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CANADIAN DRUGGIST.

DEVOTED TO THE INTERESTS OF THE GENERAL DRUG TRADE AND TO THE ADVANCEMENT OF PHARMACY.

VOL. 6.

STRATHROY, JANUARY, 1894.

No. 1.

CANADIAN DRUGGIST.

WILLIAM J. DYAS, - Editor and Publisher.

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STRATHROY, ONTARIO.

ENGLISH OFFICE,
16 Trulock Road, Tottenham,
LONDON, N.

The English Drug Market.

BY A CANADIAN BUYER.

Thinking some of your readers might like to know something of the ways of the English Drug markets and the present state of same, I have made a few notes on any experience there.

The whole packages of Drugs coming to London from the foreign markets are generally ware-housed, samples of contents are sent to brokers, and they are advertised for sale on Thursdays of each week, in Mincing Lane. Before the samples are sent out the packages are thoroughly inspected, and the state in which they are is carefully reported on. Packages which have been damaged by sea water are reported exactly to the degree of damage there may be; although the damage is generally in favor of the buyer, for instance, packages of Senna, should any of the covers show any sign of moisture from sea water though the Senna itself be hardly so, it is reported damaged and sold assuch. The packages themselves are on exhibition before the buyer for several days before the sale and you will see brokers inspecting carefully, and making notes of the amount they think the goods should bring. Then on Thursday at ten a.m. the auction begins, and if Englishmen are reported phenomenally slow, these sales are not such, as it is remarkable with what rapidity the goods are sold. It sometimes may happen as the sale is closing, that two may bid at about the same time, and the knock down is so quick, it is impossible to tell which is first. When this is the case, it is left to the vote of those

present as to who has the bid. The seats in the salesrooms are not sold, but when a party once secures a seat, he is supposed to retain it, and the seats are thus handed down from generation to generation. It is remarkable the accuracy of judgment which the brokers acquire in estimating the value of goods. One day I was sitting with a friend while the sales of ipecac were going on. A number of large ceroons were sold, and on the prices which they realized, and the value which had been put on them by several of the brokers before the sale, there was but a halfpenny advance. My friend said to me "ipecac has advanced a halfpenny to-day." This is but one instance of many, and it is a pleasure to note the pride the brokers take in striking the value at which the goods were sold. I think those gentlemen feel disappointed and aggrieved if the goods are sold at less than the values they had put upon them.

Then again there is another class of drug brokers. Many of them are merely shipping agents or general agents and know nothing whatever of the value or quality of drugs, but are open for business in drugs or anything else they can get. Before visiting the European markets, I have had letters soliciting business from so-called drug brokers. On going to see those, one would find himself in an office of a shipping or forwarding agency. You tell your business, and "Our drug man is not here to-day," is the answer. You will then be requested to call again, and make an appointment. This you do, and by this time are getting rather tired, but perhaps merely for the sake of seeing what all this means you call again, when the said 'drug man' will take your list for quotations. You question about the quality of the goods, "O, we will send you samples," you are told. Eventually you get the samples and quotations, when you find they are no better than those of the old reliable drug merchant, who can supply all your wants from his warehouse, who will attend to your packing and shipping and then if any complaints have to be made, they would go direct, and not through a third party.

The drug markets of London for other staples are much depressed, owing to the financial crisis which has been both east and west of them, their supplies for Australia, which is one of their important markets, being absolutely nil. The settlement of the Silver question being in abeyance, and the United States not

having yet recovered their usual vigor, the effects are being felt. Canada stands high, being the one English speaking country that has not felt severely the great financial crisis which has just passed. Material export sales have been cut off in the past by the Germans, owing to the low prices at which alcohol is sold in bond and their excellent regulations of the export department. Until lately one could not export manufactured articles of which spirit formed a part, unless he had a bonded warehouse, which would necessitate a very great expense. As it is now, the manufacturer can have such goods put up in packages, from one pint upwards in his own warehouse. The excise inspector comes around, gets the report of how much alcohol has been used in the manufacture of those preparations, and the rebate is allowed. This applies to tinctures, fluid extracts, essences, perfumes, spirits, etc. Had not some such regulations been made, the exports of such goods from England would have been wholly absorbed by other nations, more especially Germany.

Should a Physician Dispense His Own Medicine.

A liberal statement of the case is made by a physician in the form of an editorial article in the *Medical and Surgical Reporter*. Referring to the query, "Should the practitioner supply his own medicine?" the editor writes as follows:

In reply to this query it must be said that, in the present state of medical affairs, as a general rule, in a vicinity amply supplied with competent pharmacists, the practitioner has no right to compound or to carry drugs to dispense with his own hand to the patient.

Holy Writ says that "the laborer is worthy of his hire." That so is the trained, qualified pharmacist. Pharmacy and medical practice, while a close affinity subsists between them, are separate and independent branches of the healing art.

The physician in a large city, who carries and dispenses medicines, by that act loses caste, he does an injustice to his patient, and appropriates to himself what justly belongs to the druggist who depends largely on prescriptions for his support.

It is alleged that the physician saves the patient the expense of prescriptions and so retains him. But the fact is he fails in both. In very many cases he might as well dose his patient with frag-

ments of chips, pebbles or other inert substances as to give him the stale, petrified tablets which, with time, have lost their potency. His patient has no respect for the preacher-practitioner combination, nor has he any enduring faith in the walking apothecary shop, hence, when he is really seriously ill, he will pay only for the straight article.

"Let the shoemaker stick to his last" is an old and true saying. If we would stop counter-prescribing, the pharmaceutical treatment of gonorrhœa and amenorrhœal (?) troubles, then we must give to the honest pharmacist what justly belongs to him. Pharmacists, as a class, are appreciative, and no physician ever patronized one and was not repaid two-fold. What we have said does not apply to the country practitioner, nor to the use of emergency drugs for night practice.

Sponges—Their Structure and Life History.

From a paper by Mrs. T. S. WOKES before the Phar. Students' Society of Liverpool.

It has now been definitely proved that sponge is an animal, as it contains no cellulose, and requires organic food. It is a compound body, and the sarcode, or living part of the sponge, appears to the eye as a soft gelatinous substance, which, however, is seen by the microscope to consist of an aggregation of simple animals possessing an endodermic, ectodermic and mesodermic layer. This living portion is supported on a horny skeleton (the commercial sponge) which is composed of a substance called keratode, spongin, or keratin, chemically allied to silk. Most sponges possess some kind of skeletal structures. They may be calcareous, or silicious, or horny scleres, the latter usually having the form of fibres, which sometimes enclose silicious needles (spicules) or foreign bodies. Foreign bodies sometimes form part, and sometimes the whole of the sponge skeleton. The spicules of calcareous sponges consist of carbonate of calcium. Each spicule, so far as its mineral component is concerned, is a single crystal. On the other hand, its general structure is organic. Its surfaces are curved, and it usually has the form of a cone or a combination of cones, each of which consists of concentric layers of calcite surrounding an axial fibre of organic matter. The spicule sheath consists of a thin outer layer of organic matter, and can be readily seen by removing the calcite with a weak acid. Spicules may be obtained by cutting sponge into thin slices and soaking it in liquor potassæ to dissolve the horny skeleton. Silicious spicules consist of colloidal silica or opal. Spicules differ greatly in form, size, and use. They may be divided into two groups—minute flesh spicules, supporting a single cell, and larger or skeletal spicules contributing to the formation of skeleton. In some sponges the spicules are simply scattered through the mesoderm, and do not give rise to a continuous skeleton. British sponges contain a lot of silicious

matter. The crater-like openings on the top of sponges are oscula, or exhalant apertures, and the very small holes in the sponge are the pores or inhalant apertures. The simplest sponge we know consists of a flask-shaped body with a large internal cavity and one crater-like opening at the top. It is covered with pores through which the water is absorbed, and ejected from the terminal crater. On dissecting it we find canals running through it from the surface to the central cavity. Here and there in these openings we find dilatations, each of which is lined with cells having hairs pointing outwards, called ciliated chambers. These are for breathing purposes, by directing the water into currents. The presence of one or more contractile vacuoles in flagellated or ciliated cells suggests that they expel water, urea and carbonic acid. Also this current provides food for the sponge in the form of particles of animal and vegetable matter, which are absorbed by the sarcode. The sarcode, or living outer and inner glutinous covering of the sponge skeleton, is possessed of a rudimentary nervous system, which enables it to close the pores and suspend the process of inhalation and inhibition.

Fresh individuals arise by a sexual germination, by fission and by true sexual reproduction. In the latter case the new individuals are produced from the union of ova and spermatozoa, which develop from wandering amoeboid cells in the mesoderm. The little germinule thus formed is a yellowish capsule covered with cilia, and is ejected from the oscula, floats away from the parent sponge and attaches itself to any suitable neighboring object, as a stone or rock, where it grows. Artificial fission has been practised with success in the cultivation of sponges for the market by the Italian Government, but the experiment had to be abandoned on account of the hostility of the sponge fishers. Experiments were also made in Florida.

A description of foreign and British sponges followed, including Euplectella, the beautiful Venus' Flower Basket, and the Chinese glass-ropo sponge, which has a long string of glass-like spicules attaching the sponge proper to the mud from which it grows. The British sponges are small, and, from a commercial point of view insignificant, but to the naturalist very interesting. The principal varieties are Chalia oculata, Halichondria ramosa, and the Halichondria panicea, or crumb-of-bread sponge.

Temperance and Health.

In view of the many schemes for temperance legislation which through the political horizon, the report of the Collective Investigation Committee of the British Medical Association, on the subject of "Temperance and Health," possesses a special interest for us. The committee who undertook this work divided the subjects of their investigation into these classes, i.e., total abstainers, habitually

temperate, cureless drinkers, and the decidedly intemperate. Resultant on their labors in this field of research, the committee give the following table, illustrative of the relative longevity of the persons thus classified:

Habitually temperate	.... 62.13 years.
Careless drinkers	..... 59.07 "
Free drinkers	..... 57.50 "
Decidedly intemperate	.... 52.03 "
Total abstainers	..... 51.22 "

—The Hospital.

Solubility of Difficultly Soluble Salts.

A. F. Hollemann contributes a paper on this subject to the *Chemiker Zeitung*, from which we extract the following table, in which the last column indicates the parts of water (by weight) necessary to dissolve one part of the salt, and the second column the temperature centigrade necessary for the solution:

Barium sulphate	.... 18.9..	429,700
Barium sulphate	... 37.7..	320,000
Strontium sulphate	.... 16.1..	10,000
Strontium sulphate	... 26.1..	10,130
Silver chloride	..... 13.8..	715,800
Silver chloride	..... 26.5..	384,100
Silver bromide	.... 20.2..	1,971,650
Silver bromide	..... 32.4..	775,400
Silver iodide	..... 28.4..	1,074,040
Silver iodide	..... 40.4..	420,260
Calcium bicarbonate	... 13.6..	148,220
Calcium bicarbonate	... 24.6..	124,400
Barium carbonate	... 8.8..	61,070
Barium carbonate	... 24.2..	45,566
Strontium carbonate	... 8.8..	121,760
Strontium carbonate	... 24.3..	91,408
Calcium carbonate	... 8.7..	93,500
Calcium carbonate	... 23.8..	80,040

Mayer's Reagent for Volumetric Alkaloidal Assay.

Mercuric chloride	..... 13.546 grms.
Potass iodide	..... 49.8 "
Distilled water	.... to 1,000 cc.

1 cc. of this solution precipitates, 0.0239 grm. acetonine, 0.0097 grm. atropine, 0.00698 grm. hyoscyamine, 0.0189 grm. emetine, 0.0125 grm. coniine, 0.00405 nicotine, 0.0167 grm. strychnine, 0.0197 grm. brucine, 0.0317 grm. colchicine, 0.02 grm. morphine, 0.0213 grm. narcotine, 0.0296 grm. veratrine, 0.01375 eserine.

