only loosely grasped the general idea of degeneration, as understood by Lombroso and his school, and more particularly as it refers to the intellect, and then, more as a *litterateur* than as a physician, has illustrated the steps of his reasoning from the world of letters and art familiar to the reader.

As a contribution to science therefore one must pause a little over this book, which is rather the work of a careful reader in these branches who has kept himself *en rapport* with his subject than of an original thinker who has brought forward as the result of careful and patient investigation, anything altogether new or palpably significant.

When viewed on the other hand from the standpoint of *belles lettres*, Prof. Nordau's work has a position altogether unique, and may be looked upon as one of the most powerful satires of the century. Whether its charm will be as lasting or not, its immediate effect is as powerful as was that of Cervantes' satire in an earlier day. Unlike the majority of German writers he is not dull or tedious, and every page of the large volume sparkles with brilliant persiflage and biting satire.

In somewhat the same spirit as Dante who, with a theological substructure for his poem, carefully grouped and classified his enemies in the most uncomfortable regions of hell, so Nordau, with a scientific basis of operations, arranges the objects of his displeasure (usually the morbid and decadent) in a scientific limbo quite as unevitable, and in this task he never loses the sympathy of the reader, for the reader himself has in all probability wished often in a vague way that the same offenders might be relegated to some such place.

The causes of degeneration are hurriedly set forth in the prolegomena. One would perhaps forgive a few pages of conscientious dullness here, for the principles of degeneration, only of late years beginning to be recognized as a definite law, are as important to the criminologist and alienist, and have done as much to illumine these branches of research as the principle of evolution (of which degeneration is merely the converse) has done for other fields of science. "Vice, crime and madness," said Féré with great truth, "are only distinguished from each other by social prejudice." And this can be said with equal point to-day. It is thus somewhat to be regretted that Herr Nordau was not more thorough and exhaustive in perhaps the most important portion of his treatise.

Poisons play a very important part in the production of degenerative changes, both narcotic and pathological—alcohol, opium and tobacco, tuberculosis and siphilis. The stress of life in large cities is another factor he mentions.

The second book deals with a clinical manifestation of degeneration which the author designates as mysticism, and the works of a large number of writers and artists are cited in proof of this theory. Beaudelaire and the French school; Rosetti, Swinburne and pre-Raphaelites in England are criticised at some length. The morbid tendencies of literature and art are pointed out and explained from the standpoint of degeneration. Of a somewhat different metaphysical nature is Ego-mania, with which the author deals in the next book, where Ibsen and Tolstoi appear in very bad eminence; while in the fourth book Zola and realism are considered and briefly dismissed.

This is not a polemic in the field of rhetoric or the beaux arts, however. The literature and art of Europe are merely assumed by Nordau to indicate more or less clearly the intellectual state of a people for whom such a literature is produced and who are delighted in such art, just as a barometer indicates the atmospheric pressure.

The prognosis and therapeutics with which the book concludes are like the first book which deals with the etiology, a little weak perhaps, though in both instances this may be more due to the fact that the book is addressed particularly to the general reader rather than to the medical profession, in which case much technicality or theorizing would naturally be undesirable.

In a word, then, Prof. Max Nordau's *Degeneration* is in the strictest sense

a clinical study of the intellectual degeneration of the close of the century. The stigmata of physical degeneration are sometimes referred to, it is true, but it is not with physical degeneration that the book specially treats, nor yet with moral degeneration. With matters of social morals, indeed, he does not very much disturb himself or the reader; though in his trenchant examination of Ibsen he seems to be rather opposed than in favor of some of the innovations suggested, and he makes the following sane remark upon the much-voiced marriage question which indicates the masculine common-sense of the writer:

"A serious and healthy reformer will contend for the principle that marriage should acquire a moral and emotional import, and not retain a lying form. He will condemn the marriage for interest, a dowry or business marriage; he will brand as a crime the action of married couples who feel for some other human being a strong, true love, tested by time and struggle, and yet remain together in cowardly pseudo-union, deceiving and contaminating each other, instead of honorably separating and contracting genuine connections elsewhere; he will demand that marriage be based on reciprocal inclination, maintained by confidence, respect and gratitude, consolidated by consideration for the offspring; but he will guard himself from saying anything against marriage itself, this bulwark of the relations between the sexes afforded by definite permanent duty."

Nordau's work, possessed of unusual literary charm, and having been eagerly read by all classes, as the romancé of the day might have been, it will for many years to come have a place of its own in literature as a brilliant philippic directed against some of the most dangerous tendencies of our own time. Perhaps it belongs rather to the domain of history than science. At all events, it is safe to say that with all its qualities it has, perhaps, more than any other book, stimulated thought among all classes in a direction that was imperative, and at a time when the need was greatest. Higher than this no book can aim. To this but few can ever succeed.

In many of the prosperous and even-lived, the sense of *bien être* is very well marked. The well fed and slow witted are generally optimistic. This large, influential and very respectable class are annoyed with anything that disturbs their turgid optimism. It is soothing to them to think that all the world is as healthy, and as well fed, and as comfortable, as they are, and any assertion to the contrary seems to them to be cruel and malignant, for it reminds them for a moment of conditions the very thought of which agitate reflexly the even peace of their quiet and contented minds.

And thus it happens that one frequently hears Cæsar Lombroso, of Turin, designated by these comfortable optimists as a wild hypochondriac, who has become half maddened by his evil researches in unlawful paths. His ideas are false and pessimistic. When Nordau appeared, it was easier to transfer the same epithets to him than to invent new ones.

At last Dr. William Hirsch arose as the champion of all quiet, comfortable and optimistic people, and in his book "Genius and Degeneration" essays to adjust all these unpleasant thoughts, dragged into indecent prominence by Lombroso and Nordau, and to put all that is unseemly out of sight again. Like a buxom maidservant in the disordered halls of respectability, he sets about his humble task, with even more enthusiasm than the menial referred to generally displays upon such a domestic occasion, but with somewhat less success. He has all the housewife's instinct for neatness, but the odds are great.

His book, which is a short one, is well written, but a little heavy on the whole, and perhaps a trifle superfluous, for after having read Lombroso and Nordau, one will find it a very poor diversion to hold the heavy works in his hand ready for reference, while taking up passage after passage the well-meaning and slow-moving Hirsch, also a German, but with the proverbial dulness and prolixity of the race, singularly lacking in Nordau, triumphantly refutes in turn each assertion of the peccant authors in question. The prospect is not enticing, and on the whole reminds one of certain collegiate exercises, once but never again to be endured. Dr. Hirsch speaks harshly of Lombroso, and of the hundred times he mentions Nordau by name I do not think he speaks once in a tone of sincere affection. An optimist should not show rancour, but all should be peace and unctuous joy, such as swells in the simple heart of childhood at an evening party. But, perhaps, it will all sound different in German, from which both books have been translated.

Dr. Hirsch has brought a large fund of information to bear upon his subject, and one cannot fail to be interested in his volume in spite of the disadvantage which always attends such feats of authorship. Time and time alone will sift all. Meanwhile it is not too much to say that Professor Max Nordau has performed a great service to his contemporaries, both lay and professional.

E. H. STAFFORD.

*The International Medical Annual, 1898.* Sixteenth year, 8vo, cloth, about 700 pages. Copiously illustrated, including thirty-six full-page plates, twelve of which are finely colored. Price \$3 net, post free. A work of reference for medical practitioners (alphabetically arranged). Combines the features of an annual retrospect with those of a medical encyclopedia. Each volume contains entirely new matter. New York: E. B. Treat & Co., Publishers, 241-243 W. 23rd St.

In announcing the sixteenth edition of the "Annual" we must again express our gratification at the cordial reception given to the last edition, which surpassed all previous records, and more than ever confirmed the estimate placed on this international work, as "the handiest, best arranged and best edited reference volume issued to the medical profession." The "Annual" for 1898 will contain many special articles of great interest, in addition to the regular summaries of the year's work in medicine and surgery, by thirty-eight editors, each contributing to the department with which he is specially identified. Among the special articles will be found one on "The Chief Pathogenic Bacteria in the Human Subject," with descriptions of their morphology and methods of microscopical examinations, by S. G. Shattock, F.R.C.S., the Pathological Curator of the Museum of the Royal College of Surgeons, London, illustrated by a series of ten finely colored plates; two contributions by Drs. Robert Jones, F.R.C.S., and A. H. Turby, M.S., on "The Obliteration of the Deformity in Pott's Disease," and on "Congenital Dislocation of the Hip," showing the technique in each case; both are freely illustrated, chiefly by reproductions from photographs. The work will be thoroughly illustrated by thirty-six full-page plates, twelve being colored, besides many illustrations, line and half-tone, incorporated in the text. We respectfully ask the continued patronage of the profession, that we may thus still further extend the "Annual's" circulation and usefulness.

E. B. TREAT & Co., New York.

The firm of W. B. Saunders & Co., of Philadelphia, are at present actively engaged in completing several very important works. Amongst them are Lehman's hand atlases, of which eight to ten will be published during the coming season. Each will contain a large number of colored plates, and will be placed on the market at a very low price. The American Text-Book of Genito Urinary and Skin Diseases will be out at the end of the current month. This book will contain also several well executed illustrations specially made for the work. Van Valzah and Nisbet's "Diseases of the Stomach" will also be out this month, as also Keen's "Surgical Complications and Sequels of Typhoid Fever," and Dr. Chapin's "Compendium of Insanity." The 1898 edition of the "Year Book," by Dr. Geo. M. Gould, is now ready, and the publisher sends us word that there are for it a still larger number of orders than even for '97, which beat the record. The following also comprise works which are in active preparation :

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

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

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

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

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

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

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

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

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

PUBLISHERS' DEPARTMENT.]

## SERUM THERAPY WITH REPORT OF CASES.

BY JOHN M. ALLEN, A.M., M.D.

THE announcement of the subject matter of my paper carries with it the idea that I would cover the field of serum therapy, but I shall confine myself to the use of antitoxic serum and its effects in diphtheria and phthisis pulmonalis.

The curative effects of antitoxic serum in diphtheria is now so well established that there is no need of argument or detailed report of cases to establish its benefits in this disease to the medical profession. Hence I give only a summary of my cases. I have treated fifty-three cases of diphtheria without the loss by death of a single case. Forty of these cases were treated with serum only, cleanliness and good food. The remainder had had other treatment before I saw them. The complications which occurred among these cases were as follows: Hoarseness, seven; five of aphonia; two of toxemia; one of broncho-pneumonia, resulting from the extension of the membrane into the bronchi; one case of paralysis. No operative interference was needed. In none of these cases of complication did I see them before the third day. All of the cases which I saw within the first twenty-four hours recovered without complication. Hence it is my opinion that cases seen thus early rarely have any complications.

My mode of administering the serum is to begin with a full dose the first day; two-thirds the next day; one-half the next day, in mild cases. If the case is of malignant variety, I repeat full doses of serum every ten hours until improvement begins. Then lessen the dose, and give from two to four more. This repeated administration of the serum is based on the fact that the bacilli may be found in the fauces for several weeks after the membrane is thrown off.