IODINE AND STARCH.—The compound formed—if there be one formed at all—between iodine and starch has always been a subject of interest, and one little understood. Rouvier has just communicated a paper on the subject to the *Académie des Sciences*, of which the results are the following. (1.) The weight of starch remaining the same (as do all the other conditions of the experiments), if the quantity of iodine added be gradually increased, the quantity fixed also increases, until a maximum of 19.6 per cent. is reached. Whatever the amount of iodine used in excess is, no greater quantity than this is taken up by the starch. This corresponds to the formula $(C_6H_{10}O_5)_{10}I_5$. (2.) If weight of iodine and starch be kept constant, as also the other conditions, but volume of liquid used increased, the iodine fixed decreased, unless excess of iodine is used, when dilution scarcely alters percentage (19.6) that is taken up.—*Comp. Rend.*

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"Sweet Chimes" Perfume, in ½, 1, 2 and 4 oz. bottles, handsomely put up.

"Sweet Chimes" Perfume, trial size, 12 on card.

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"Sweet Chimes" Sachet Powder, in Envelopes.

"Sweet Chimes" Sachet Powder, in ¼ lb. Bottles.

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French, Cave & Co.'s:—Chlorate of Potash, Soda Mints, San Cholera, Charcoal, Bronchial, Muriate Ammonia Tablets, Worm Chocolates and Lozenges, Quinine Chocolates, Cucumber Cream, Dentistine, Turkish Mints, Oriental Court Plasters, Com. Syrup Hyp., Columbia Lavender Salts, Concentrated Toilet Water Essences, &c.

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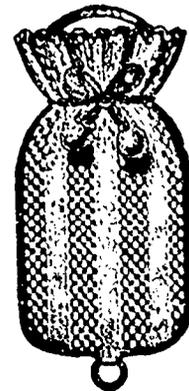
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WINE OF COD LIVER OIL

WITH PEPTONATE OF IRON



Is an entirely new and original preparation, containing 25 per cent. of pure Cod Liver Oil, as represented by its active medicinal constituents, Methylamine, Butylamine, Amylamine, Iodine, Bromine and Phosphorus.

Modern investigation has proven that the value of Cod Liver Oil as a medicinal agent is not due simply to the fact of its being an oil, but to the valuable active principles which it contains, as noted above.

Each fluidounce of the Wine contains four grains of PEPTONATE OF IRON, the most readily assimilated and most valuable of all forms of iron, it being partially predigested and free from styptic properties.

The fact that iron is prescribed in so many cases where Cod Liver Oil is required, verifies the ingenious, yet scientific combination of this preparation, which now fills a long felt want as to how to administer an agreeable manner the very agents much needed.

This preparation does not cause eructations or nausea, as does the oil, but is pleasant to take and thoroughly active. The dose may be increased somewhat with its use, if thought desirable.

The Wine notably increases the strength of the patient, as increased weight is evidence of returning health. It is valuable in nervous affections of children, acting especially on the nerve centers, thus not only assisting but preventing nervous disorders.

This Wine sustains the functional activity of the organs of digestion and assimilation, and is therefore recommended for phthisical patients who cannot digest and assimilate nourishment. Its power of increasing metabolism (tissue change) makes it especially useful in such cases, for it has been proven by clinical experiments that patients taking it have gained rapidly in weight and increased appetite.

Stearns' Wine has a delicious taste, and is acceptable to the stomach of the most delicate invalid. It is rich, ruby red in color, and free from all odor and taste of the plain Oil.

Stearns' Wine may be used in all cases where Cod Liver Oil and Iron are indicated, and furthermore it is devoid of all the objectionable features hitherto attending the administration of Cod Liver Oil in any form.

Samples, Literature and Treatise on Wine of Cod Liver Oil sent free on request. Price, \$6.00 per doz.

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Oil Santal, Eng. Opt.
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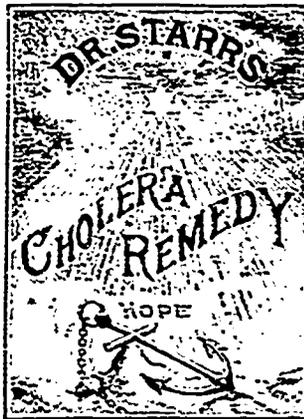
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MONTREAL.

Trade Notes.

Thos. B. Wiley, druggist, of Sumner, has removed to Salcoats, N. W. T.

James Labelle & Co. have opened a branch drug store in Windsor, Ont.

R. B. Taylor has opened a new drug store at Grenfell, Assiniboia, N. W. T.

The drug stock of F. W. James, Leamington, Ont., has been sold at 55c. on the dollar.

Thompson & Co. have bought the drug business of Harris & Guest, Yarmouth, N. S.

C. H. Couen, Parliament st., Toronto, has opened a new branch store in East Toronto.

A new drug store has been opened at St. Francois de Beauce, Que., by Drs. Dechene & Godbout.

Dr. Burkholder has sold his drug business on Richmond st., London, Ont., to J. G. Ross, of Embro.

A new drug store is being opened by H. Love, at the corner of Broadview and Danforth aves., Toronto.

Wilson Barr succeeds W. W. Barlow & Co., druggists, corner King and Hughson sts., Hamilton, Ont.

A new drug store is being opened at Selkirk, Man., by Dr. J. M. Ferguson and Mr. Peploe, of Winnipeg.

A. E. Fawcett has moved his business from King st. West to the corner of Baldwin and Huron sts., Toronto.

W. J. Young, of the firm of Young & Scharschmidt, druggists, of Courtney and Union, B. C., died last month.

J. F. Aitken, Waterford, Ont., has moved to the corner store of Union Block and has greatly improved his store.

The many friends of W. H. Switzer, Dresden, Ont., will sympathize with him in the loss of his youngest daughter.

Geo. A. Peaker, of Brampton, has purchased the insolvent business of Austin T. Gamsby, Spadina Ave., Toronto, Ont.

H. O. Fleming has opened a handsome new drug store in Windsor, Ont., in the block which he recently erected near the Post Office.

J. McHaffie, of J. Winer & Co., Hamilton, Ont., who has been suffering from a mild type of pneumonia, is back at his duties again.

W. C. Pettingell, druggist, of Regina, N.W.T., who was burned out in November last, had his stock completely destroyed by fire on Jan. 11th.

The Victoria, B.C., Chemical Co., has been incorporated as a limited liability company with a capital of \$100,000 in 2,000 shares of \$50 each.

C. Thomson, Tilsonburg, Ont., had his stock badly demoralized by moving, caused through fire. Covered by insurance. The business was only delayed a few days.

Geo. LeRiche has retired from the firm of J. Winer & Co., Hamilton, Ont., with which he has been connected for thirty-

two years. He feels that he has well earned a rest.

J. W. Strothers, who formerly was in business in Kincardine, has purchased the business known as the Euclid Pharmacy, on Euclid ave., Toronto, restocked and refitted the same.

We notice with pleasure the weddings of two of Toronto's young druggists during the month, A. H. Dilworth, son of J. Dilworth, at the market, and Frederick McLean, corner of Shuter and George sts., Toronto.

The many friends of N. C. Polson, of Kingston, Ont., will be grieved to learn that his health has not been much benefited by his stay at the seaside. His physician says he must remain there until spring.

The British Columbia Pharmaceutical Association, at a meeting held in Nanaimo, decided to join with the eastern associations in forming a Dominion Pharmaceutical Society, and to have a Canadian Pharmacopœia.

The wholesale drug house of T. H. Hinchman & Son, Detroit, Mich., was gutted by fire Jan. 3rd. The loss on building amounts to \$25,000 and on stock between \$80,000 and \$100,000, both covered by insurance.

D. Ross & Co., wholesale druggists, London, Ont., who succeeded to the business formerly carried on by McCallum & Co., are trying to effect a settlement with creditors. The liabilities are, direct, \$3,000, indirect \$3,000 to \$4,000.

Druggists in Municipal Politics.

The following druggists have been honored by their fellow-citizens in the municipal elections in Ontario:

Arkona,	G. M. Everest,	Reeve.
Cayuga,	D. Thompson,	Reeve.
Cobourg,	R. Wilson,	Mayor.
Guelph,	W. G. Smith,	Mayor.
Listowel,	J. A. Hacking,	Reeve.
Milverton,	J. G. Grosch,	Reeve.
Niagara,	H. Passford,	Mayor.
Waterloo,	S. Snyder,	Reeve.
Welland,	J. H. Burgar,	Mayor.

Nova Scotia Notes.

A. F. Buckley, Druggist of Brunswick street, Halifax, has sold the business so long conducted by him to Walter Irwin. Mr. Irwin is a graduate of the Pharmacy Branch of the Halifax Medical College.

H. McMurray for several years with R. B. Dakin, of Windsor, has transferred his services to R. S. Masters of Kentville.

Geo. K. Thomson & Co., of Annapolis, have purchased the business lately conducted by Messrs. Harris & Guest, of Yarmouth, and same will be carried on under the name of 'Thomson & Co.' We understand that Mr. Thomson takes charge of the Yarmouth Branch himself.

John S. Simson, who, up to the beginning of his serious illness of the last two

years, was travelling for Simson Bros. & Co., wholesale druggists, Halifax, died at his father's residence, Grand Pre, N. S., on Dec. 1st. John S. Simson was one of the most popular travellers in the Maritime provinces and his death is deeply regretted by his host of friends.

British Columbia Notes.

When the Council met at Nanaimo on Thursday, Dec. 14th, perhaps only a fractional number of the B. C. druggists were aware of the fact; but although the meeting was lacking in display and fuss the result of that meeting will be felt inside of three months or we are greatly mistaken. The principal business was the consideration of some proposed amendments to the Pharmacy Act which will come before the Legislative Assembly next session which opens January 18th. Everything being satisfactory Schedule A. will contain "Rough on Rats" and "Battle's Vermin Killer," two highly dangerous compounds known to contain arsenic. It is possible that the duties of a Licentiate and an apprentice will be so clearly defined that in future there will be not the slightest room for a doubt. The province is not making this move any too soon and we believe they will get what they ask for. British Columbia must keep abreast with the other provinces of the Dominion and we believe she will do so in her peculiar quiet way.

A Victoria newspaper reporter thought he had a delicate morsel when he reported the other day that some of the druggists were to be proceeded against by the Medical Council for prescribing. His aim missed the mark; if he wished to stir up animosity between physician and druggist he failed for these professions have hitherto worked very harmoniously. Here is what an English paper says on the subject: — "Should Chemists Prescribe? Whether reprehensible or not, the practice prevails largely. That there are risks attendant upon it is certain. But it may be urged that many chemists by long experience as dispensers for medical men, or by actual study, are perfectly capable of dealing with some of the simpler and less complexed ailments attendant upon daily life. In poor or comparatively poor neighborhoods, the chemist is often the poor man's doctor for small and simple afflictions. It would be a hardship and a great tax upon many of the poor if for every small ailment they must incur the expense of calling in a doctor. For a few coppers, the chemist will often accomplish all that is required, while the doctor's fee would range from half-a-crown upwards. It is always to be remembered that for any serious blunder a chemist may have to answer. This fact should act as an effectual restraint upon chemists, whose good sense, when confronted by serious or complicated cases, should teach them to direct the patient to a skilled practitioner."

All the Diplomas issued by the B. C. Pharm. Association since its incorpora-

tion have been recalled by Registrar Nelson on account of the illegal use of the Provincial Seal on those documents.

J. M. Henderson of the firm of Langley & Co., Victoria, has been confined to his home for two weeks with influenza. He was unable to be at the Council meeting on this account. The drug stores here are making some very attractive window displays for Christmas. We might mention particularly those of Cochrane & Munn, Douglas street, and Geo. Morison's, Government street. Dean & Cryderman and also C. E. Jones have a good show of toilet and fancy articles.

La Grippe has been almost epidemic here for some weeks and the sales of quinine have largely increased as a consequence. It is amusing to notice the fight that is going on quietly among three downtown druggists on an "original" balsam for coughs and colds; each claims priority.

Second Annual Meeting of Provincial Pharmaceutical Association on Thursday and Friday, February 8th and 9th, 1894,

PROGRAMME.

FIRST SESSION—Thursday at 1.30 p. m.
Address by the President, Wm. Murchison, Esq.

Reception of New Members.
Reading minutes of previous meeting.
Receiving reports of committees.
Reading communications.

Incidental business.
(30 minutes will be allowed for discussing subjects of general interest.)

Essay—"A New Avenue of Trade."—R. S. Muir, Esq.

General business.
(During the above Session an adjournment of one hour will take place at 6 p. m.)

SECOND SESSION—Friday at 9.30 a. m.
Reception of New Members.
Reading minutes of previous session.
Election of officers.

Address—"Hints on the Preparation of Pharmaceutical Elixirs."—H. Waters, Esq.

Incidental business.

THIRD SESSION—Friday at 2 p. m.
The newly-elected officers will take their respective positions.

Reading minutes of previous session.
Address by Vice-President, L. W. Yeomans.

New business.

Address.

Receiving reports of standing committees.

General business.

Wm. MURCHISON, G. A. McCANN,
President. Secretary.

Prince Edward Island Notes.

F. de C. Davies was married in St. John, N. B., on the 4th instant, to Miss Young, daughter of Robert Young, Esq., for many years a leading merchant in

Charlottetown. Mr. Davies and his bride returned next day to Charlottetown.

La Grippe is very prevalent in Charlottetown, and the druggists are saying, "it is an ill-wind that blows nobody any good."

Ontario College of Pharmacy.

The results of the junior examinations at the Ontario College of Pharmacy are as follows:

First class honors (arranged in order of merit)—A. Wilkinson, H. C. Thomas, E. F. Armstrong and E. D. Storey, (aeq.), A. Henderson, A. I. McCall, W. A. Coleberry, G. C. Bowes and J. A. Jamieson, (aeq.), J. A. Smith, W. H. Watson, A. E. Hotson, J. H. Seagers, Walter Master.

Second class honors (in order of merit)—J. McLeister, W. J. Nichol, Theo. Sweet and G. W. Mahood, (aeq.), John A. Johnston, H. P. Elder, A. H. Dowsley, M. B. Annis, F. J. Miller, Orin DeLong, W. Edmonds, F. E. Marshall and Ira E. Belfry, (aeq.), R. P. Leslie, C. G. Mills, G. F. Bigham, J. A. White and H. Brillinger, (aeq.), J. E. Hovey, George Reid, F. C. Hooper.

Pass list (arranged alphabetically)—W. R. Abbott, T. R. Allen, L. R. Ash-ton, F. C. Barnhart, T. E. Bean, J. Boardway, J. H. Booth, J. D. Bower, R. R. Budgeon, F. B. Bunting, W. A. Cameron, J. R. Clements, J. A. Conkey, H. M. Copeland, G. H. Davis, Frank Dowling, J. E. Gayfer, O. O. Hammill, W. W. Hewing, R. C. Heuston, A. R. Johnston, J. J. Johnston, W. G. Keddle, C. P. Lyman, H. W. Mitchell, J. A. McRossie, F. W. Nichaus, Alfred E. Pirt, J. H. Radford, H. G. Robertson, R. B. W. Robinson, James Shurie, Geo. A. Small, G. E. Smeaton, Chas. Smuck, B. D. Turquand, R. H. Walton, R. C. Ward, A. E. Williams, W. M. Woodburn.

Granted aegrotat with pass standing.—E. R. Stevenson, T. R. Powell, R. W. McLung.

Passed in part subjects.—(Latin, Posology, etc., only), John Love. (Pharm., Latin, etc., Chemistry only), Milton C. McIntyre. (Pharm., Latin, etc., Pract. Chem. only), F. W. Jeffs, James A. Johnston. (All subjects excepting Practical Chemistry), J. A. Thompson. (All subjects excepting Latin, Posology, etc.), Sydney Jackson.

Highest in subjects.—Pharmacy, (theoretical and practical)—A. I. McCall, Geo. C. Bowes and H. C. Thomas, (aeq.) Chemistry—A. Wilkinson and M. B. Annis, (aeq.), W. A. Coleberry and E. D. Storey, (aeq.). Practical Chemistry—A. E. Hotson and H. C. Thomas, (aeq.), E. D. Storey and G. C. Bowes, (aeq.). Botany—J. A. Jamieson, A. I. McCall, A. Wilkinson. (Latin, Posology, etc.)—E. F. Armstrong, A. Wilkinson, W. A. Coleberry, and A. Henderson, (aeq.).

A fraudulent cochineal made of exhausted cochineal powder, colored with rose aniline and dusted with chalk, has made its appearance in European markets.

Forty-Sixth Semi-Annual Examination, December, 1893.

There were 28 up for examination, 11 in part subjects and 17 on the whole.

Passed in Order of Merit.—Walter B. Scott, Port Hope; C. A. Buchanan, Kemptville; Geo. C. Park, Chatham; Thos. Rowland, Toronto; Wm. H. Rutledge, Creemore; Rolph T. Shepherd, Stayner.

Passed in subjects now and on previous occasions:—Dugald Campbell, Atwood; Harry W. Love, Toronto; Alexander Ray, Belleville; Colin McIntyre, St. Thomas; Arthur S. Hopkins, Toronto; H. F. Gordon, Woodstock.

Candidate who succeeded in taking four subjects.—John Srigley, Toronto.

Candidates who succeeded in taking one subject:—Leon Albert Goodacre, London, dispensing; James M. A. Waugh, Wallaceburg, pharmacy.

THE Semi-Annual meeting of the Council for granting certificates of competency, in accordance with Section 8 of the Act respecting Pharmacy, and for general business, will be held in the College building, Gerrard street, Toronto, on Tuesday, the sixth day of February, 1894.

Montreal College of Pharmacy.

The Sessional Examinations of the Montreal College of Pharmacy were held at the close of the lectures, prior to the Christmas holidays, the result being as follows: the names of the successful students in the various classes being given in their order of merit, namely:

Botany—H. W. Reynolds, W. I. Taylor, W. A. Hendrie.

Chemistry and Pharmacy—First year students, Medard Langlois, D. R. O'Neil, T. C. A. Bates.

Second year—Wm. Lyman, A. M. McMillan, R. J. Lunny and W. A. Hendrie, equal; W. L. Taylor and R. N. Miller, equal; F. O. Anderson, J. V. Leveque.

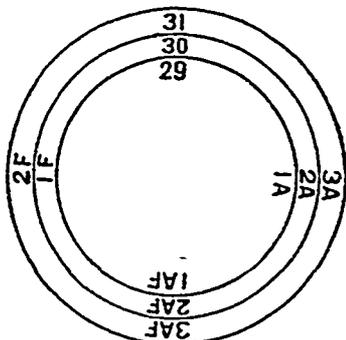
Materia Medica and Toxicology—First year students, James Franckum, O. Mowatt, Oscar Turgeon, J. W. Elcome and T. C. A. Bates, equal; W. J. Roach, A. C. Paquet, R. J. Taylor.

Second year—Wm. Lyman, J. H. Goulden, R. N. Miller, F. L. Woolley, O. J. Pinch and J. Boutin, equal.

The next College examination will take place at the close of the session, the end of March. The results obtained by the students then will be added to those obtained at the examination just held, and the student obtaining the highest number of marks on the whole in their separate classes, will be presented with valuable prizes, consisting of books treating upon the sciences taught, and all students passing these examinations will, after graduating and passing the Pharmaceutical examinations, receive the College diploma. Some misunderstanding had arisen among a portion of the students in regard to these examinations, to the effect that if

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Dr. Slocum's Psychine, small,	14	00	Dr. Slocum's Worm Wafers,	2	00
Dr. Slocum's Oxygenized Emulsion, large,	7	50	Dr. Clark's Catarrh Cure,	4	00
Dr. Slocum's Oxygenized Emulsion, small,	3	00	Dr. Clark's Pile Ointment,	7	50
Dr. Slocum's Coltsfoot Expectorant,	7	50	Dr. Clark's Regulative Pills,	4	00
Dr. Slocum's Celery and Quinine Bitters,	4	00	Dr. Clark's Lightning Liniment,	2	00
Dr. Slocum's Regulative Pills,	4	00	Peach Bloom Skin Food,	7	50
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Dr. Slocum's Iron Blood Pills,	2	00	Abrasive Corn Solvent,	2	00

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they did not pass these examinations, their lecture attendance tickets would not be certified, but the Board of the College have had no such intention, but students who do not pass these examinations will not receive the College diplomas.

Preliminary Pharmacy Examinations.

The Preliminary Board of Examiners of the Pharmaceutical Association of the Province of Quebec, held their quarterly examinations for students entering the study of Pharmacy, in Montreal and Quebec, on Thursday January 4th, when thirty two candidates presented themselves in Montreal and five in Quebec, of these the following named in order of merit passed:—Eleanor Sleeper, Joseph Ernest Nadeau, Geo. Virolle, Joseph Normandin and Valmore Ledoux. Allan Ayerst passed on all subjects but French and Wilfred Landry on all but History. These two gentlemen will have to present themselves again for examination on these subjects. Candidates are examined in English, French, Latin, Arithmetic, Geography and History. The examiners were Prof. A. Leblond de Brumath and Prof. J. Gammell. The next examination will take place on the 5th of April.

Montreal Notes.

The Pharmacy Students' Association held its annual dinner at the St. James Hotel on Thursday evening, Jan. 11th. W. H. Johnson is President and R. Desilets, Secretary, and these gentlemen, with Mr. Rioux, have been indefatigable in their endeavors to have their annual jollification up to the standard of former years.

Dr. Cheval will in future carry on business as a chemist and druggist at 501 St. James street, under the name of A. Gauvreau & Co., Mr. Gauvreau retiring.

Edmond Giroux, jr., of 1934 St. Catherine street, has sold out to Mr. Barbeau, licentiate of the Pharmaceutical Association. Mr. Giroux returns to Quebec to become a partner in the old firm of Edmond Giroux & frere, St. Peter street. The many friends of Mr. Barbeau will wish him success in his new undertaking.

I. H. Nault, chemist and druggist, of 2449 Notre Dame street, is out as a candidate for Hochelaga Ward in the approaching civic elections. His opponent is Alderman Hurtubise a very rich and very popular man in the ward, so that our friend, we are afraid, will have a hard road to travel in order to get there. Anyway, as brother pharmacists, we must wish him every success.

A poor business in Christmas and New Year's goods was done this year in Montreal compared with preceding years. There was evidently a scarcity of current coin of the realm in the pockets of Her Majesty's lieges.

There is a strong feeling amongst the

druggists of Montreal in favor of curtailing the credit business. A good many tell me they are now delivering a statement of account monthly as a hint to their long-winded customers. In the residential parts of the city the women run up the bills and the husbands are annoyed when the collector calls on them for the amount. It is always bad policy to allow a bill to run on too long as the amount becomes serious and *pater familias* puts off the payment as long as possible.

Dr. Thayer has removed his pharmacy from St. Catherine street to his old stand on Notre Dame street, east. This part of the street has been recently widened and the stores rebuilt. Dr. Thayer is well known in the neighborhood and will doubtless be well patronized.

T. Chive, who was obliged to move into a cross street during the pulling down of his premises, owing to the widening of the street, has removed back into his new store which is very near, one might say dangerously near that of Dr. Thayer on Notre Dame street.

It is thought by some that the epidemic of street widening in Montreal is nearly over. The luxury of making a western city out of an old eastern one costs money, and Montrealers are beginning to find that out. The danger of pulling down one side of a business street is that it tempts capitalists to put up a class of stores entirely out of proportion to the business to be done.