It does occasionally happen that the larynx has been attacked a week or ten days after the membrane disappears from the fauces. But where the remedy is continued as directed above, the bacilli are either destroyed or are so attenuated as to lose their vital energy. It is my opinion that the serum has immunizing properties, because I injected it into seven children who were dangerously exposed to the disease. None of them had it. The dose used was full size.

I have treated four cases of phthisis pulmonalis with Paquin's antitoxic tuberculosis serum.

*Case 1.*—June, 1894, Mrs. D., age 32, mother of one child, presented herself for treatment and I found her in the following condition: Hereditary tendency to phthisis, had gradually lost flesh and strength until reduced from 115 pounds to 75 pounds, in a



period of about twelve months. Severe cough and expectoration for about last seven months. Sputum had been examined about four months before I saw her and found to contain bacilli tuberculosis. At the time of my first visit she stated that she had had hectic fever and colliquative sweats daily for some time. Temperature 103.5, respiration 37, pulse 98. Entire loss of appetite. Sputum under microscopic examination found to contain large quantity of bacilli. Auscultation and percussion located two spots in upper portion of right lung that were impervious to air. There was no evidence that the tissues had broken down.

I began the treatment with Paquin's antitoxic tuberculosis serum, giving ten drops by hypodermic injection, increasing the dose within three days to a dram, which was continued daily for 120 days. After which for another 120 days it was given every other day. After this it was given three or four times a week for the remainder of the year. This treatment was supplemented by the following prescriptions:

|                   |           |       |
|-------------------|-----------|-------|
| ℞ Creosote.....   | xxiv gtt. | 1 30  |
| Tr. cinnamom..... | ʒiv       | 16 00 |
| Glycerin.....     | ʒxx       | 80 00 |

Sig. Teaspoonful, gradually increased to five teaspoonfuls, three times daily before eating.

|                       |      |            |
|-----------------------|------|------------|
| ℞ Oil eucalyptus..... | ʒi   | 4 00       |
| Oil cassia.....       | ʒi   | 4 00       |
| Creosote.....         | ʒi   | 4 00       |
| Oil tar.....          | ʒi   | 4 00       |
| Liq. vaselin.....     | q.s. | ʒiv 128 00 |

Sig. Inhale in nebulizer frequently.

By the end of the third week her appetite began to return, hectic fever ceased, cough and expectoration gradually ceased and in less than six months she weighed 120 pounds. From the end of third month the bacilli began to be attenuated and continued to decrease in size and number until the end of the fifteenth month when none could be found in the sputum nor has there been any since. The points of dulness in the lungs have greatly decreased in size, but have not entirely disappeared.

Case 2.—July, 1895. Unmarried lady, age 26; hereditary tendency to phthisis. Had been an invalid for five years, visiting many climates in search of health. When presented to me I found her in the following conditions. Extreme emaciation, loss of appetite, hectic fever, chronic diarrhoea for the last fifteen months; pulse 110, evening temperature 103.5, respirations 45; auscultation and percussion revealed a large abscess in apex of right lung. Mouth covered with aphthæ. Sputum loaded with bacilli. My prognosis was that she would not live sixty days. She was placed on the same course of treatment as Case 1. At the end of four

weeks hectic fever had ceased. Her appetite had returned. Diarrhoea very much better, and entirely ceased before the sixth week. She steadily improved until the end of the fifth month, when a thrombus formed in the left femoral vein, from which she died thirty days later.

*Case 3.*—December, 1895. There had existed for five years a tubercular deposit in the apex of the right lung. Childbirth caused it to rapidly break down. Microscopic examination showed tubercular bacilli. Began treatment and continued irregularly two months. This case was refractory to treatment from the beginning; therefore was not benefited and died at the end of five months.

*Case 4.*—March, 1896. Male, age 22, of good proportions. Had hemorrhages several times during the preceding year. Progressive emaciation; weight 130 pounds, appetite not good. Evening temperature 101.5; respiration 34. Auscultation and percussion indicated tubercular deposits at two points of upper right lung. Microscopic examination of sputum showed an abundance of bacilli. Began treatment as above, and within three weeks patient began to improve, which continued without interruption until he was compelled to leave me, September, 1896. At this time temperature normal, respirations 22, weight 150, appetite good. Sputum contained attenuated bacilli. When last heard from he was at work on a ranch in Colorado.

In an analysis of the above cases it is fair to conclude that if this treatment was begun before the structures began to break down, it would be certainly beneficial and possibly curative. After abscesses have formed it is beneficial but probably not curative. Yet if the disease is not too far advanced in the second stage, many could be cured if supplemented by climate influences.

In estimating the curative value of the remedies used, the inhalation of germicidal remedies is certainly in the right direction; but alone they are useless. The creosote has for years had some reputation as a cure for phthisis. That it is beneficial, there is no question; but it is not curative, for the reason that it practically has no effect on the bacilli. This I have many times demonstrated by microscopic inspection of sputa in patients in my clinic at the University Medical College of Kansas City, who had taken large quantities of it. Creosote is beneficial in two ways. 1. It reduces the toxins in the blood, thereby lessening or preventing hectic fevers and colliquative sweats. 2. In a very large percentage of cases of phthisis pulmonalis next to the lungs the most frequent structure involved is the duodenum with chronic inflammation and ulceration. This interrupts intestinal digestion and assimilation, also often by reflex irritation interrupts stomach digestion. Hence is the progressive emaciation in phthisis. Creosote stands at the head of the list as a curative remedy in this pathologic condition, thereby increasing the digestive and assimilative force of the person.

With these facts before me I must conclude that the active force in affecting the bacilli was the serum. The next question is as to the

effects of the serum after entering the blood. On this point many theories have been advanced.

I abstract the following from an address delivered by Dr. William Carter, of Philadelphia, before the Pan-American Medical Congress, 1893. "That blood serum is a powerful and active therapeutic force is just now beginning to be recognized. Landois discovered more than twenty years ago that the mixing of the blood of different animals resulted in the destruction of red corpuscles." Recently Dr. Carter by experiment has established the globucidal property of blood serum beyond question. He has further demonstrated that the serum of some animals are destructive to the life of others. Mettall and Buckner have shown that the blood serum of certain animals, which are refractive to certain diseases, is highly destructive to the bacteria that caused the disease. This shows that there are other forces in the blood which are destructive to bacteria, besides that of Metchnikoff's theory of phagocytosis. It is also well established that animals, naturally susceptible to certain diseases, can be immuned to those diseases by injection of the blood serum of animals either naturally immune or rendered so artificially. That the injection of blood serum of immune animals after infection has taken place will destroy it and terminate this disease is true.

That serum has globucidal and germicidal properties is well established. Its globucidal effects can be well understood, but whether its germicidal effect be by actual contact or by destroying the entity upon which the germ lives and develops is doubtful.

In view of the fact that the life and development of the germ depends as much on its environments as that of the human family, and further that its life and development ceases as soon as the pabulum upon which it lives is consumed or destroyed, we deduct the idea that serum destroys this pabulum, thereby terminating the life of the germ. This is proven by the natural history of all the contagious diseases, first by their being self-limited, secondly by the fact that one attack in the majority of them immuned against a second, no matter how badly we may be exposed to the contagion. Indeed inoculation will not produce the disease. For no other reason than the entity upon which the germ lives and develops has been eradicated by previous attack. When serum is injected into the blood to immunize the person, it is done before there exists any germs in the blood; therefore, not for its germicidal effect. The only phenomena observed is a slight reaction attended with elevation of temperature. Hence immunity is nothing more than the eradication of this entity upon which this germ lives and develops. I give as an example, smallpox. After the person has been immuned from the disease no difference can be detected by the microscope or otherwise between the immune person from smallpox and the one who has not been. The blood, the secretion and exhalation are exactly alike. I think this holds good in all germ contagious diseases. We see this exemplified in the following

process of fermentation, acetous, venous, alcoholic. The bacterial ferment lives and develops as long as the fluid element contains the essentials necessary for its life, after which it dies and no further germ life can exist in this fluid. The same is true of all culture media.

Hence it is my opinion that the curative effect of serum is indirectly germicidal by destroying an entity, which is necessary for the life and development of the bacilli. This is manifested in the fact that after its use the bacilli becomes attenuated; and from the further fact that many of us do not possess this entity. Hence the bacilli can not develop in our structures.—*Jour. Am. Med. Assn.*

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### THE ARTIFICIAL FEEDING OF INFANTS.

BY EDWARD AMES ROBINSON, M.D., PHILADELPHIA, P.A.

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THE subject of infantile feeding and nourishment is one that commands the attention and study of all physicians, by virtue of its great importance and direct bearing on the survival of infantile life and health.

Every physician when brought into contact for the first time with a case of an infant to be artificially fed cannot but feel his incompetency to satisfactorily manage the case. Therefore would I urge the indefatigable study of infant feeding, especially as it is so intricate in its many details, requiring much patient study and experimentation to master.

In the first instance every case where artificial feeding is to be employed should be individualized and studied as such. There is no class of cases where empirical prescribing is more harmful and positive detriment to the patient is sure to result.

One food will meet all that is desired in a certain case, but in another case the same food may cause gastro-intestinal disturbances, which cannot be controlled until the food is changed.

How often have we all seen an infant thrive and give every appearance of robust health after being fed on a diet that has been entirely assimilated, and on the other hand, we have seen another infant that had been fed on the same food lose flesh and grow marasmic from mal-assimilation. The paradox cannot be attributed entirely to defectiveness in the constituents of the food, but to the powerlessness of the gastro-intestinal secretions to act physiologically and appropriate the various ingredients of the food as a whole, to the nutrition and development of the body. It then became our imperative duty to study each case alone and adopt for its use the food that *in toto* will meet the exigencies in the individualized case.

In considering the many factors that are concerned in the nourishment of an infant, one of the most important to keep in

mind is the capacity of the infant's stomach. Of this fact very few who have the care of infants have any correct idea.

You will find that the prevailing notion is to let an infant take as much food at each feeding as it wants. The difficulty in overcoming this erroneous and pernicious custom deters many physicians from giving exact instructions to mothers and nurses as to the amount of food to be given at each feeding. But I hold that it is the duty of every physician who really has the interest of his patient that he should have to specifically state to mothers and nurses the exact amount to be given at each feeding, and to intelligently explain the limit of capacity of the infant's stomach.

If this is made a rule of practice and persistently adhered to, you will find that the vomiting of the excess of food, which is so common, will cease, and the infant will be spared the discomfort and oftentimes the suffering of an over-distended stomach. And also the mother will be saved the unnecessary labor of frequent changing of clothing and washing of clothes.

Another prolific source of trouble in the feeding of infants is the too frequent giving of food.

And here again you will have to break down an old prevailing notion that when an infant is irritable and sleepless that it must be given some food.

The fallacious idea is very firmly fixed in the minds of the people in general, and it will require a strong purpose on the part of the attendant to insist that his orders in regard to feeding are strictly observed by those in charge of the infant.

I am convinced, beyond doubt and without prejudice, that more infants cry because the limit of capacity of their stomach has been over-reached than from any other single cause.