C. M. Desilets, for many years with Mr. Bandon, and lately with Mr. Decusy, has commenced business on his own account on St. Denis street, above Sherbrooke. Mr. Desilets was formerly in business at the corner of Notre Dame and Jacques Cartier Squares. We are afraid he will have a hard fight up hill, unless he can carry a stock equal to the old established houses on the same street.

Mr. S. Lachance's new pharmacy on St. Catherine street, east of St. Denis, is a veritable *chef d'œuvre* in its way. It is spacious, with fine fixtures, and well lit. The proprietor gives unwearied attention to the business and he is a capable and conscientious man. Time alone will tell whether the investment will pay.

Notes from England.

(From our own Correspondent.)

The decision in the lanolin case has just been announced and is against Messrs. Richardson & Co. on all the counts. Henceforth it is illegal to attempt to purify wool fat in order that it may be used as an ointment. The verdict may be regretted by pharmacists as tending to monopolize an ointment basis, although it is generally admitted in pharmaceutical circles that Liebreich is entitled to the credit of having first prepared wool fat in a presentable form. The attempt of the defendants to unsettle the validity of the lanolin patent is regarded as a tactical

mistake, particularly when the chief support had to rest upon the unknown *œsypum* of Discorides. The trial lasted 6 days and was principally remarkable for the vast amount of extraneous matters which were dragged into the case by counsel. I hear on exceptionally good authority that the expense incurred by Messrs. Richardson & Co. will be at least \$15,000, but it is probable that the greater part of this will fall on the Yorkshire firm of wool-grease manufacturers. The latter have for some years been spending considerable sums of money in attempting to produce a fair article from the evil-smelling by-product obtained when washing wool. Until within recent years the only success they had with it was as cart-grease! It must be particularly mortifying to them, therefore, to find that now they have secured a presentable substance they are infringing the lanolin patent. Perhaps the most sensational evidence was given by Dr. Paul, the editor of the *Pharmaceutical Journal*. When he showed in court samples of butter, lard and wax containing 100, 200 and 300 per cent of water and described his method of incorporating it, quite a sensation was produced. The ex-attorney general tried hard to break down his evidence but was met in such a calm and incisive manner that he completely failed to negative Dr. Paul's conclusions. In his capacity as an analytical and consulting chemist. Dr. Paul has been working upon wool-fat and its purification for some years and the complete grasp of the whole of the technicalities stood him in good stead. Professor Atfield gave his evidence in fine style also, but left the impression that he had not gone very deeply into the subject. On the lanolin manufacturers' side Professor Dunstan proved an effective witness but made a mistake in attempting to answer questions of a mechanical nature, instead of confining himself to the chemistry of the subject. During a certain stage of the case, by the introduction of such subjects as fatty acids, hydrolysis, centrifugal force, etc., such a fog arose in the minds of everybody that it appeared impossible for the judge to make head or tail of it. But English judges have a cool way of keeping the legal facts before them and ignoring all others which they may consider irrelevant.

The close of the year suggests a retrospect of the progress of pharmacy. As far as England is concerned the year 1893 will hardly be particularly noteworthy although there have been some solid contributions to our knowledge of drugs. Perhaps the most important investigation is that in connection with the aconite alkaloids, to which has been progressing under Professor Dunstan's guidance in the research laboratory of the Pharmaceutical Society. There has been some tendency of late to express disappointment with the work of this laboratory. It is certainly unfortunate that the energies of this expensive laboratory were chiefly confined to a drug which is not used to anything like the extent that

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many others are. But this is not the fault of the laboratory, but rather of the committee, who practically instigated the research. For instance, it has been suggested that an investigation upon *ipecaecanaha* would have been of far more practical value than that upon *aconite*. Certainly there is no comparison between the two as regards their consumption in medicine. We have advanced a step also concerning the decomposition of chloroform and the means of preventing it. The use of thyroid glands in myxœdema, goitre, etc., has been further demonstrated, although we are still unable to identify the nature of the remedy. During the last few months sulphite of magnesium has been added to the long list of so-called "specifics" for diphtheria. It is receiving an extended trial, but reports are by no means universally confirmatory. The production of citric and tartaric acids absolutely free from lead is a triumph in technical chemical manufacture achieved during the year. The physiological action of a large number of organic compounds have been investigated without important results, although we are daily learning more concerning the influence of certain groups in the compound. The rush for new remedies has somewhat subsided, and although the production of endless organic derivatives still continues in Germany, it provokes but little interest here.

Pharmaceutical legislation in this country is at a stand-still, and there are many who consider that that is the best for everybody. The law has been so clearly demonstrated on the question of poisons being sold by unqualified persons, although in the employment of a registered chemist, that it amounts to a new pharmacy act. The question of branch shops is agitating many minds and also what is known as the widow's clause—which permits a business to be carried on by the widow of a registered person provided she employs a registered manager. It is quite evident that it is impossible to tackle "company pharmacy" unless some alteration is made regarding these two anomalies. To "company pharmacy" originally we owe the cut-rate problem although now there are many private members of the craft who have joined the scalpers. The recent suggestion of a junior association that the promulgation of a code of ethics for pharmacists would clear the ground is interesting but unpractical. The year closes without any serious and concerted attempt to grapple with the cutters; the efforts of a few isolated manufacturers to confine their goods to legitimate traders being only noticeable in comparison with the large number who are regardless of the matter and its consequence. The evil of substitution is, however, beginning to be felt by manufacturers and there is hope that this may lead to a better recognition of the only method of dishing the "muslin druggist," viz, by the hearty and loyal co-operation of manufacturers, wholesalers

and retailers. Is this too much to hope for in 1894?

University Examiners.

The following are the examiners chosen by the Senate of Toronto University for the examinations in pharmacy for 1894: Pharmacy, Chas. F. Heebner; Chemistry, J. Munro; *Materia Medica*, J. T. Fotheringham; Botany, T. McCrae.

New Reaction of Eserine.

In 1890 Ferreira da Silva announced that eserine is the only alkaloid of the benzene ammonical group which, when treated with fuming nitric acid (sp. g. 1.40) and evaporated to dryness, yields a green residue upon the borders of the capsule. In a closer study of this reaction da Silva found that it was marvelously accurate, and that the green residue itself enjoyed some highly interesting properties. In making the test take a fragment of eserine or one of its salts not larger than a little grain of sand (or say $\frac{1}{100}$ inch in diameter), place it in a little capsule and dissolve it with a drop or two of fuming nitric acid. The solution will at first be a clear yellow color, but in warming it over the water-bath, it passes successively into a deep yellow, orange yellow, and finally into orange. As evaporation progresses, under constant stirring, the residue becomes greenish until when finally dryness is reached the color of the dry material becomes clear green. In this manner the presence of as small a quantity of eserine or its salts as 5 mgm. can easily be determined. This green matter is soluble in water and alcohol, the solutions being green and non-fluorescent, and on evaporation of the solvent, is found unchanged. If we now let fall a drop of nitric acid upon the green matter, on returning the capsule to the water-bath, we will see the parts not directly touched by the acid become blue, but the whole finally becomes red-violet which gradually passes into a greenish. If we dilute the acid with water we get a fluorescent solution which by reflected light is blood-red, but by direct or transmitted light is greenish-yellow. Examined with the spectroscope the aqueous solution is characterized by three absorption bands. The first, which is sharpest, is in the red between λ (lambda) 670 and λ (lambda) 688; second is wider and occupies a place in the indigo between λ (lambda) 400 and λ (lambda) 418; and the third which is quite feeble is in the orange. The alcoholic solution shows the identical bands more clearly characterized. Petit has already described a blue coloring matter derived from eserine (physostigmine blue), which is obtained by treating eserine with ammonia. Daquesnel has obtained from the same alkaloid a red coloring matter (*rubreserine*) by treating it with the fixed alkalies. Ferreira da Silva proposes the name of *chloreserine* for the green matter discovered by him.—*Nat. Druggist*.

Constituents of Mate.

Dr. Hermann Kunz-Krause, of the University of Lausanne, has investigated the chemical constituents of the *Ilex Paraguensis*, or mate, and finds besides the constituents heretofore said to be present—caffeine, tannin, proteid substance, etc.—that the leaves contain combined cholin, a reducing but optically inactive sugar as a decomposition product of the tannic acid, notable quantities of water-soluble potassium and magnesium salt. He also noted (2) that mate is free from ilixanthan, which is found in the allied *Ilex aquifolium*. (3) The tannic acid present is identical with that of coffee, both yielding dioxycinnamic acid as a decomposition product. (4) The dioxycinnamic acid so obtained forms neutral monobasic and dibasic salts with bivalent metals, and yields, on partial oxidation with nitric acid containing nitrous acid, as further derivatives pyrocatechin, and oxalic and hydrocyanic acids. (5) The derived dioxycinnamic acid is analogous to the other aromatic oxyacids, since at 200° C. its carboxyl group, splits off as CO_2 , meta-para-dioxystyrol resulting.—*Arch. der Pharm.*

Iodide of Iron.

Roussillon proposes the following method for preparing an official solution of iodide of iron which will not alter, and which can be easily used for preparing syrup of iodide of iron when wanted quickly.

Take of

Iodine (re-sublimed).....	16.4 grammes.
Iron filings.....	8 "
Distilled water.....	30 "

These are allowed to stand until the reaction is over and then filtered into a flask containing 220 grammes of glycerine. The mixture is then exposed to a moderate heat until the liquid is reduced to 240 grammes. It is then rapidly transferred to bottles in quantities of 72 grammes, and the corks well paraffined. Each bottle serves to make one litre of syrup of iodide of iron. This solution keeps quite well in the light. The objection to this is that the addition of 70 grammes of glycerine per litre of syrup so alters the composition of it, that it becomes quite a different preparation.—*Reperoire*.

In the calcium spectrum some new lines have been discovered.

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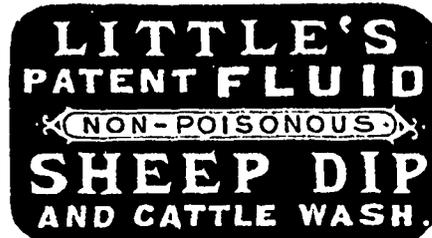
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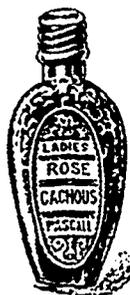
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A Few Notes on Essential Oils.

We condense the following from the semi-annual report of Schimmel & Co., which has lately been issued and contains much of general interest to druggists:

Almond Oil, Bitter.—The difficulty in finding an outlet for the fatty oil of almond can only be overcome to some extent by selling at a very low price, hence the price of essential oil of bitter almonds has correspondingly advanced. The artificial oil of bitter almonds has been quoted higher, in sympathy with the advanced price of benzoic acid. The product referred to is not oil of mirbane, but benzaldehyde, until recently believed to be quite innocuous for alimentary purposes, but this has been disproved by Professor Kobert, of the University of Dorpat, who states the contrary to be the fact. He maintains that benzaldehyde exercises a powerful influence on the nervous system and upon changing tissue, but unlike nitrobenzol, does not act on the blood.

Almond Oil, Expressed.—The first arrivals of the new almonds are already in press. The price of the raw material is lower than for years, and a brisk business may be expected.

Anise Seed.—The yield of the harvest, although exceeding first expectations, is smaller than last year, and the general opinion is that the price will soon advance. It is said that consumers are becoming converted to the use of pure anethol, being the sole vehicle of the pure anise odor, and free from all disagreeable after-taste, yielding products such as cannot be obtained by the use of any other kind of oil of anise.

Bay Oil.—The price has been depressed to the lowest possible level by competition, the quality of the oil in the market being said to be in keeping with the price. In the recent revision of the U.S.P., the tests for pure bay oil have been modified in accordance with the results of the most recent investigations. The specific gravity, which was formerly stated to be 1.040 has been reduced to 0.975-0.990, the higher figure having facilitated adulteration with oil of cloves or oil of pimenta. The absence of these adulterations is ascertained further by the following tests:

"If to 3 drops of the oil, contained in a small test tube, 5 drops of concentrated sulphuric acid be added, and after the tube has been corked the mixture be allowed to stand for half an hour, a resinous mass will be obtained. On adding to this mass 4 c.c. of diluted alcohol, vigorously shaking the mixture and gradually heating to the boiling point, the mixture should remain nearly colorless, and should not acquire a red or purplish-red color (distinction from oil of pimenta or cloves)."

Caraway Oil.—Within a few months a violent revulsion has occurred in the value of this oil. The abnormal drought has reduced the yield of the seed harvest in Holland. Not until the crop was in

progress did the extent of the damage become apparent, heavy arrivals being looked for in vain in the chief market centres. Serious apprehensions are beginning to be entertained in regard to the next year's crop, as the principal part of the crop sowed during the current year has perished, on which the supply for 1894 will depend.

Cassia Oil.—No material change has taken place in the condition of the cassia oil market.

Citronella Oil.—No alteration has taken place recently in the value of this article, however, adulteration is reported to have been practiced to quite an extent in Ceylon, which threatens to destroy the reputation of the article. The adulterants are stated to be admixtures of either a fatty oil (probably coconut oil) or petroleum. In either case, the adulterant can easily be detected by a simple test. One part of citronella oil should yield a clear solution when well shaken with ten parts of spirit of 80 per cent. Pure oil of citronella yields a clearer or feebly opalescent solution, not separating out after standing. Schimmel & Co. request all firms interested in the citronella oil trade to adopt this system of examination.

Lemon Oil.—The new lemon crop in Sicily presents a favorable prospect for moderate prices, and the new essential oil will be available earlier than usual this season. The oils prepared during the first two months of the harvest, i.e., November and December, are said to be better in quality than when prepared from later matured fruit.

Orange Oil, Sweet.—It is reported that the prospects of the coming crop are not very good, although this is not authoritatively stated. However, good stocks of last year's oil are said to be in existence.

Eucalyptus Oil.—The commercial situation caused by over production of these oils in Australia still continues. Schimmel & Co. conclude that one-half of the oils offered in the London market were either destitute of eucalyptol or contained it in feeble proportions. Many species of eucalyptus produce the oils of the market, but the product of eucalyptus globulus seems to be the one reliable article for medicinal use. This oil, when rectified and deprived of its objectionable constituents, which are the first to distill over, deserves preference on account of its uniform quality, if for no other reason. It is offered with a guarantee of 60 per cent. of eucalyptol. What is known as eucalyptus maculata, var. citriodora, is also well spoken of and said to be economical for use.

Ginger Oil has advanced in price, as have all varieties of ginger, which is especially true of African ginger which contains the higher proportion of oil.

Juniper Berry Oil.—Reliable reports from Italy announce the failure of the crops. Considerable stocks of the last crop of berries are held, but are not avail-

able for distillation, as the proportion of oil is too small.

Lavender Oil.—The low prices of last season are not likely to be advanced to any appreciable extent, and the market will offer a large selection of fine qualities.

Peppermint Oil, American.—It is reported that the intentions of peppermint producers, who proposed enlarging the area of land planted, were frustrated by unfavorable weather at the time for planting, and that the area planted was smaller than for three preceding years. Quite interesting figures are given in regard to the acreage and product in different localities. In Wayne county, N.Y., the acreage is given as follows:

1076 acres of old plants.
1119 acres of new plants.

The yield is estimated at 8 pounds per acre for the old plants, or 8,608 pounds, and 24 pounds per acre for new plants, or 26,856 pounds, a total of 35,464 pounds for this district. The yield for 1892 for same district is given at 73,782 pounds. The peppermint producing counties of Michigan are stated to have had a total output for 1893 of about 68,000 pounds, against an output of 98,000 pounds for 1892. The deficiency is said to be due to frosts and grasshoppers. It is stated that an important advance is unavoidable.

Wintergreen Oil.—Pure methyl salicylate having been incorporated in the late revision of the U.S. Pharmacopœia, some of the prejudice against the substitution of this product for betula lenta (sweet birch) oil will disappear. Real oil of wintergreen is said to have disappeared from commerce altogether.

Among the new products named in the report from which we have abstracted, we notice essential oil from mignonette flowers and an essential oil from mignonette root, the former for perfumers' use and the latter as an object of scientific interest, possessing a strong radish odor. It contains sulphur, as determined by a preliminary examination, and it is proposed to subject it to a more thorough examination.

New products of the American laboratory are oil of dittany, oil of mountain mint, and oil of wild mint, which will be subjected to a thorough chemical examination and reported on later.

Notes on the Chemical and Microscopical Examination of Urine and Sputum.

E. J. MILLARD, F. C. S.

Read before the Chemists' Assistants' Association.

The requirements in the subject of urine analysis at the present time are much more complex, in the author's opinion than even a few years ago. The fact was that many medical men make rough analyses of urine almost daily, and are assisted by the ingenious apparatus invented by pharmacists, the apparatus of Ger-

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rand and of Squibb being found in many surgeries and consulting rooms. There was reason to believe, however, that in the future this branch of analysis would be handed over to pharmacists, owing to their more complete chemical training, even as physicians do now when they meet with difficulties.

URINE.

Color.—Light yellow urine may be due to drinking excess of water or to nervous affections. Diabetic urine is usually light colored. Reddish-yellow color may be due to santonin or chrysophanic acid, and can be detected by alkalis turning it red. Urine of fevers is nearly always highly colored, concentrated and clear. In jaundice the urine is brown, or tinged with green from bile. Smoky-brown color to almost black may be from blood, in which case the deposit will contain corpesces. Carbolic acid or creasote internally turn the urine dark, and senna renders it brown.

Reaction.—The acidity is due to acid sodium phosphate. After a full meal the urine is often alkaline, and this is called the "alkaline tide," whilst the "acid tide" occurs after a fast. In acute rheumatism and fevers the urine is highly acid.

Albuminuria.—After excessive exertion or exposure the urine may contain traces of albumin. In Bright's disease the amount present rarely exceeds 1 per cent., and Esbach's albuminometer is only graduated to 0.7 per cent. Mr. Millard mentioned that he had recently examined a sample which contained 2.4 per cent. of albumin. Only two ounces of urine had been passed and it was simply loaded with albumin and casts. The separation of albumin and globulin, which occur together in albuminuria, may be effected by estimating first the total proteids in Esbach's albuminometer. Then a portion of urine is saturated with magnesium sulphate, filtered, and the filtrate estimated for albumin. The difference in the two results, after allowing for increase in volume from the magnesium sulphate, represented the amount of serumglobulin precipitated by the sulphate. When blood is present, as in inflammation of the kidneys, the serumglobulin is in excess.

The recently introduced tests for albumin were next described. Trichloroacetic acid was strongly recommended, it being stated that it detects 1 part in 100,000 of urine with ease. Its reaction with alkaloids should be observed. On adding a few drops of trichloroacetic acid test to urine containing quinine, a precipitate is produced which is soluble, either by heat or by large excess of the reagent. Trichloroacetic acid has been shown to detect albumin when it was dissolved by acetic acid, and not precipitated by picric acid or by heat. In the milk treatment of Bright's disease, no albumin coagulable by heat remains. Nitric acid gives a precipitate, soluble in excess, and saturated salt solution gives a precipitate increased by the addition of acetic acid. This was due to the conver-

sion of albumin into albumose. Spiegler's test is very delicate, and does not precipitate peptone, but behaves with alkaloids in the same manner as trichloroacetic acid. It is prepared by dissolving mercuric chloride, 8 parts; tartaric acid, 4 parts; glycerine, 20 parts; in water, 200 parts. The urine is first acidified with acetic acid, and filtered from mucin.

Salicylsulphonic acid had been recommended by Dr. Williams, as it precipitates one part of albumin or globulin in 100,000. Albumoses and peptones are also precipitated, but dissolve on heating. It was pointed out that the heat and acetic acid test, very commonly employed, will give a precipitate when the patient is taking tolu, balsam of Peru, &c. This is due to precipitating the resin, but as it is soluble in alcohol there need be no difficulty in recognising it.

Peptonuria.—If peptones are present it is an unfavorable symptom. The biuret reaction (trace of copper sulphate and excess of potash giving a red color) and precipitate with picric acid, soluble on heating, are also obtained with acid albumin. It is, therefore, necessary to add acetic acid, saturate with ammonium sulphate, filter and test filtrate.

Glycosuria.—Fehling's solution is reduced by other bodies besides dextrose. Uric acid accounts for fully one fourth of the reducing action of non-saccharine urines, whilst creatinine, hippuric acid, &c., have also a similar action. Internal administration of chloral, camphor, &c., was formerly stated to produce sugar in urine, but it is now known that glycuronic acid is the body present. In diabetic urines, there is not much difficulty, as the quantity of sugar is large, usually over 4 per cent. It is with samples containing only about $\frac{1}{2}$ per cent, of reducing substance that care must be taken to ascertain if due to dextrose or glycuronic acid. The latter has very little clinical importance. To make sure as to which is present the fermentation test is used for confirmation, as glycuronic acid is not affected.

Mr. A. W. Gerrard's patent "Glycosometer" was exhibited at this point, and an estimation of diabetic urine performed with it. The diluted urine runs from a special burette into the boiling Fehling's solution, and when the color is discharged, the level of the urine in the burette represents the percentage of sugar. It was pointed out that although the end reaction was not so sharp as with Pavy's method, the absence of ammoniacal fumes was a considerable advantage.

Urea.—The average amount of urea present is 2 per cent., but is increased in fever and diabetes, and decreased in chronic and wasting diseases. Mr. Millard then defended the hypobromite method of estimating urea against the views expressed quite lately in the *Lancet*.

Uric Acid.—The high results of Haycraft's method of estimating uric acid are due to the precipitation of compounds of the xanthine group. Uric acid, according

to Sir W. Roberts, exists as quadrates, which are decomposed by the phosphates with liberation of uric acid. In gout, the excretion of uric acid is diminished owing to its accumulation in the tissues. The appearance of the concretions in joints, as in gout and rheumatism, was next described, and Dr. Haig's experiments on the excretions of uric acid during the administration of salicylate of sodium.

Hæmatoporphyrin in urine had been stated to be due to the administration of sulphonal, but Dr. Adair had informed the author that at the Wadswley Asylum, where the drug was given in 70 grain and 80 grain doses, no case had been observed.

Urinary Sediments.—Pus, and its appearance in alkaline and acid urine, was described. The addition of acetic acid renders the nuclei more apparent for microscopical examination. Mucus was distinguished from pus by its behavior with acids, alcohol and alum. To separate the two, precipitate pus with mercuric chloride, filter and add acetic acid, which precipitates mucus.

Casts may be granular, hyaline, epithelial, fatty or blood, according to their composition and contents. Cylindroids were also described, and the microscopic appearance of these was given. A useful method for recognizing epithelial debris, casts, &c., was to add a drop or two of solution of methylene blue to the deposit, before examining under the microscope.

SPUTUM.

The chemical composition of sputum is mucin, 2; albumin and fat, 1; extractives, 2; salts, 1; water, 94.

In bronchitis it is yellow and tenacious, in phthisis it may be tinged with blood, in pneumonia it is rusty-brown, and in the last stages becomes purulent. Sputum of bronchitis is very watery, whilst that of pneumonia is ropy.

The detection of yellow elastic tissue in sputum is very important. A small quantity of sputum is boiled with an equal volume of caustic soda solution, containing 20 grains in a fluid ounce. When the liquid is quite fluid, it is diluted with water and placed in a conical vessel. After some time the undestroyed tissue is taken out with a pipette and examined microscopically. The tissue is nearly always present in acute phthisis, whilst in the more advanced stages fragments will be present.