Try to teach the mother to closely watch the baby for symptoms, which will be the expression of any abnormal condition that may exist, rather than to accept that simply a cry is the desire for food. If you will take the trouble to reason with an intelligent and interested mother in regard to the management of her offspring, she will prove an apt scholar and will greatly assist you in discovering diseased conditions, when they really exist, and you will be wonderfully aided in reaching a direct diagnosis and administering proper treatment.

The selection of a suitable food from among the large number of artificial foods is oftentimes associated with many difficulties.

To find food that contains in the proper proportions the ingredients which are necessary to sustain the normal nutrition of the body and which at the same time is palatable and easily digested is not so easy as at first thought might be supposed.

If we would want to use cow's milk we have the constant fear that bacteria which permeate the atmosphere, and also are found on the hands of those who handle the milk, will contaminate the fluid and thereby give rise to intestinal disorders in the infant. Of course it can be sterilized and rendered thereby entirely free from

bacteria, but the necessary labor to the mother and the process of sterilization, being somewhat complicated, it cannot be entrusted to the ordinary mother or nurse; especially true will this be found among the poor.

But, on the other hand, think of the simplicity of the preparation for feeding of the commercial food. Any mother or nurse, be she ever so inexperienced, can make in a few minutes a food absolutely free from contamination of any kind, sufficient for one feeding, the temperature of the proper degree and containing all the essential elements of nutrition.

I contend that inestimable advantage is secured to the infant by an artificial food closely approaching in its constituents mother's milk.

With cow's milk the proportion of fat, proteids and sugar are variable, and of necessity, must continue so because of the various sources of milk supply.

But in a good artificial food we can have invariable proportions of each ingredient at each feeding, equable temperature and free from chemical changes.

Early this summer, in the treatment of several cases of gastro-enteric catarrh, and later in a large number of cases of *ci. olera infantum* and enterocolitis, I employed "Eskay's Albumenized Food" exclusively.

My reason for using this special preparation in preference to others was the results obtained were so uniformly satisfactory that I was compelled to believe that an almost perfect substitute for mother's milk has been found.

In all other cases of the character previously mentioned there was not one instance in which this food was rejected by the stomach.

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## A PROMINENT MEMBER OF THE MEDICAL PROFESSION

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"Then the generous Hiawatha  
Led the strangers to his wigwam,  
Seated them on skins of bison,  
Seated them on skins of ermine.

And the calumet, the peace-pipe,  
Filled and lighted for their smoking."

DR. ORONHYATEKHA was born at the Six Nations Reservation, near Brantford, Ont., in 1841. His education was begun in an Industrial school established by the New England Company for the training of young Indians, and continued at the Wesleyan Academy, at Wilbraham, Mass., Kenyon College, Ohio, Toronto University and at Oxford University, England.

Even as early as Kenyon College days we find in the character of Dr. Oronhyatekha, evidences of that shrewdness, boldness and

ability as an organizer, that has marked his entire course. Apropos of these characteristics is a story coming from his college associates to the effect that, finding his limited exchequer nearly depleted at the end of one term and the chances for another consequently at the vanishing point, he organized an Indian show. With one "really" Indian and several of the most raw-boned white men he could induce to receive instructions in war dances, songs, and blood-curdling war whoops, and be painted and feather-trimmed to suit the requirements of the show, he put in the vacation "starring"



ORONHYATEKHA, M. D.

through the country, with the result that the next session found the young showman, in the language of the street, with "money to burn."

It was while Oronhyatekha was a student at Kenyon College that the Prince of Wales made his memorable visit to Canada. The Chiefs of the Six Nations deputed him to deliver an address to the son of the "Great Mother," as they called the Queen. The impression the young Indian made upon the Prince and the royal party was so favorable that he was invited to continue his studies at Oxford, England, under the care of Sir Henry Acland, Bart. Regius Professor of Medicine, and out of this relation of teacher and pupil sprung a friendship that will likely last to the end of life.

For some years Dr. Oronhyatekha practised medicine in London, and elsewhere in Ont. However, a broader field of activity soon

claimed his splendid administrative ability and practical methods—we refer to the organization of the Independent Order of Foresters, with which his name has been indelibly inscribed.

Oronhyatekha, as he prefers to be called, is a familiar figure to all, especially in Toronto, at present his headquarters. He moves among us a noble and inspiring tribute to the advantages of liberal education, and a connecting link between the present and the past in the history of Canada, inasmuch as he blends in his interesting personality the physical perfection of the race whose shelter was the grand forest primeval of our land, with the culture of the nineteenth century man of affairs.

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### TESTS FOR DIPHTHERIA ANTITOXIN.

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THE tests employed for the estimation of the potency of antitoxic serum are only of value when the toxin employed for the investigation is the same that was employed for the inoculation of animals destined to furnish the antitoxic serum. Ignorance of this fact has prevailed until very recently, and it may be said that there are but few members of the profession that are as yet aware of it. A number of months ago tests of various makes of antitoxin were made in a laboratory, and one of these was found, according to the reporters, to be below the standard claimed.

We can most readily see the worthlessness of the results arrived at when we consider what occurred to Dr. C. T. McClintock, of Detroit (*Med. News*, October 30th, 1897.) We quote his own words: "It has been recognized for some time by every competent observer that our tests are very unsatisfactory and unreliable. One bacteriologist would report that a given serum contained only a half or a third the number of units which another had found. Several months ago I had a bottle of serum divided into four equal parts. One of them was sent to a bacteriologist at Ann Harbor, another to Detroit, another to Philadelphia, and the fourth to New York, with requests for an accurate test of the number of antitoxic units in each cubic centimetre. Every one of the bacteriologists to whom this serum was sent has had large experience in testing antitoxin. The reports made were as follows: (a) 150 units per c.c.; (b) 175 units per c.c.; (c) 100 units per c.c.; (d) 250 units per c.c." Dr. McClintock goes on to say that "there is nothing strange in such variations, if we remember that the foundation of the test is the strength of the toxin, or in other words, the lethal dose of a poison." Further on we find that "at the Berlin control station they have had the same experience, and finally concluded that the test was wholly unsatisfactory and abandoned it, or rather modified it."

It has also been found that serums of a high potency very rapidly lose their antitoxic power, and at the Behring Laboratory



they have ceased to place on the market any that contains more than 250 units per cubic centimetre.

There is another factor of importance, however, which McClintock does not mention, and which is a source of fallacy in the application of any test upon animals. It consists in the fact that there are animals which, like men, show idiosyncrasies in regard to poisons of any nature, that an animal is frequently found which will show an astonishing power of resistance, or an extreme sensitiveness. If such an animal is employed for a test it will of necessity produce an erroneous conclusion. These idiosyncrasies make it absolutely impossible, with living animal reagents, to arrive at mathematical conclusions.

Again, a third factor of interest exists. This consists in the fact that, according to Madsen, of Norway (*Uni. Med. Jour.*, April, 1897), and others, "it is not easy to secure a constant production of the diphtheria toxin; although he used a very virulent species, the cultures in bouillon gave very different results, to variations occurring without any known reason." He also found that when toxins from different laboratories are employed to test the serum, the result is different, even when the lethal minimum dose of the toxin is accurately determined. A serum, which is calculated in one laboratory to be of 100 units, may in another laboratory, where the toxin is different, only reach the force of 30 units.

More could be said, but it appears unnecessary, to prove that the tests upon which certain makers pride themselves, have absolutely no character of reliability.

It has lately been stated that in New York the State health authorities would soon begin to test all the makes of antitoxin found in the market, at regular intervals. We welcome the idea, which is a praiseworthy one, providing the tests are so conducted as to eliminate all possible source of error. The only way in which this can be accomplished, it would seem, is the following: The State Health Board should furnish its own toxin to the makers, and thus enable them to test their product with it before sending it upon the market. And here we may add that each test should be conducted upon more than one animal, to save against error by idiosyncrasy.—*N. Y. Pasteur Bulletin for December, 1897*.

The first issue of the *Philadelphia Medical Journal*, under the able editorship of Dr. Geo. M. Gould, came to hand a month ago. It is quite unnecessary to add anything to the many words of praise already accorded this publication further than to say that it must of necessity have a very bright future before it, the material being of the very best, well illustrated, and the typography most attractive. We welcome it as one of our most appreciated exchanges.

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## THE THERAPEUTIC ACTION OF QUINALGEN.

BY DR. GOLINER, ERFURT.

Translated from the "Reichs-Medicinal-Anzeiger," 1893, No. 4.

DR. VIS, of Freiburg, has recently succeeded in producing a derivative of Quinoline, viz., Quinalgen, which seems destined to act as a first-rate Nervine. The more or less severe pains which occur in various nerve diseases certainly justify in searching after new, reliable anti-neuralgic remedies. True, our medical treasury is not exactly poor in such remedies, we may mention Antipyrine, Phenacetine, Exalgin, etc. However, every medical man probably knows by experience that many nervous troubles obstinately resist these remedies, and in those cases where real effect has once been obtained the case becomes complicated with all manner of disagreeable symptoms, often such as collapse, inordinate perspirations, cyanosis, palpitation and the like. We therefore welcome any remedy which, without being subject to the said ill effects, acts promptly as an anti-neuralgic.

The chemical factory of Dahl & Co., in Barmen, some time ago, placed a quantity of Quinalgen at my disposal for experimental purposes. I have employed the same for typical neuralgia, *Tabes dorsalis*, and migraine, and with what result may be seen from the following reports of cases:

1. A merchant, 36 years old, without syphilitic taint, suffered two years since from excruciating pains in the right thigh. Later, attacks of pains also occurred about the stomach, which were combined with visceral Neuralgia and with *Incontinentia alvi*. At the same time infirmity and weakness occurred in the legs. The sexual functions were nearly extinguished, pain in the waist, creeping sensation and itching in the legs. There was distinct ataxy but good motorial energy. When the eyes were shut the patient staggered, and there was a decided want of feeling as far as the navel and a lowering of the tone of the muscles. There was also failure of the plantar reflex, of the tendon reflexes and slight ataxy in the upper extremities. The eyes showed myosis and reflective rigidity of the pupils.

The treatment with the faradic pencil certainly improved the visceral neuralgia after a few weeks, but the effect was only temporary. The patient took, morning and evening, a gramme of Quinalgen, and in three days felt a decided improvement; the feeling of pain in the waist and the stinging pains disappeared altogether, after the patient had taken two grammes Quinalgen daily for a fortnight.