For the examination of tubercle-bacilli, the expectoration should be collected before breakfast. The opaque white particles will be found most frequently to contain the bacilli. The method used by Mr. Millard for the detection of tubercle bacilli appears to be a modification of Crookshank's, and is as follows:—With the aid of a scalpel a particle is placed on a clean cover-glass, and a second cover-glass applied face to face with a slight rubbing pressure, so as to ensure a thin even layer on each. Slide the glasses apart, and dry by gently warming. Hold-

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ing the cover glass film upwards, it is passed several times quickly through Bunsen flame to coagulate the proteids. Some carbolic-fuchsin is heated in a watch-glass, and the cover-glass floated in it, film downwards, and allowed to remain at least ten minutes. It is then removed and immersed in diluted sulphuric acid, containing about 20 per cent. of acid. Wash well in water, and if more than a light red color remains, decolorize again in acid, and wash with water. Place two or three drops of solution of methylene blue on the film, allow to remain two or three minutes, and wash well with water until no more color is removed. Dry thoroughly by warming, and mount in xylol-balsam.

In concluding, a warning was given as to negative results by no means proving the absence of tubercular disease. Frequent examinations during the course of the disease were necessary, although usually vainable evidence would occur besides the presence of bacilli. In some cases the author detected *Macrococcus tetragonus*, although bacilli were not present.—*Br. and Col. Druggist.*

More Chemistry Needed.

ALFRED R. L. DOHME, A. B., PH. D.

Read at the last meeting of the A. P. A.

"Keep abreast of the times," is the cry on all sides and everywhere in this last decade of the nineteenth century. Any person who fails to follow the teachings of this popular edict, be it in science or business of any nature, soon becomes a back number, and is regarded more or less as a fossil. It is the age of advancement and of progress, and to be successful a man must advance and progress with the age. Science is advancing with giant strides; veritable revolutions are taking place in all branches of it, notably chemists, and unless a man follows closely the work that is being done he soon finds himself in a bog, where he sees confusion on all sides and no landmark or guide post in sight. Pharmacy is advancing, and the advance is along the line of the chemical cohorts; chemistry is encroaching upon her parent science, and threatens to make a serious fight for supremacy in the eyes of both physician and pharmacist. It is not much of an exaggeration to say that the percentage of prescriptions written by physicians and filled by pharmacists that embody in them chemicals pure and simple, though very far from simple in their constitution, is increasing in arithmetical progression. Every day almost sees a new organic compound or mixture of organic compounds ushered into existence, and just as truly does every day see an increase of them in number on the prescription files of the pharmacist. It is no longer only quinine, strychnine, morphine, cocaine, antipyrin, and other alkaloids, besides inorganic chemicals that greet him; no—the names have increased both in number, length, and complexity, as piperazine, diethy-sulfon-dimethyl methane,

chloralamide, phenyl-dihydro-quinazolino-hydro chloride, phenylacetamide, di-isobutyl-orthoiodide, etc., evidence. Where is the true cause of this innovation in the pharmacist's curriculum to be found? Advance of knowledge and improvement of scientific methods, as well as the development of pharmacology as a distinct science are the true causes. Pharmacology studies the effect of known substances, perfectly chemical individuals, upon the various organs and tissues of the animal body. Its aim is to make medicine an exact science, as nearly so at any rate as that is possible, and in order to do so it proposes to employ exact scientific methods and exact scientific material, i.e., pure chemical substances. It would be quite a complicated and hopeless problem from a scientific standpoint to attempt for instance, to study the pharmacology of fluid extract of opium, because there are so many substances at work all at once producing the observed effect of the administration of a dose of this medicine that it is absolutely impossible to tell positively what has caused the same. When, however, one substance of known purity and composition, and, if possible, known constitution, is administered and certain effects are produced, we have in hand a problem the premises of which are known tangible facts, and we can draw definite and valuable conclusions.

The branch of chemistry known as the chemistry of the carbon compounds, or organic chemistry, is an unlimited one according to the chemical laws and theories obtaining to-day, and in multiplying and increasing at a marvelous rate. One has but to glance at the latest newest trench in the breastwork of chemical journals of the present to see what an enormous amount of work is being done in the line of producing new compounds. In every instance almost the constitution of the new comer is determined, so that our family is fully named, analyzed, examined, and described structurally, physically, and chemically. More than that it is now getting to be general to describe the new compounds pharmacologically by testing their effect upon animals and human beings. Two factors have brought about the result, viz., the probability of the compounds being of value first medicinally and second financially; the chemist being no exception to the rule in most cases, and joining in the universal race for rhino. The past shows only too well what a chance discovery in this branch of chemist's work may be worth to him and in more ways than one. The natural result of this voluminous rush into existence of new compounds is that some day, perhaps not far off, there will be known a chemical substance possessing a definite composition, definite properties and a definite name for every known disease. The physician will of course have to be instructed fully as to the composition, dose, properties, names, etc., of the compounds, and what is true of the needs of the apothecary in this line is also true of him. That the pharmacist and the physician should in

future be more thoroughly and extensively versed in organic chemistry than they are at present is, we think, very evident. Does it not seem very evident to every teacher of chemistry in our colleges of pharmacy, to every studious and scientific pharmacist, and to the state boards of pharmacy the country over, that it is incumbent upon them to meet this exigency and take the bull by the horns by increasing the amount of time spent on organic chemistry, and by becoming as thoroughly acquainted with the properties, composition, etc., of antipyrin, phenacetin, etc., as they were with those of epsom salts, potassium chlorate, etc., even if the terms and courses of study at college have to be lengthened?

If the state were made aware of this fact that men were handling daily, and in unlimited quantities, medicaments of which they knew nothing save their names perhaps, and possessed not the means of acquainting themselves with something further about the substance, it seems very probable that it would be the state's duty to interfere and adopt stringent laws on the subject. That this is not necessary at present is also clear, because we are only on the veritable threshold of what is to come—of the time when these so-called "new remedies" will number not dozens but hundreds, and thousands perhaps. It is a very serious matter and an irrepressible conflict, because no observant pharmacist or chemist can deny the certain and steady increase of these "new remedies" nor the evident preference of pure crystalline compounds to extract and composite mixtures. In the writer's opinion the pharmacist of five years hence will have to be as well acquainted with the intricacies and beauties of organic chemistry as he is now with those of inorganic chemistry. Whether or not the United States Pharmacopœia will make any or all of the "new remedies" official is a question that cannot be answered at present, but does not much effect the problem under consideration, for the said remedies will be prescribed and dispensed in either case, very few if any, men in probability, refusing to prescribe remedies that are known to be uniformly reliable and efficacious, simply because some firm or another has the exclusive right to manufacture and sell them. This would be pedantry. When they do come "en masse," and are generally used, will not the teacher of chemistry feel that he is not educating his pupils if the present system continues, and will not the pharmacist feel that his calling is getting a little the better of him?—*Pacific Drug Review.*

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The International Pharmaceutical Congress of 1893, and Some Points in American Pharmacy.

From a paper by N. H. MARTIN, one of the delegates from Great Britain.

Since Mr. Martin intended to visit Chicago at the time of the Congress, he was, he said, appointed as a delegate from England to that meeting. It had been his second visit to the States, and had modified many of his former ideas and views. He did not intend, nor, indeed, was he able, to enter into details of pharmaceutical life, but rather to give an account of some of the general principles of American pharmacy. He should not mention any names of the various colleges and men and shops he had visited, but merely give some account of his views of them.

Mr. Martin then wandered from matters pharmaceutical to ideas of the discomforts of American travelling, and to the beauties of American scenery, and, after ten minutes, he returned to his subject by telling his audience how he arrived late at the meeting of the American Pharmaceutical Association, and was soon welcomed on to the platform. He was surprised to find that printed copies of the papers read were circulated amongst the members directly the author commenced his paper. The visible effects were twofold. Firstly, little attention was paid to the speaker, since the paper could easily be followed in print. Secondly, the discussion was very critical and well maintained on account of the easy way in which the whole of the paper was before the audience at once.

The papers read were divided into three sections (1) scientific, (2) legal and educational, (3) commercial. The volubility with which many of these latter were read and discussed was remarkable, as was their great impracticability, said Mr. Martin. A peculiar custom was the frequent appointment of committees of three to settle trivial matters. Even the vote of thanks to the President for his address was referred to a committee of three. Many of the members of these committees never knew they were nominated until two or three months afterwards. The commercial papers were usually very entertaining, but very unprofitable, and this was a warning to us not to be too eager to introduce trade matters at our Conference. The publication of theseventh decennial revision of the United States Pharmacopœia was the most important of all their work. It was a matter of great satisfaction to see how the Pharmacopœia Committee of 1810, consisting entirely of medical men, had gradually altered until an equal number of pharmaceutical delegates and of medical men were on the Committee, and 56 delegates from the various pharmaceutical colleges were present at the meeting. After another extra pharmaceutical excursion to the World's Fair, the author said he thought it was a mistake to have held the International

Congress a week after the other meeting, since the members were hardly ready to seriously discuss pharmacy so soon again. The most notable feature of the Congress, in his opinion, was the presentation of the Hanbury medal to Professor Maisch, who was too ill to receive it in person. Mr. Carteighe, therefore, presented it to Professor Remington on his behalf. The 1,000 dollars voted towards the compilation of an International Pharmacopœia for potent remedies was also noteworthy, and a committee of three were appointed to communicate with the authorities in other countries. It is most essential that we should all have our potent remedies of identical strength. The discussion on the relation of pharmacists to sanitation and the working of the Adulteration Act led to the expression of the feeling that the pharmacist was the right man to deal with questions of hygiene, sewage water and adulteration. In England pharmacists needed to be far more chemists than they were at present to be able to take these matters into their hands. The Congress expressed its approval of a four years apprenticeship, and of an enforced curriculum. In regard to the general relations of education and examination, the author said there was no lesson whatever to be learned from our American brethren. The independence of pharmaceutical management in the different States causes no definite standard to be maintained, and the result is deplorable. In some cases where a distinction between a junior and a senior course is maintained, the latter is practically a repetition of the former. The diploma of a pharmaceutical graduate is thought very little of; so much so, that the educational section concluded that pharmacy boards should not accept the collegiate diploma in lieu of the State examination. Some of the colleges, indeed, are so lax that they will give a diploma after 15 months' training to men under 21. This appears to be done in order to gain fees and popularity. There is practically no training to laboratory work, two hours per week being a common enough time for this, and then three hours lectures every evening of the week. After the day's work is done lectures on subjects quite outside any branch of pharmacy are often given, and the astounding statement that two hours lecturing is to dispose of the origin of trade, botanic gardens, the practice of medicine, and the location of man is noteworthy. The pharmacy boards are appointed by the Governor of the State, and their duties are loosely defined, and their powers are absolute. The heavy salary to the secretaries indicate the way in which the posts are given. Politics and dollars seem, according to the author, to have more to do with the matter than pharmacy. The examinations are entirely theoretical, with the exception of a few drugs for identification, purchased from a druggist in the locality just before the examination. The examiners travel about from town to town and examine the candidates at an hotel. An example is worth giving. A

class of 31 students in one State, were examined in toxicology, materia medica, and prescriptions from 5 to 7 one day; in chemistry from 8 to 9 the same evening, and in pharmacy from 10 to 11.15 next morning. At 3 the examiners met, and 15 candidates were passed the same evening. Although all the examination was by means of papers, the examiners were three in number. In such States the whole system was merely a parody on Pharmaceutical education. The pharmacy laws were very lax and unsatisfactory. In one State, the law passed in 1889 said that no man but one duly registered could sell or dispense poisons, whilst an unqualified man could always be covered by the employment of a qualified man. Spirits were allowed by the Act to be kept for medicinal purposes (?) There was a great tendency to use the dollar fairly or unfairly, in order to get doctors to prescribe only a certain brand of goods, and the enormous trade in drinks was one of the worst features in American Pharmacy. The last shop he had visited was Mr. Francis, of 5th Avenue, where, he was glad to say, the soda fountain had been abolished, and only pharmacy was transacted. However, America had its great pharmacists as well as other places, and he would end by pointing to the names of Squibb, Parrish, Bedford, Remington and Maisch, men who made pharmacy in the United States.—*Dr. and Col. Druggist.*

A Pertinent Suggestion.

There is no better reading for a young man who is anxious to rise in the store in which he is employed than a good trade journal. In it are gathered brisk business items, discussions on commercial issues, and pointers gathered from the experience of the oldest and most tried merchants, that are of inestimable value to him. No matter how thoroughly he is posted as to his own trade and locality he will always find something in it that he can read with interest as well as profit. The clerk who does so soon gets on. He becomes, half unconsciously, better posted than his fellow employes. He knows the latest commercial news, and soon is appealed to by the others for this or that bit of information. Customers like to buy from him because he is so well posted, and by and by it comes that no matter what changes may be made in the personnel of the staff he is always a fixture until he gets a store of his own or an interest in the firm. And this is all due to his patient and intelligent perusal of the trade paper; for he who reads will learn, and knowledge is always power.—*Exchange.*

AFTER the ingestion of either rhubarb or senna the urine gives the bismuth reaction for sugar. (Phar. Zeit.). Both Knapp's and Nylander's solutions are reduced, and Fehling's solution is decolorized without causing precipitation with urine passed after the administration of rhubarb.—*Pharm. Cent.*

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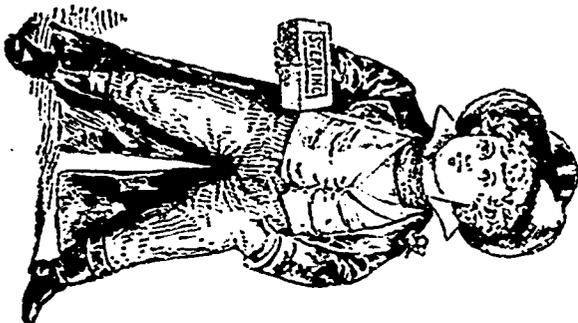


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JUNIOR EXAMINATIONS, DECEMBER, 1893.

Chemistry and Physics.

Examiner—A. Y. SCOTT, B.A., M.D., C.M.

Time Allowed—2 Hours.

1. Explain what is meant by the terms ; (a) Dissociation, (b) Decomposition, (c) Synthesis, (d) Atomicity, (e) Allotropism.

2. Describe fully the preparation, properties and uses of Hydrogen Nitrate.

3. Explain why Chlorine, Bromine and Iodine are said to belong to the same natural family.

4. Compare the physical and chemical properties of ordinary Phosphorus with those of Amorphous Phosphorus.

5. Calculate the percentage composition of Ammonium Sulphate.

6. What is the difference in a mass between 10 litres of air at 15° c. and 10 litres of nitrogen under 775.62 m. m.

7. Write equations showing reaction of

(1) Potassium Nitrate, Hydrogen Sulphate and Ferrous Sulphate.

(2) Chlorine on Potassium Hydrate.

(3) Nitric Acid on Copper.

(4) Bromine on Phosphorus and Water.

(5) Chlorine and Calcium Hydrate.

8. Describe fully the principles involved in Sprengel's air pump.

Botany.

Examiner—A. Y. SCOTT, B. A. Time—2 Hours.

1. How do roots differ from stems—describe the different forms of underground stems.

2. Distinguish between Definite and Indefinite Inflorescence. Give and describe three examples of each.

2. What is a Fruit. Classify and fully explain your classification. Give examples.

1. How would you show that the separate parts of a flower are modified leaves.

5. Describe fully a plant cell and two of the essential parts of a plant cell.

6. Explain the following:—Perigynous, Druse, Helicoid Dichotomy, Discicous, Umbel, Involucre.

7. Describe fully the three specimens given.

Practical Chemistry.

Examiner—GRAHAM CHAMBERS, B.A., M.B.

1. Detect metal in solution marked (a).

2. Detect metal and acid in solution marked (b).

3. Detect acid in substance marked (c).

4. Detect acid in substance marked (d).

5. Blow bulb on glass tube and then bend at centre at right angles.

6. Write equations illustrating the action of heat upon (a) ammonium nitrate, (b) potassium chlorate, (c) lead nitrate.

7. Write equations showing the action of hot concentrated sulphuric acid upon (a) potassium bromide, (b) hydrogen sulphide, (c) copper, (d) sulphur.

8. Nitric acid is said to be an oxidizing agent. Describe experiments and give equations illustrating its action.

9. 100 cc. of bromine sp. gr., 3.0., is shaken up with 5 litres of water, and hydrogen sulphide added until solution is decolorized. What is the strength of the hydrobromic acid solution formed?

10. How would you detect bromine in a sample of iodine?

Pharmaceutical Laboratory.

Examiner—CHAS. F. HEEDNER, PH. G., PHM. B. Time—TWO AND A HALF HOURS.

1. Prepare 90 Grams of solution of subacetate of lead by the following formula, submitting a report in accordance with the subjoined synopsis, and illustrating the chemical changes by an equation :

LIQUOR PLUMBI SUBACETATIS.	
Lead acetate.....	88.3
Lead oxide, in powder	62.5
Distilled water.....	425.0 or q. s.

Make finished product 450.0 grams. Heat the distilled water to boiling, and dissolve in it the lead acetate. Add the lead oxide gradually and boil gently for half an hour, agitating well and keeping up the original volume of the liquid. Cool, filter, and make up to proper weight.

REPORT I.

(Exhibit all figures used in calculations required).

Amount of each ingredient used :	
Lead acetate.....grams	Equivalent in grains
Lead oxide.....grams	Equivalent in grains
Distilled water.....c.m.3	Equivalent in fl. ozs.
Equations.....	

2. Determine the specific gravity of the solution of subacetate of lead. (Bottle and label properly, and submit solution to the examiner).

REPORT II, SPECIFIC GRAVITY.

Weight of solution used	
Weight of equal volume of water	
Specific gravity	

(Exhibit figures.)

N. B.—Neatness of work, order in arrangement, and cleanliness of working desk and outfit, will enter as important factors in your ratings.

Pharmacy.

Examiner—CHAS. F. HEEDNER, PH. G., PHM. B.

1. (a) Name and define the process by which *Liquor Ferri Dialysatus* is prepared, (b) describe the apparatus used, (c) what forces are exhibited during the operation, and what are the respective directions of their action.

2. (a) Name and define the process made use of in preparing "Burnt Alum," (b) name the likely impurities of commercial alum, (c) what is the composition of the salt from which "Burnt Alum" is prepared, and (d) to what extent is this composition changed during the process.

3. State reasons for the use of :

(a) Potassium sulphate in preparing *Pulvis Ipecac. Co.*

(b) Plumbic carbonate in preparing *Liquor Gulla Percha.*

(c) Solution ammonia in purifying Ammonic chloride.

(d) Why should Sodid carbonate be kept in stoppered bottles.

4. (a) Describe two methods of Granulation, (b) explain fully how this process becomes an important means of purification.

5. (a) Define and mention common examples of Deliquescence and Efflorescence. What is the solubility of (b) Potassium chlorate, (c) Plumbic acetate, (d) Ammonic chloride.

6. (a) Differentiate between Filtration and Clarification, (b) mention three methods of clarification, giving modes of application and principles involved.

7. Add 13 Hectograms, 25 Kilos, 27½ Grams, 438 centigrams, 84 decigrams, 18

milligrams and 68 Dekagrams, and convert the result to Avoirdupois weight.

8. How would you estimate the strength of *Liquor Plumbi Subacetatis* (a) volumetrically and (b) gravimetrically?

9. (a) What weight of pure ether would a 250 c.m.³ bottle hold? (b) What is the capacity of a bottle that will exactly hold one pound of official glycerin?

10. Metric System : Explain fully the relation existing between (a) the Gram and Meter, (b) the Meter and Liter. Give metrical equivalents for (c) one grain, (d) one fluidounce, (e) one inch.

11. Required 90 ozs. of powdered scammony that will assay 62.5% of resin, by the admixture of powders assaying respectively 75%, 70% and 53%; how much of each will be required?

12. (a) Describe Evaporation-in-Vacuo. (b) State the utility of the process. (c) Explain the principles involved.

Latin Prescriptions, Etc.

Examiner—J. T. FOTHERINGHAM, B. A., M.B., M.D., CM. Time Allowed—2½ Hours.

1. LATIN, ETC.

1. Expand the following abbreviations into full Latin, and give English translation—a. "*Conf. Ros. Gall. q. s. ut sit massa, in pil. xii. dividend. Sum. i. Gra quaque hor.*"

b. "*Fl. mist. de qua sum. cochl. ii. mag. subind.*"

c. "*Fl. haust. cujus sum. cochl. ii. ampl. Itis horis ad effect., ph. p. b. conc.*"

2. Name the four essential parts of a classical prescription, and define them. Divide the following prescription into its four parts, and point out the basis, correctives, adjuvant and vehicle.

℞ Pulv. Jalapæ	gr. xx
Potass. Tart. Acidæ.	ʒi.
Syr. Zingiberis	ʒi.
Aq. Menth. Pip.	ʒiiss.—M

Fiat haustus, mane sumendus

2. POSOLOGY.

1. Taking the above prescription as right for an adult, rewrite it for a child 4 years old.

2. Give maximum dose of the following preparations: Ac. Carbol., Ac. Tannic., Acetum Scilla, Essentia Anisi., Ext. Nuc. Vom., Ext. Cannab. Ind., Inf. Digitalis, Liq. Ammon. Acet., Liq. Donovan, Liq. Hydrarg. Perchlor., Mist. Cretæ, Ol. Phosphoratum, Pil. Plumbi. c. Opio, Tinct. Digitalis, Vin. Ipecac.

3. Discuss and explain the following terms:—Toleration, Accumulation, Idiosyncrasy, Habit, in their bearing upon the question of dosage.

3. PHYSIOLOGY.

1. Define the four main organs of excretion, giving names and approximate quantity of matters excreted by each in 24 hrs.

2. Define and distinguish between an organized and an unorganized ferment, with example.

4. THERAPEUTICS.

Define the following terms, giving two drugs as examples of each. Anodynes, Stimulants, Hypnotics, Tonics and Pustulants.

ONTARIO.

MANITOBA.

BRITISH COLUMBIA.



THE _____

Canadian Druggist

QUEBEC.

Wishes you the Compliments of the Season and solicits the favor of your advertising for 1894.

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. Our circulation is such that it guarantees the advertiser a perusal of his advertisement by the Druggists of the whole Dominion.

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. No other medium approaches it in circulation, in matter especially interesting to the trade, or in business results.

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NOVA SCOTIA.

CAPE BRETON.

NEW FOUNDLAND.

Canadian Druggist

WM. J. DYAS, EDITOR AND PUBLISHER.

JANUARY 15th, 1894.

Condition of the Drug Trade.

THERE are some people who are naturally pessimistic, others, through force of habit, grow so, and others, again, endeavor to make themselves and their neighbors as much so as possible for purposes peculiarly their own. Bad habits, as well as good ones, grow, and, before we are aware of it, we often become slaves to some habit or propensity which affects our life and action. We are led to make these remarks from articles which appear frequently in the daily press and are reiterated by business men, as to the "dullness of times," "loss of trade," the "bottom knocked out of business," and other similar expressions, which, in many cases, are not justified by facts. Neither is the drug trade free from this falling, for while there are cases and localities possibly where, perhaps, any or all of these epithets may apply, still they are but the exceptions. How many of the men who now call out about "hard times" can, with any degree of candor, say that, in proportion to the general business of the community, they are not receiving their share.