2. An old labourer of 50 complained of excruciating pains in both legs, twinging and tension in back, feeling of tightness under the ribs, weakness and infirmity in the legs and likewise in the arms, and tickling in the feet. Patient could not walk safely in the dark. The diagnosis showed oscillation when the eyes were shut, distinct ataxy, sense of touch partially destroyed, muscular feeling in the toe and ankle considerable reduced. The reflex action in the legs failed. slight paresis of the bladder, unsteadiness of the arms and reduction in the sensitiveness of same. The pupils narrow, react very slowly when light is thrown upon them. Sexual desires have been extinct for a year. In this typical case of *Tabes*, electric treatment was also commenced, the effect however was very unsatisfactory. Certainly the neuralgic pains and the pains in the waist decreased, but only for a time. The infirmity of legs and arms would not pass off, and severe headaches set in. The

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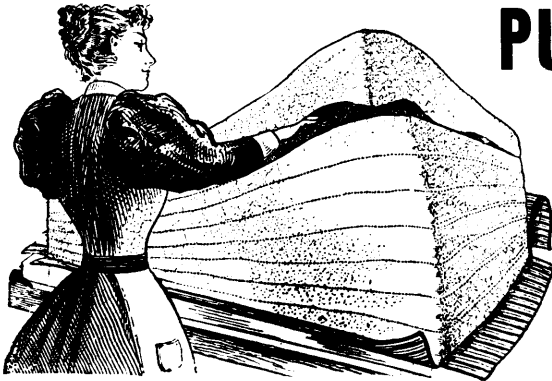
**AND SUPPLIES THE NEEDED NUTRITION**

*Unguentum Resinol* should be readily obtained at any drug store, as it is carried in stock by wholesale druggists and jobbers in medicines everywhere.

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If you wish to try one, write us the exact inside measure of the bed and the name of your nearest dealer.

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patient was then put on to one gramme Quinalgen twice daily. In two hours considerable relief was experienced, the headache ceased, and in the evening the sleep was quieter. Fourteen days later the patient was free from all pain, having taken altogether thirty grammes Quinalgen.

3. An old merchant of 44, free from Lues, had complained for some time of severe pains and weakness in both legs, followed later on by want of feeling and coldness in the soles of the feet and the feet generally, creeping sensation and itching in the back and in the leg, and also pain in the waist. The motions were slow, urining difficult, the sexual instinct entirely wanting. Loss of sleep in consequence of the severe pain. The examination showed severe ataxy. Oscillation when eyes shut, unsteady walk, loss of the sense of touch. The reflex action failed in the legs, but was present in the skin. The patient was treated in a clinical hospital with the faradic pencil for several weeks, the result was satisfactory at first, as regular sleep came on, the pains lessened and the disturbances in the sensibility came back. This condition did not, however, continue. After some weeks the stinging pains and tightening of the waist re-appeared. He now took daily, morning and evening, one gramme Quinalgen, and noticed in four days considerable improvement. No stinging pains, or feeling of tightness in the waist.

It is worth noticing that all three tabetic patients endured the Quinalgen without any unpleasant by-effects and spoke highly of the sedative effects upon the headache.

The Quinalgen has proved itself an excellent Anti-neuralgic in the following case of Neuralgia Quinti:

4. A labourer of 18, had for years complained of faceache in the right side, which troubled him twice yearly, in the spring and autumn. The pains which were situated on the right side of the forehead, and in the right eye, came on in the morning about 7 o'clock, increased till noon, reached their utmost severity about 4 o'clock in the afternoon, and disappeared about 7 p.m. No pain during the night. No change in the chest and lower organs of this powerfully built and well fed young man could be observed. The right half of the forehead seemed somewhat more highly colored than the left, and slightly swollen. Conjunctiva colored red on the right, heavy secretion of tears, the right upper eyelid drooped, and in sudden strong light the patient quivered in consequence of the severe pain. Over the entire right half of forehead there was decided hyperalgesia, and there every touch was felt more than on the left side. The patient received, morning and evening, one half gramme Quinalgen, and felt in two days a pleasant free feeling in the right half of face: the pain had completely disappeared.

Finally, I also succeeded in three cases of migraine to remove the idiopathic headache, after several days use of one half gramme Quinalgen twice daily. Considering that this stubborn nervous complaint constantly recurs, sometimes defying every treatment, it must be said that any therapeutic results from a new remedy is welcome.

Dr. Vis's Quinalgen is therefore an excellent Nervine, which deserves in a high degree, the attention of all practitioners.

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In the January issue of this Journal there is an appeal from Mr. Hart, the dietetic specialist, to the medical profession with important information, that should be read by every medical man, corroborated by the testimony of eminent physicians in London, England, New York, Chicago and Minneapolis, Minn.

## There is no Substitute for God-Liver Oil

BUTLER, in his new *Materia Medica*, makes this very clear. He says:

"God-liver oil is more readily absorbed and oxidized than any other fat. It has already been prepared by the liver and, therefore, partly elaborated."

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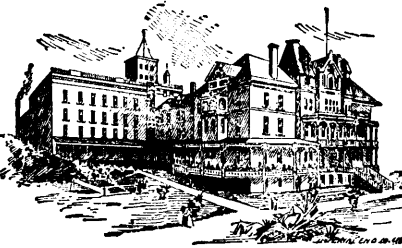
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### THE MOTHER.

---

Is there any other thing on earth that so awakens human sympathy and interest, that so stirs the tenderest feelings of the human heart, as a helpless babe?

Looking out for the first time upon the small part of the cold world which is bordered by the walls of a room, it begins its life with a cry for warmth and help.

With what supreme trust it nestles in its mother's bosom, seeking at the fountain of life the nourishment Nature has provided. How beautiful to its infantile eyes must appear that round, white breast; blue veined, warm, and softly inviting, where first it pillows its tiny head and upon which it seeks the peace which slumber gives.

In the days of early infancy, when pain and suffering rack the little frame as its tender organs adjust themselves to changed conditions, with what sighs and murmurs of comfort it cuddles against the mother's breast, and with what human intelligence it pleads for the mother's arms.

It is here that the young life receives its first impressions; here that the foundation of future health and happiness, or disease and sorrow is laid.

Can anything be of greater importance than the health and strength of the mother?

A weak and nervous mother will insure a weak and fretful child. The mother-cares are manifold and exacting. Her rest is broken by night and her strength taxed by day. She must provide nourishment, not only for her own body, weakened as it is by the pains of confinement, but also for the growing body of the little one.

Under such circumstances it is little short of a crime to fail to provide for the mother those things which experience has proved most efficient in keeping up her strength and increasing her capacity to furnish nutriment to the child.

It sometimes occurs that the physician or nurse is at fault, in that, being depended upon to do and provide what is proper and necessary, they fail to give or prescribe the simplest and most necessary of all needful things in such cases—a tonic or aid to alimentation.

The things most required by both mother and child are appetite, good digestion, quiet nerves, and restful sleep.

And what of Puremalt?

First. Puremalt is rich in *food elements*, and in a form most easy to assimilate. It is a true liquid food, not only easy to digest but aiding in the digestion and assimilation of other food.

Second. Puremalt is a true tonic. It builds up nerve strength, and so tends to reduce pain and anxiety and to give rest and repose.

Third. Puremalt is mildly sedative. It has been found to be a complete cure for insomnia, even in the most severe cases. Thus it produces quiet, restful sleep.

Fourth. Puremalt is a *builder*. It helps Nature to restore tissue, to make muscle, to build up.

Fifth. Puremalt is *harmless*. Absolutely so. Not the least injury of any kind can come to either mother or child from its use.

And lastly. The best physicians everywhere, who have used it in their practice and noted its results, prescribe it in every case. Puremalt is doing good.

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The quality of these products is in every respect as unexceptionable as that of our regular lines of compressed and triturate tablets. The ingredients are of the finest material; the excipients carefully chosen; the solubility as nearly perfect as the formulæ will permit.

Our line of chocolate-coated tablets comprises many ill-tasting and malodorous substances which are now perfectly disguised by the chocolate investment.

The new tablets cannot fail to meet with the admiration of all who give due weight to pure materials, conscientious manufacture, and exquisite finish. Samples furnished on request.

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# Have you read the Ringing Editorial on Antitoxin in the Philadelphia Polyclinic for December 11? • •

The writer (Dr. S. Solis Cohen) urges justly that "it is of the highest importance to have a trustworthy serum, of as high potency as possible, so that a dose small in bulk shall be large in antitoxic units. \* \* \* \* \* In every case, the higher the number of antitoxic units per cubic centimeter the easier it is to give an efficient dose."

## 750 Units per Cc.

is the potency of the ANTI-DIPH-  
THERITIC SERUM, SPECIAL, pro-  
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## Most Concentrated Antitoxin

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**Invalid Soups, Potted Meats** of finest quality.

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Ceylon Tea is absolutely pure and nutritious to the system. Sold in lead packets only.

25c., 30c., 40c., 50c. and 60c.

**THE "SALADA" CEYLON TEA CO.,** 25 Front Street East, TORONTO.  
318 St. Paul Street, MONTREAL.

## DOCTOR

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Your library is not complete without the HYPNOTIC MAGAZINE. Cost of this handsome monthly, including premium book on SUGGESTIVE THERAPEUTICS, is only One (\$1.00) a year.

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When writing advertisers, please mention THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

## THE PRIMARY CAUSES OF THE PHYSICAL AND MENTAL DEGENERATION OF THE HUMAN RACE.

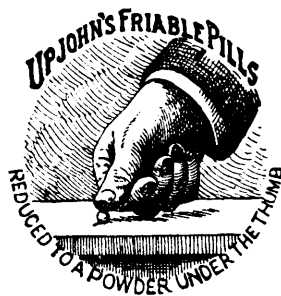
THE attention of the medical profession has recently been directed in a prominent manner to the Health Restoring Bread, Biscuits and other foods made from the whole-wheat flour prepared by a special and greatly improved process invented by Prof. H. W. Hart, of London, England (President of Professor Hart's Health Food Company), who has for a lifetime given great study to the subject of dietetics, and has proved himself to be an undoubted scientist. H. W. Hart has determined to alter the erroneous system of diet that has existed for the last century, which has been going gradually, but surely, from bad to worse, as explained by him in his letter to the *Globe*, January 28th, in reply to Lieut.-Colonel Denison on the "Food Supply of Great Britain," in which he says: "I am sorry Lieut.-Colonel Denison was not led to go a little deeper into the primary causes, that have been slowly but surely sapping the foundation, and bringing about the degeneration of the British race (which causes were at work for nearly fifty years before free trade was adopted), and the same causes have ever since been doing their deadly work unperceived, and by the last device of the superfine milling system, invented now about thirty years ago, a more rapid decline in the physique of the British and American born race has been apparent. Statistics of the frequent reduction of the chest measurement of recruits by the English Government, from thirty-eight to thirty-three inches, will prove this, and it is not surprising that, while the population of America, according to the most reliable statistics, has increased 100 per cent. in thirty years, insanity has increased 600 per cent. during the same period, from 1850 to 1880, when it was considered that that which was the "staff of life" to our great-grandfathers has been gradually and systematically impoverished by the increased fineness of the bolting-cloths used, which at first were very coarse, but which are now as fine as the finest silk, being still more deadly in its effects on the vital organs, as it removes the most blessed man-building and health-sustaining properties, till the present product has become a broken reed, unfit for man's use. The effects of this diabolical system of milling are now also more manifest in Canada, where, in the Province of Ontario, as proved by Dr. Bryce's report on the health of the Province, thousands are succumbing to the scourge of consumption, which he states is carrying off more people than all other diseases put together: the primary causes of which I have traced to the lack of suitable food to consume, to enable the system to resist diseases, while studying dietetics during the last forty years, which I have the credit of reducing to a reliable science, by the most eminent medical men of Europe and America. The only reason why the recruits seen by Lieut.-Col. Denison were not equal to their sires can be traced solely to the system of milling flour which has so impoverished the product—which should be the mainstay of man—that the golden grain is now used solely to enable the miller to produce, not only a worthless flour, so far as nutrition is concerned, but a pernicious product that causes indigestion, constipation, piles, fevers, and other ailments too numerous to mention, besides removing the lime and silicic acid, which are closely adherent to the brain, the former so necessary to the growth of the bone structure, and the latter so essential to the structural formation and preservation of the teeth, for want of which there are tens of thousands of dentists doing patchwork substitution for

# Why Under the Hammer?

The significance of the test which consists of driving old mass pills into a board with hammer and block of wood has been questioned by some makers of the "solid kind" of pills.

This test is simply intended to supply the pharmacist and physician with a ready and quick means for estimating the age of factory-made pills and their therapeutic value.

It is effective in showing that there is a difference between **Fresh Mass Pills** and **Old Mass Pills**. The test shows the difference in hardness. Hardness must have some relation to therapeutic value. This is the teaching of pharmacy. The soft pill mass is insisted upon for the pills dispensed extemporaneously by the pharmacist. There can be no exception made in favor of manufacturers whose pills become progressively harder with age. The retail pharmacist cannot be asked with consistency to dispense soft pills extemporaneously and hard pills from the general stock. The stock of ready-made pills should be of the kind that does not deteriorate with age, and that preserves their quality of ready disintegration indefinitely. Upjohn's Friable Pills have these qualities and preserve them indefinitely.



## THE UPJOHN PILL & GRANULE CO.

Samples and Price List free on application to

**GILMOUR BROS. & CO., Montreal,**

**Sole Agents for Canada**

nature's perfect work, through natural food being deprived of the materials provided by nature for the perfection of man's organism.

"There cannot be a shadow of a doubt that the greatest scourge of the British race is the superfine flour of the miller, which renders it impossible for children partaking of it to grow their bones and teeth, or develop their bodies and brains, as they otherwise would if whole-wheat bread were eaten, the same as partaken of by our forefathers and foremothers (as advocated by me for over forty years): besides, the germ, the germinating principles, being removed, has the effect of greatly reducing the population, even of a regenerate race. Lieut.-Col. Denison has a splendid opportunity of turning his great influence to account by using it in the furtherance of food reform, the basis of all reforms, as it greatly depends on what we eat as to what we are. As brilliant Savarin says, 'The destiny of nations depends on how they feed themselves.'"

We think it will be to the advantage of the medical profession to carefully peruse the four pages of advertisements of "The Professor Hart's Health Food Company," which appears in this issue (which will not, we are informed, be repeated).

The late great phrenologist, Professor Fowler, says of Professor Hart, that irrespective of his numerous inventions and discoveries in the science of dietetics, he deserves the undying gratitude of the race for his bread and other food reforms which he has inaugurated.

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#### TREATMENT OF TUBERCULOSIS OF THE SPINE.

---

DIKONOFF (*Centralbl. f. Kinderheilk. u. d., 1896, i, 309*) laid bare the seat of disease in three cases by resecting the vertebral ends of the ribs. Two of the cases were in a very poor condition, and died after the operation. The third case was described as follows: The child had a kyphosis in the neighborhood of the seventh cervical and the first and second thoracic vertebræ, complete paralysis of the involved muscles, and motor disturbances of the lower extremities. Temperature was 99.9° F. The operation was done on December 17, 1895. An incision 10 cm. long exposed the transverse processes of the second and third dorsal vertebræ. The first was cut through at its base, and resected along with the head of the second and third rib. In isolating the bodies of the vertebræ a pus cavity was discovered which communicated with the spinal canal through the foramina. After removal of the carious pieces of bone, partly with Luer's forceps, partly by the sharp spoon, the spinal canal was reached. The dura was found perfectly intact. The cavity was drained, the wound sewed up, and iodoform emulsion was injected through the drainage tubes. As the pus cavity very rapidly filled up with healthy granulations, the drainage tubes were removed on December 31, and iodoform gauze strips were substituted. On the twenty-third day after the operation, motility was established in the paralyzed muscles, and at the end of January the patient was able to sit up for a long time, and carry the head erect without apparatus. On February 2 he began to walk, and the motility increased.

A. S. G.

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THE attention of medical men is called to page xviii. of this month's issue, where an important announcement of the Ever Ready Dress Stay Co., of Windsor, Ont., will be seen.

# BOVRIL

contains all the nutritious constituents of beef. It is therefore life-sustaining without the aid of any other nutritious food.



The coagulated Albumen, and Fibrine, which form a great proportion of BOVRIL, are reduced to such a state of minute subdivisions that they can be easily assimilated by the weakest stomach.

*The Medical Profession are respectfully invited to visit and inspect our works.*

**BOVRIL LIMITED**

27 St. Peter Street, MONTREAL

### THE USE OF DIPHTHERIA ANTITOXIN.

THE following are the recommendations as to the manner of using diphtheria antitoxin made by the American Pediatric Society on the basis of its first report issued some time ago (*British Medical Journal*, July 4th, 1896, p. 37): (1) Dosage: For a child over two years old the dosage of antitoxin should be in all laryngeal cases with stenosis, and in all other severe cases, 1,500 to 2,000 units for the first injection, to be repeated in from eighteen to twenty-four hours if there is no improvement; a third dose after a similar interval if necessary. For severe cases in children under two years, and for mild cases over that age, the initial dose should be 1,000 units, to be repeated as above if necessary; a second dose is not usually required. The dosage should always be estimated in antitoxin units, and not of the amount of serum. (2) Quality of Antitoxin: The most concentrated strength of an absolutely reliable preparation. (3) Time of Administration: Antitoxin should be administered as early as possible on a clinical diagnosis, not waiting for a bacteriological culture. However late the first observation is made, an injection should be given unless the progress of the case is favorable and satisfactory.

A WINTER REMEDY.—That Codeine had an especial effect in cases of nervous coughs, and that it was capable of controlling excessive coughing in various lung and throat affections, was noted before its true physiological action was understood. Later it was clear that its power as a nervous calmative was due, as Bartholow says, to its special action on the pneumogastric nerve. Codeine stands apart from the rest of its group, in that it does not arrest secretion in the respiratory and intestinal tract. The coal-tar products were found to have great power as analgesics and antipyretics long before experiments in the therapeutical laboratory had been conducted to show their exact action. As a result of this laboratory work we know now that some products of the coal-tar series are safe, while others are very dangerous. Antikamnia has stood the test both in the laboratory and in actual practice, and is now generally accepted as the safest and surest of the coal-tar products. Five grain "Antikamnia and Codeine Tablets," each containing  $4\frac{3}{4}$  grains antikamnia,  $\frac{1}{4}$  grain sulph. codeine, afford a very desirable mode of exhibiting these two valuable drugs. The proportions are those most frequently indicated in the various neuroses of the throat, as well as the coughs incident to lung affections.

December 29th, 1897.

TO THE IMPERIAL GRANUM COMPANY, NEW HAVEN, CONN.:

DEAR SIRS,—I have raised my baby on IMPERIAL GRANUM and no healthier child can be found in the city. She is three years old, weighs thirty-six pounds, and still has two meals a day consisting almost wholly of Imperial Granum. HER LAST MEAL AT NIGHT IS IMPERIAL GRANUM ONLY. It is soothing, nourishing and satisfying, and gives *good sleep* and *no nightmare*, which children so frequently have from improper evening feeding! I always speak enthusiastically for the Imperial Granum, for I know of no food that is as good for babies and children.

—, M.D.

Literature and SAMPLES for clinical test supplied ONLY to PHYSICIANS and trained nurses. Sent FREE, charges prepaid on request. CORRESPONDENCE SOLICITED.

FOR MAKING LITHIA WATER OF A KNOWN STRENGTH  
WHAT CAN BE MORE SATISFACTORY THAN

# Wyeth's Compressed Effervescing Lithia Tablets.

## WYETH'S LITHIA TABLETS

are most convenient for the preparation of artificial Lithia Water, and the great advantage these tablets have over the natural Lithia Water is that the dose can be regulated very readily to suit the case by dissolving one or more in any desired quantity of water.

## WYETH'S LITHIA TABLETS

when taken in doses of from one to two tablets, dissolved in water, and repeated two or three times daily, exerts a marked influence in cases where patients are voiding uric acid gravel, causing the formation of deposits to become less or cease altogether.

## WYETH'S LITHIA TABLETS

have been so perfected that they dissolve almost instantly in water, and a tumblerful of Lithia Water *of a known strength* can be quickly, easily and economically made by dropping one or more of these tablets into a glass of moderately cold water, producing a pleasant and palatable draught.

Price, per dozen bottles, 5 grains, 50 tablets in each, \$5.00  
" " " 3 " 40 " " 4.00

## Wyeth's Effervescing Anti-Rheumatic Tablets

OF SALICYLATES, POTASSIUM AND LITHIUM

(Each Tablet represents 3½ grains of Combined Salts.)

These Tablets of Salicylates of Potassium and Lithium, in the above proportions, are readily soluble, effervesce quickly and freely, producing a pleasant, sparkling draught, and we believe, where salicylate salts are specially indicated, will have the cordial endorsement of physicians.

This combination is recognized as almost a specific in the treatment of **Acute and Chronic Rheumatism, Rheumatic Gout** and kindred ailments, and is an invaluable remedy in all febrile affections inducing headache, pain in the limbs, muscles and tissues: it is also prescribed in **Lumbago, Pleurisy, Pericarditis**, and all muscular inflammatory conditions.

Price per dozen bottles, - - - \$4.00  
(Each bottle contains 50 Tablets.)

**DAVIS & LAWRENCE CO., LIMITED,** SOLE AGENTS FOR **MONTREAL**  
CANADA



WHAT can be easily claimed to be the largest brewery in the world is that of the Pabst Brewing Co., of Milwaukee, Wis. The various departments cover many acres of land in the upper or residential part of the city named, the bottling establishment covering an entire square in itself. To show the immensity of the output of this firm, it has simply to be stated that they pay in inland revenue alone to the U. S. Government every year \$1,000,000, or at the rate of \$1 per barrel for every barrel of ale turned out. It can readily be realized therefore that, large as the business is, it increased by many thousand dozen bottles even during the past month. The scientific department is proof in itself that the utmost care is used to test the purity of every ingredient used in the manufacture of the ale. Every barrel, and every bottle which has been used, is subjected to a cleansing process which renders it absolutely impossible that any impurity could enter the ale. The Pabst Brewing Co. do not take up room by storing thousands of tons of ice as many firms do, but by chemical process manufacture their own ice as they go along, which effectually keeps the ale at the required temperature. Pabst Malt Extract is meeting with a larger sale all the time and is receiving more and more the endorsement of the medical profession.

THE use of Abbey's Effervescent Salt is increasing daily with the medical profession in this country. Abbey's Effervescent Salt has been looked upon as standard by the medical profession of Great Britain and Europe, and has been prescribed there generally for many years. The undoubted care exercised in compounding this preparation, and the excellence and purity of the materials used, make it possible to obtain the best results from its administration. It has already obtained a general use in therapeutics.

THERE is nowadays so much adulteration of food ingredients that it behoves medical men to see to it that articles of common family use are made of the finest materials only. There are on the market a large number of baking powders, one of the articles of frequent daily use, and some are adulterated to a most alarming extent, rendering their use most deleterious and hurtful. It should be remembered that Pure Gold Baking Powder, as manufactured by the firm of A. Jardine & Co., of Toronto, is in every respect to be depended upon and can be recommended by medical men.

THE attention of medical men is called to another page of this month's issue where the advertisement of S. H. Kennedy will be seen. This gentleman is the manufacturer of Kennedy's Oak Bark (*Quercus Alba*), both white and dark, one of the most valuable aqueous astringents known to the profession. To prove its value, all the readers of this journal need do is to turn to the advertisement where Dr. Marion Sim's opinion as to the preparation will be seen.

To a woman, during her period of gestation, nothing is so comforting as a good abdominal support. The use of a properly made and comfortable support will remove, or at least relieve very largely, the back-ache which is sometimes so distressing. There are many such appliances on the market—some good, and others worse than bad. One of the best to be procured, and one which in the end will prove by far the cheapest, is that made by Mrs. F. L. Pickering, of Brantford, Ont. This lady makes a specialty of the manufacture of those garments, and insists upon using nothing but the best materials, at the same time charging a very reasonable price.

A Man and E. & D. Bicycle can be seen in the Picture. Find them.



# Reliability.

WHEN a man invests his money in a bank that's reliable, or insures in a company that's solid, a sense of satisfaction steals over him. This is the kind of feeling that steals over riders of the

## .. E. & D. Bicycles ..

READ WHAT DR. CRUICKSHANK SAYS ABOUT HIS WHEEL

CANADIAN TYPOGRAPH Co., Windsor, Ont.

GENTS.—I am very grateful for the excellent bicycle you have made for me. My machine is no toy. It is part of my business, and gets all kinds of weather and all kinds of roads, and is a constant surprise to me, with its good behaviour and good looks under such circumstances. I give it no care whatever. It does not seem to need it.

Sincerely yours,

S. R. CRUICKSHANK.

**CANADIAN TYPOGRAPH CO., Limited,**

WINDSOR, ONTARIO

SIR HENRY THOMPSON, F.R.C.S., in a clinical lecture on "The Early History of Calculous Disease, and the treatment best adapted for its prevention," delivered at University College Hospital, made the following remarks on the radical difference between natural and artificial mineral waters: "You will, therefore, readily understand how essential it is to our object to employ the natural mineral waters, since what are called 'artificial waters' are simply pharmaceutical products and are destitute of the very quality which distinguishes the remedy they are designed to imitate. One of the oldest mineral waters to-day is that known as Vichy. It is without a question of a doubt a *natural mineral water*, being the property of the French Republic and bottled under the supervision of that Government. The water of the Célestins Spring come out of the earth at a temperature of 12° centigrade, and is therefore better adapted for importation than that of Grande Grille or Hopital, which are hot springs. These waters are absolutely pure, so that members of the medical profession need have no hesitation whatever in recommending their use to their patients, as they will be found in many cases almost curative, so great the value to be derived. Vichy is also to be procured in the form of compressed effervescing tablets and will be found of great convenience for those who are travelling.

THE goods of the Tait, Bredin Co. (Limited.), of 744 Yonge St., have always been characterized by purity of ingredients and general excellence. Nothing can be, and unfortunately is, so much adulterated and rendered almost unfit for human use as is "THE STAFF OF LIFE." The bread manufactured by The Tait, Bredin Co. will be found to be the very best, and can confidently be recommended.

RESINOL, on account of its antiphlogistic and antiseptic qualities, has been found of great service in strangulated hemorrhoids and in acute proctitis. It is used by hollow suppository, and promptly relieves pain.

We direct the attention of readers to the announcement of the Resinol Chemical Co., of Baltimore, Md., appearing in this issue. The ointment seems to be meeting with the approval of a very large number of medical men all over the United States and Canada, and deservedly so.

ROSENTHAL, EDWIN: The Use of Antitoxin in Laryngeal Diphtheria. (*Virginia Semi-Monthly*, 1897, Vol. ii., No. 7.) The author reports the number of cases treated during the year preceding the writing of the paper. There were 48 of these cases, of which 7 died: mortality, 14.5-10 per cent. Of these, 25 were not intubated: 1 died, mortality, 4 per cent.; 23 were intubated, of which 6 died; mortality 26 per cent. The latter mortality rate is similar to that shown by the collective investigations. Most of these cases were seen in consultation and the author was only called when intubation was urgently required, which explains why the proportion of operative cases is so large. Twenty-seven cases were under three years of age. The time of wearing the tube varied between 27 and 576 hours, the average time being 128½ hours. Mulford's concentrated antitoxin was used in all the cases.

ONE of the handsomest catalogues it has ever been our pleasure to peruse is that recently gotten out by the Chloride of Silver Dry Cell Battery Co., of Baltimore. It is their eighth edition, and one the publishers can justly be proud of. The paper is thick book paper, and the illustrations as clear as the finest photographs. It can be claimed to be a most complete catalogue of medical batteries, and should be in the hands of every up-to-date physician.

# The Best Cannot be too Good



Is made from the best Canadian Barley Malt.  
 Is richer in Diastase and Maltose than any other made.  
 Is guaranteed free from foreign matter, such as Glucose,  
 Licorice, Salicylic Acid, etc.

Write for samples and literature to

**W. LLOYD WOOD**

GENERAL AGENT TORONTO, ONT.

Reduced in Price to \$1.00 per ounce.  
**EMINENT BRITISH OPINION**

AS TO MERIT'S OF

## ANTITOXINE

(Strengthens the Heart's Action.)

THE Late President of the Glasgow Obstetrical and Gynaecological Society of Glasgow has informed us that in his opinion the four Antipyretics which are best known to British Medical men should be placed thus in order of merit.

1. **ANTITOXINE.**
2. **Phenacetine.**
3. **Antipyrin.**
4. **Antikamnia.**

The Manager, The British Antitoxine Manufacturing Co.  
 Glasgow, W., 5th September, 1896.

DEAR SIR: I have found Antitoxine give immediate relief in severe Facial Neuralgia after Phenacetine had failed. After having given Antitoxine a thorough trial—I have used 16 ounces during the last 3 months—I rarely prescribe Antipyrin now and almost as rarely Phenacetine. I believe that the 4 Antipyretics which are at present best known to English Medical men should be placed thus in order of merit so far as they relieve pain, headache, Facial Neuralgia, Dysmenorrhoea, and reduce fever.

- 1.—ANTITOXINE.
- 2.—Phenacetine.
- 3.—Antipyrin.
- 4.—Antikamnia.

I have frequently given Antitoxine in cases where I would not dare give Antipyrin; weak hearts, etc. I have never seen the slightest bad result from its administration. I have used it recently with great success in cases of flushing at the Menopause, one tablet 2 or 3 times a day. I am, dear Sir, Yours faithfully,

M. D.

Some time President Glasgow Obstetrical and Gynaecological Society.

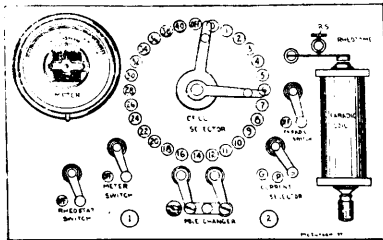
\*The original signed letter, of which the above is a copy, will be sent for perusal to any physician who desires to see the signature, provided he promises to immediately return it.

IMPORTANT TO PHYSICIANS.

Since the production of Antitoxine, the only heart-strengthening antipyretic and antineuralgic, unscrupulous imitators have copied our literature, often verbatim, as well as the sphygmographic tracings which we published to illustrate the unique heart-strengthening effects of Antitoxine.

The B. A. M. Co.

## Electricity



IN THE TREATMENT OF

**DYSMENORRHOEA, STRICTURES, STENOSIS,**  
**Removal of WARTS, MOLES, NÆVI,**  
**CATAPHORESIS, ELECTRO-DIAGNOSIS,**  
**METALLIC ELECTROLYSIS**

and many other electrical operations, are explained in detail in our 18th edition catalogue.

This work of 300 pages also gives prices and descriptions of the **BEST BATTERIES IN THE WORLD.**

It will be mailed to your address *postpaid*, without charge, if you write and ask for it.

**McIntosh Battery and Optical Co.**

521-531 WABASH AVE., CHICAGO.

### PHTHISIS AND ITS TREATMENT.

---

PHTHISIS is pre-eminently a wasting disease, and by exalting failing nutrition, cod liver oil being little more than a given food, a great advance was made in therapeutics. It has been found, however, that the oil does not in many cases meet the indications: for not only is nourishment needed, but the digestive power is so reduced that little use is made of the food taken. Hence a demand both for nutritious material and also for something which will aid food assimilation. The clinical starting-point in the history of the greater number of cases of phthisis is malnutrition, and when that is guarded against much is accomplished.

After a full trial of the different oils and extracts of malt preparations in both hospital and private practice, I find Maltine most applicable to the largest number of patients, and superior to any remedy of its class. Theoretically we would expect this preparation which has become practically officinal, to be of great value in chronic condition of waste and malnutrition, especially as exemplified in phthisis. Being rich in *diastase*, *albuminoids* and *phosphates* according to careful analysis, it aids in digesting farinaceous food, while in itself it is a brain, nerve and muscle producer.

In practice this hypothesis is sustained. A female patient in St. Luke's Hospital, aged 35, with phthisis, signs of deposit in left upper lobe, losing flesh for six months, poor appetite and night sweats, was put upon Maltine. Within a few weeks her weight was increased to 121 pounds, she ate well, no night sweats, and the evidences of local disease were much less marked.

Another cases of phthisis: A gentleman from Alabama, with all the physical signs of phthisis, rapidly losing health and strength. His was the remarkable gain of 10 pounds *from six weeks' use of Maltine*.

Seven pounds' increase in as many weeks is the record of a third patient, a lady of 41 years, who had no other medication than the Maltine. In these and other cases the increase in strength and mental vigor was in proportion to the gain in weight.

These instances are sufficient for illustration, and are *duplicated many times in the experience of physicians everywhere*. There is a universal reluctance always to testify to results from medicinal preparations, but when, as in this case, the composition is fully known, and the profession invited to investigate the manner of preparing it, there is no reason why the remedy should not receive general approbation, provided it be worthy.—*Quarterly Epitome of Practical Medicine and Surgery*.

---

INSTEAD of having recourse to applications of tincture of arnica, spirits of camphor, and strong compression of the swelling in the treatment of light bruises, Dr. Auger prefers the use of olive oil, both in children and in adults. He applies the oil freely to the contused parts, and rubs the latter lightly with a rag, absorbent cotton, or with the fingers, and covers the bruise with a compress saturated with olive oil. He claims that this treatment gives immediate relief to the patient, and that the formation of a bloody protuberance is often prevented; while excoriations and superficial wounds, which may be present, heal very rapidly.

**E. MERCK**

16 JEWRY STREET

LONDON, E.C.



**MERCK & CO.**

UNIVERSITY PLACE

NEW YORK

# Merck's

Chemicals for medicinal use are recognized as the standard for Purity, Reliability and General Excellence.

When ordering, please specify—**MERCK'S**

**SALICYLIC ACID.**

**SALICYLATE OF SODA**

**CREOSOTE FROM BEECH TAR**

**CHRYSOPHANIC ACID.**

**IODIDE OF POTASH**

**EXTRACTS**

Please direct attention to **MERCK'S**

# Stypticin

Which is a styptic and hemostatic remedy, especially adapted for checking uterine hæmorrhage. **STYPTICIN** is a powerful vaso-constrictor, and has been employed with excellent results in various hæmorrhages, by injecting it in solution into the gluteal region. In profuse menstruation  $\frac{3}{8}$  to  $\frac{3}{4}$  of a gr. is administered internally four to five times daily, during the periods.

For convenience of dosage, tablets each containing 1 gr. are in the market.

**PRICE, 25 Cents per 20 Tablets**

TO BE HAD OF ALL DRUGGISTS AND CHEMISTS, OR DIRECT OF

**E. MERCK, Chemical Works, Darmstadt**

MERCK'S ANNUAL REPORT ON APPLICATION

# Beaver Line Royal Mail Steamships

Sailing Weekly Between

Liverpool and Montreal, - in Summer  
 Liverpool and St. John, N.B. - in Winter



Calling at Moville and Halifax to land and embark Passengers and Mails in winter, and Rimouski and Moville in summer.

From Liverpool, every Saturday.

From Montreal or St. John, every Wednesday.

"LAKE ONTARIO," "LAKE SUPERIOR,"

"LAKE HURON," "LAKE WINNIPEG," "GALLIA."

These steamers have been built specially for the North Atlantic Passenger trade and have excellent accommodation for all classes of passengers.

Rates of passage to Liverpool—1st cabin, \$50 and \$55. Round trip, \$100 and \$114. 2nd cabin, to Liverpool or London, \$34. Round trip, \$66 75.

Steerage at lowest rates, including complete outfit.

Special rail rates to and from all points.

Passengers via St. John travel by Canadian Pacific Short Line, trains running alongside steamers at Carleton (St. John West Side), thus avoiding transfer of themselves and baggage.

**AGENTS:**

**D. W. CAMPBELL, Mgr.** **D. & C. MACIVER, Mgrs.,**  
 18 Hospital St., Montreal. Tower Building, Liverpool.

THE . . .

## HOLGATE, FIELDING CO., LTD.

OF TORONTO

✱ Manufacturers and Importers ✱

**25 MELINDA ST., TORONTO**

We beg to call the attention of Physicians to the following list of Granulated Effervescent Salts manufactured by Messrs. KEASBEY & MATTISON Co., Ambler, Pa.:

- |                                   |                                          |                                     |
|-----------------------------------|------------------------------------------|-------------------------------------|
| Eff. Alkalithia.                  | Eff. Lithium Benzoate.                   | Eff. Pepsin, Bismuth and Strychnia. |
| " Bismuth Citrate.                | " Lithium Bromide.                       | " Potassium Benzoate.               |
| " Bromo-Caffeine.                 | " Lithium Carbonate.                     | " Potassium Bicarbonate.            |
| " Bromo-Caffeine (medium).        | " Lithium Citrate.                       | " Potassium Bromide.                |
| " Bromo-Caffeine (sample size).   | " Lithium Citrate with Potash.           | " Potassium Citrate.                |
| " Cafetonique.                    | " Lithium Citrate with Soda.             | " Potassium Iodide.                 |
| " Caffeine and Bromide of Potash. | " Lithium Citrate with Soda and Potash.  | " Rochelle Salt.                    |
| " Caffeine and Bromide of Sodium. | " Lithium Salicylate.                    | " Salaperient.                      |
| " Caffeine Citrate.               | " Lithium Salicyl. with Potash.          | " Salicylio Acid.                   |
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| " Cocaffeine.                     | " Lithium Salicyl. with Soda and Potash. | " Seltzer Salt.                     |
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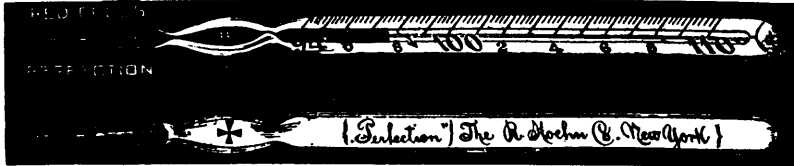
I AM prompted by that "Spirit, invisible, that shapes our ends, rough hew them as we will," being a stranger among strangers, to address you (and permit me to digress, by expressing the impression made upon me, that through the deficiency in brain nutrition and absence of the artificial stimulant, Canada seems devoid of that sociality and hospitality to strangers within her gates, with which I have been accustomed, which makes it appear as if wrapped up in selfishness, so different to the other side of the water, where I have always extended to Canadians and American cousins a brotherly and hospitable feeling). Understanding human nature, I do not trace it to any malformation of skull, but to an impoverished dietary, that is not sufficiently brain nourishing, (not the climate, as has been erroneously stated). Seeing this state of things (being a humanitarian), I am prompted to right this great wrong in Canada, the great gem in the British crown. With reference to the incidents of my life, that may be considered providential influences which led me over forty years ago to visit and sojourn in a foreign land, some thousands of miles away, from the refinements, the artificial comforts and surroundings of civilized life, where I had to come face to face with nature and partake of what such an outlandish place could provide. It was under these circumstances I found myself compelled for the first time in my life to eat a dark, heavy, and, to all appearance, an indigestible kind of bread. There was no chance of sending to a baker's shop for any other kind; it was certainly composed of the whole wheat, unleavened, and was made by Jewish maidens, from flour ground by themselves, and therefore absolutely pure, and in the interest of my future health and happiness, and the well-being, prosperity and happiness of the civilized world, I would to God that every house had the sense to provide such an honest loaf of whole-wheat bread as did these Jewish maidens, and, had it not been for the conservatism of the Jewish race, I should have been buried about forty years ago, for this bread, which I partook of, was the blessed means of nourishing both body and brain and the turning point of my life; for instead of dying, as I fully expected, I have lived and been able to undergo great fatigue and educate hundreds of thousands personally, and millions indirectly, through the press, to live and prolong their lives by eating properly constituted food. About three days after partaking of this bread I was led to make a solemn vow and resolved henceforth not to touch the accursed white bread again, and I have kept my word and not eaten the pernicious substitute for bread since. I became so deeply impressed with the great importance of the necessity of bread and food reform that I further resolved to abandon the profitable employment for which I had a talent, viz.: the constructing of destructive weapons of warfare (being the inventor of the only method by which ordnance could be constructed that would not burst, so that I proposed to construct a gun that would propel a shot a ton weight) and follow the more peaceful

profession of preserving life, by preventing disease, and by devoting my life to the advocacy of a system of prevention which I discovered and which I found to be in accordance with a fundamental, natural law of life, which, being infallible, cannot err. I afterwards discovered that by the knowledge and observance of this natural law any human being of normal organization could live a life of healthful vigor, and create a force of resistance that would render sickness impossible by warding off disease, and, barring accidents, prevent them from succumbing to any disease during their natural lives. I do not claim any credit for my discovery, for the reason that the experience I had was forced upon me against my will by circumstances and surroundings from which I could not escape, and for this same reason there is little hope of my conferring the great benefits I have derived upon my fellow-creatures, which I would most willingly do, as the generality of persons met with in every day life seem so wrapped up in their unconscionable ignorance of the benefits nature has in store for them were they sufficiently susceptible of her blessed gifts. The middle-aged, whose brains generally become so hardened for want of the brain-sustaining phosphates, that they become incapable of normal thought or proper consideration for themselves and therefore incapable of the consideration of others. The more aged, their brains become ossified, and the sutures of the skull close up for want of suitable food, so that their case becomes chronic and hopeless, and therefore swell the lists of the insane and suicidal, which increase every year; but I claim that I had the moral courage, with which I was endowed at birth, by a superior parentage, to recognize what is natural and what is right, from what is unnatural and wrong, and having formed a conscientious conviction, I persistently act up to it, with the result, of the blessings of health and strength and the enjoyment of life while I live, with no other master than the great Jehovah, the Giver of all good, for whose principles I contend, and with pleasure fight the battle of life.



The beneficial action that I experienced through the kind of food I partook of for over forty years have been well worth the journey, and any kind of privation or expense that I was put to, for had I remained in the civilized community in which I was brought up I should have died. At the time I left England I was thin and emaciated, though 5 ft. 10 in., weighed only 140 lbs., with a chest measurement of 36 in.; by the change of diet alone my chest measurement was gradually increased to 45 inches, with a smaller waist than any man I have ever met with in three quarters of the globe, and my weight has increased to 190 lbs. Forty years ago I would rather run a mile than fight a minute, now I would rather fight than run. Then I was sickly, sentimental, superstitious, afraid of my shadow; now I am robust and philosophic, capable of arguing or contending with the devils I am constantly meeting with in human shape.

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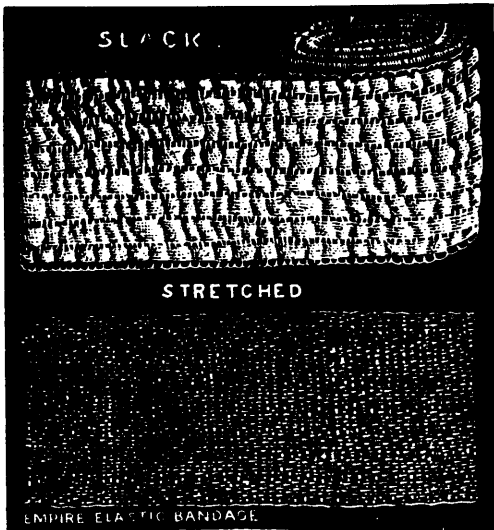
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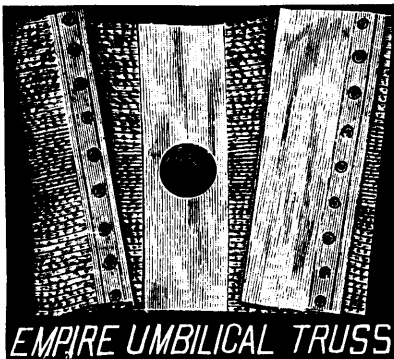
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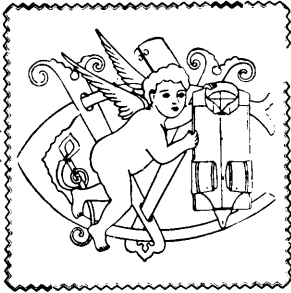
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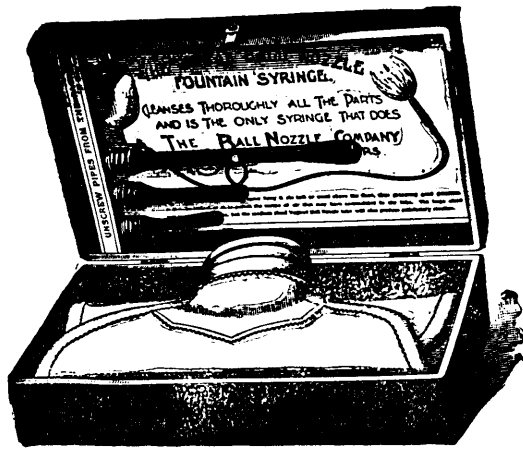
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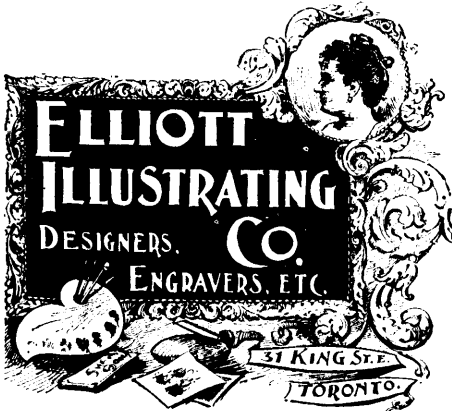
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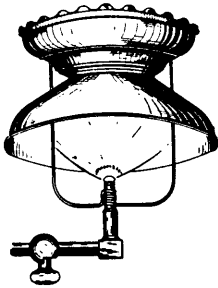
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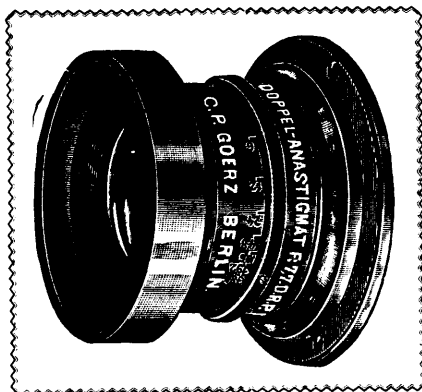
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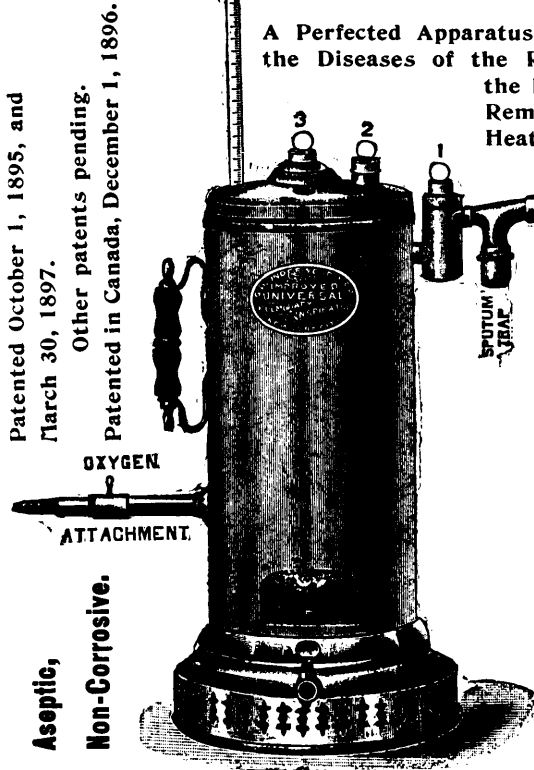
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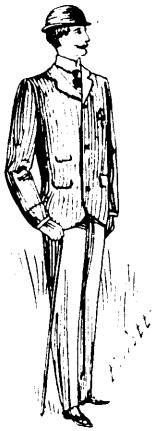
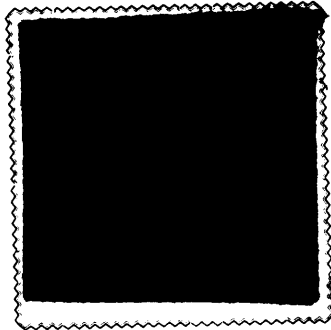


FIG. 1  
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FIG. 2  
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FIG. 4  
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FIG. 3  
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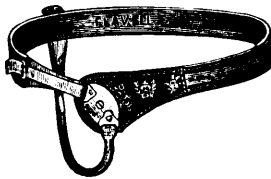
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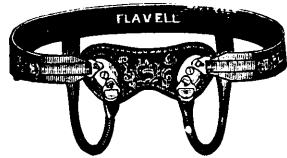
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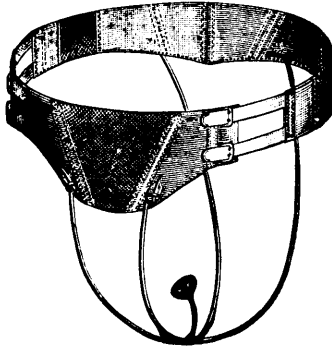
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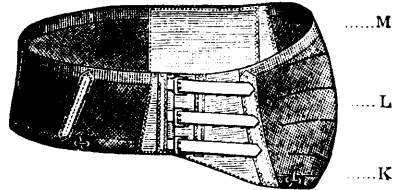
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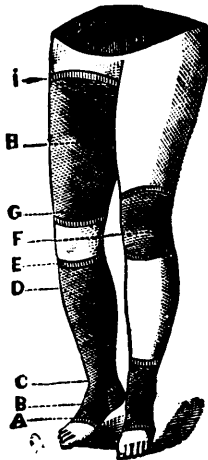
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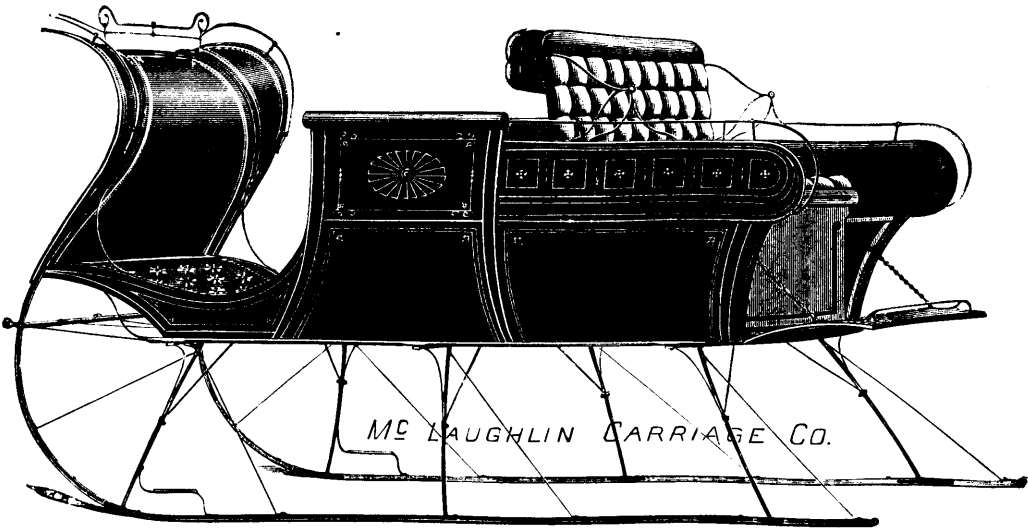
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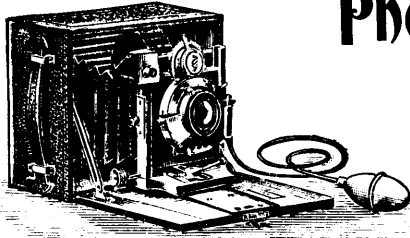
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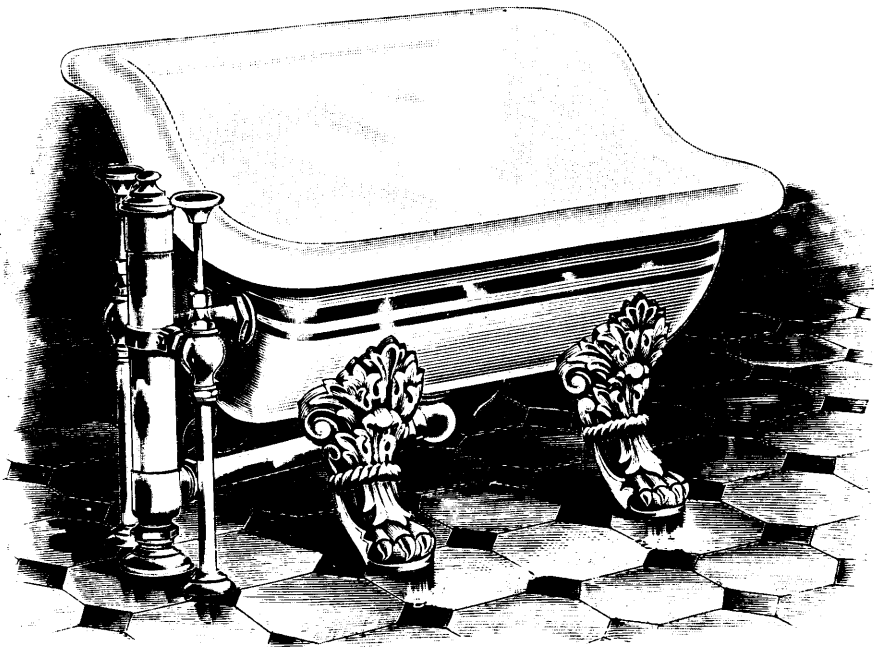
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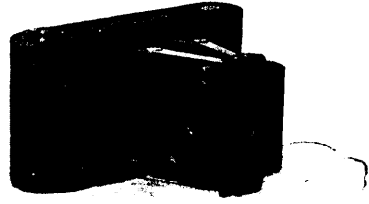
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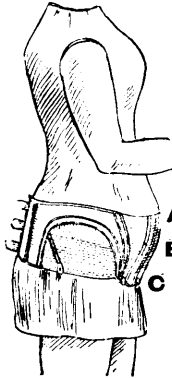
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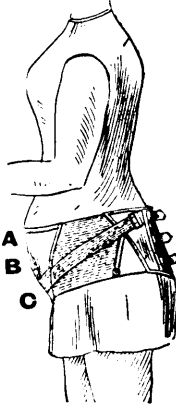
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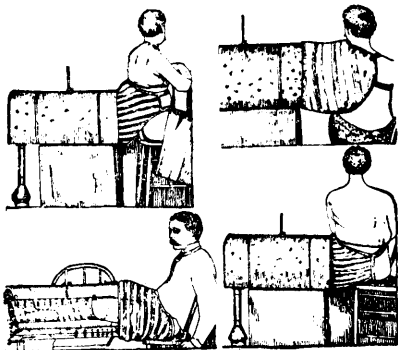
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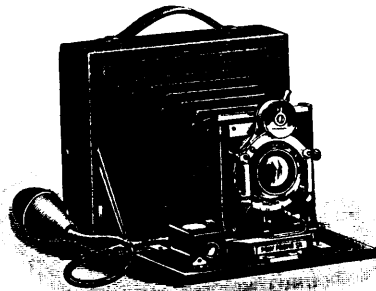
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