It is a well-known fact that a general business depression exists and has existed for some time, both in Europe and America, and that in some places, notably in the United States, it has assumed the dimensions of a panic, and, under these circumstances, it would be strange indeed if its effects would not be felt in Canada. Yet it is universally acknowledged that Canada has suffered less than almost any other portion of the world.

In the face of this, it is quite apparent that whatever affects general trade must affect that of the druggist, but that it has only affected it in a proportionate extent with that of other lines cannot be denied.

There are individual localities where, there is no doubt, the trade is in a deplorable state, notably that of the City of Toronto, but this is due to special causes, and, unfortunately, causes which it is very difficult to prevent. In the case of Toronto, the unsatisfactory condition of the drug business is, without doubt, owing to too great competition. The volume of business done in the retail drug stores of Toronto is, we believe, quite as large as that of five or six years ago, but, when we consider the fact that during that time a large number of new drug stores have been opened in all parts of the city, the receipts of the older houses must necessarily be greatly diminished. The reasons for the multiplication of stores in the city are not hard to determine. In the first place, Toronto, being the home of the best College of Pharmacy in Canada, attracts students not only from the entire Province of Ontario but also draws largely from the other Provinces as well as

some from the United States. Many students from country towns and villages become enamored of the city during their college-term residence and are seized with the idea that there is still an opening for them to establish themselves in business in a city already too well supplied, and, with a few hundred dollars, perhaps, secure a stock from some jobbing house, who, through their anxiety to do business, not only injure their other customers but frequently make certain losses for themselves by thus establishing another business which, in seventy-five per cent. of such cases, is sure to fail.

Too few young men realize that a college education, an excellent record at the examination, or even a gold medal for some special subject does not constitute a fitness for management of a business. Many of the students attending our colleges of pharmacy are lacking in business aptitude, and totally unfitted, therefore, to enter into competition with those who have had years of hard earned experience and with already established trade. Nevertheless we find year after year fresh "graduates" blossoming out as full-blown druggists only to fade again out of sight, through bankruptcy, or through pressure brought to bear by the wholesale house with whom they dealt. Of course there is still another factor to reckon with, viz., the "department stores," which, no doubt, rob the druggist of a considerable portion of what he considers as his legitimate trade. These, we believe, are the main reasons of the existing demoralized state of the drug trade in Toronto.

However, what is true of Toronto cannot be said to be equally so of the drug trade of Canada generally. Throughout Ontario, Quebec and the Eastern Provinces the drug business done during the past year has been quite proportionate with that of any other trade, and in Manitoba, British Columbia and the Territories, although dull and payments slow, are only so as a part of the volume of business of all kinds transacted there. The druggists of Canada, as a whole, not limiting ourselves to the experience of one individual place, have therefore no reason to be discouraged, and with diligent attention to business, careful buying and continually adding new lines which they can handle with advantage, not following in the only ruts of our ancestors, but being wide-awake men of business, will surely make a financial success of their chosen profession.

A New Pharmacopœia.

THE preparation of a new edition of the Pharmacopœia has been under the consideration of the Medical Council of Great Britain, and, at a meeting held on Dec. 4th, adopted the report of the Pharmacopœia Committee, which we give below.

For the first time the Council have directly asked the co-operation of the Pharmaceutical Society of Great Britain in the preparation of the work, and the

committee appointed by the latter society will be on an equal footing with that of the committee of the Medical Council.

As will be seen by the report it is proposed to widen the scope of the new Pharmacopœia by making it better adapted to the requirements of India and the Colonies. It is contended that many drugs indigenous to India might replace some of those now ordered in the present volume, and in the case of Canada, many preparations not now official, but which are required, consequent upon the frequent use of the French Codex and the U. S. P., might, with advantage, be inserted. In the case of Canada, we would certainly prefer a Pharmacopœia of our own, compiled, it may be, from the three now used viz., the British, United States, and French, with dosage, etc., as applicable to our climate. A serious drawback, no doubt, to this undertaking would be the expense of editing and compiling such a work, although we believe that pharmacists, as a rule, coincide with us in the desirability of undertaking it as soon as the Pharmaceutical Councils of the various Provinces, or better still, the proposed Canadian Pharmaceutical Association, see their way clear to such an undertaking.

It is certainly desirable that the official work, whatever it may be, should be one that will, as nearly as possible, meet the requirements of the prescriber and dispenser in the country where it is to be used, and we trust whatever course will be adopted will tend to the best interests of pharmacy at large. The following is the report mentioned:

"The Committee report to the Council that since the last meeting a further reprint of 3,000 copies of the British Pharmacopœia of 1885 has been issued, making the total number of copies of this edition issued up to the present date 41,000, the total number of copies of the additions to the British Pharmacopœia being 13,125; and that, of the last reprint of 3,000 copies of the British Pharmacopœia, 481 have been sold.

"The Committee now submit to the Council the following report:

"In accordance with the instructions of the Council at the meeting in May last, the Pharmacopœia Committee have corresponded through the Privy Council with the India Office and the Colonial Office, with the object of ascertaining what changes, if any, could be effected in order to better fit the next edition of the British Pharmacopœia to the requirements of India and the Colonies. The result has been that a very large number of copies of letters from the Chairman of the Committee to the Lord President of the Privy Council, as printed in the minutes of the Council, have been distributed by the India Office and the Colonial Office for use by the medical and pharmaceutical authorities in India and the Colonies.

"The development of this action will require much care and consideration on the part of the Indian and Colonial authorities as well as by the Committee, and will demand more time than that

IMPORTANT

To the Trade

We have pleasure in advising you that by special arrangements just completed with the proprietors of **WYETH'S BEEF, IRON & WINE**, we are enabled to offer to the **CANADIAN TRADE** a Reduced List of prices on this standard preparation, the **Original and only Genuine Beef, Iron and Wine** on the market.

In order to do this it was necessary to put this article upon the rebate plan, with the following scale of prices, to which we shall strictly adhere :

- For 1 doz. and less than 3 doz., \$7.25 per doz.
- " 3 " " " " 6 " 7.00 " "
- " 6 " " " " 12 " 6.75 " "
- " 1 gross and upwards, - 78.00 " gross.

A discount of 5 per cent. for Cash will be allowed, if paid within 30 days from date of purchase only.

We trust that this change will meet with your approval, and will ask you to kindly send in your valued order.

DAVIS & LAWRENCE CO., Limited.

Montreal, Oct. 20th, 1893.

General Agents for Canada.

YOUR OWN!

Do you know that we prepare for Druggists' Sale

A Special Throat Troche

Put up with the Druggist's own name, thus

SMITH'S

Improved Bronchial Pastilles

For....

This preparation is no "cheap John" candy, but an elegant compressed powder, and is as pleasant and efficacious a lozenge as ever introduced for the relief of the various disorders of the respiratory organs, and a valuable remedy for the cure of many bronchial affections, such as Influenza, Hoarseness, Soreness of the Throat, or any irritation of the throat arising from cold.

TWO SIZES IN NEAT LID BOXES.

- Large (containing 60 Troches) \$10.50 per gross.
- Small (" 30 ") 6.50 " "

Will be glad to have your valued order, or at least let us send you a Sample.

We can also quote Special Prices in Bulk for this Troche.

DAVIS & LAWRENCE CO., Limited,

MONTRÉAL.

Wine of the Extract of Cod Liver.

Sold by all first-class Chemists and Druggists.

CHEVRIER

General Depot : PARIS, 21, Faubourg Montmartre, 21

This Wine of the Extract of Cod Liver, prepared by M. CHEVRIER, a first class Chemist of Paris, possesses at the same time the active principles of Cod Liver Oil and the therapeutic properties of alcoholic preparations. It is valuable to persons whose stomach cannot retain fatty substances. Its effect, like that of Cod Liver Oil, is invaluable in Scrofula, Rickets, Anæmia, Chlorosis, Bronchitis and all diseases of the Chest.

Wine of the Extract of Cod Liver with Creosote.

General Depot :--PARIS, 21, Faubourg Montmartre, 21

CHEVRIER

Sold by all first-class Chemists and Druggists.

The beech-tree Creosote checks the destructive work of Pulmonary Consumption, as it diminishes expectoration, strengthens the appetite, reduces the fever and suppresses perspiration. Its effect, combined with Cod Liver Oil, makes the Wine of the Extract of Cod Liver with Creosote an excellent remedy against pronounced or threatened Consumption.

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LIQUID ROOT BEER.

An Extract of Roots and Herbs for making a brilliant, sparkling and invigorating Summer Drink. It can be prepared in five minutes, and is ready for drinking in twenty-four hours.

As it is put up in 10 and 25 cent bottles, for making two and five gallons, its popularity in price and quantity is assured.

Put it on your want list and order from your next wholesale representative.

W. MURCHISON,

SUPPLY DEPOT,

1418 Queen Street West, TORONTO.

hitherto necessary for the preparation of a new edition of the Pharmacopœia. Nevertheless, this action must be regarded as the first step, however distant it may be, towards the issue of the next edition of the British Pharmacopœia.

"The Committee therefore recommend that the Council should now direct the preparation of another edition of the work, and further, that the aid of the several medical authorities and of the Pharmaceutical Society be again invited by the Council.

"The Committee also recommend that Professor Atfield be invited to continue his services as reporter and editor. He has long been an advocate of the principle of extending the operation of the Pharmacopœia."

"RICHARD QUAIN, M.D.,
Chairman."

The eleventh International Medical Congress will be held in Rome from March 29th to April 5th, 1894.

The *Financial Times*, London, Eng., says, "Canada seems to be the only part of the world which is not keenly suffering from the wide-spread depression of 1893."

The Provincial Board of Health, of Montreal, are taking steps to guard against the introduction of small-pox from the United States, where it is very prevalent in some of the larger cities.

A CAPSULE trust is said to have been formed, composed of the Michigan Capsule Co., the Warren Capsule Co., the Merz Capsule Co., and the National Capsule Co., of Indianapolis. It is said that the prices of empty capsules will be advanced at least 50 per cent.

The *Indiana Pharmacist* says that nine-tenths of the oil of peppermint made in the world comes from the United States. More than half of this amount comes from Michigan, and St. Joseph County is the centre of the industry. It takes 250 lbs. of dried plant to make a pound of oil. The oil is worth \$2.50 to \$3 a pound, and about 15 lbs. is made from an acre of plants.

Acknowledgements.

We are in receipt of *Dollars and Sense for Fifty Cents*, being a collection of articles on publicity, or how to advertise and do it efficiently. The most of these have appeared in leading American dailies and are a valuable aid to the intelligent advertiser. Published by the Trade Co., 299 Devonshire-st., Boston, Mass.

Frederick Stearns & Co. have sent us their calendar for 1894, which is a gem of art. The calendar is printed in colors and is a development of a photographic process by which the colors of the original painting are reproduced with absolute fidelity. This, we believe, is the first one of the kind ever offered to the public. The calendar will be furnished on receipt

of 25 cents to pay cost of publishing, postage and packing.

Pamphlets descriptive of the Creosote Carbonate (Creosotol), being Beechwood Creosote deprived of its harmful properties—Diabetin, a nutritive agent in Diabetes—Formulin, a Germicide and Disinfectant, all being the preparations of Schering & Glatz, 55 Maiden Lane, New York, have been received at this office, and copies may be had for the guidance of physicians by applying to the general agents.

The Rochester Optical Co.'s Catalogue, together with a brochure on Modern Photography is published by the Rochester Optical Co.

Answers to Correspondents.

"Ontario," asks for a permanent solution of Bichloride of Mercury which has no deposit.

The official solution should answer the purpose as the Ammonium Chloride has a tendency to prevent any deposit. Perhaps your trouble has been in not using distilled water, without it you could not have a permanent solution. The exposure of a bichloride solution to strong light may sometimes cause a precipitate. This may be dissolved by the addition of a slight excess of Hydrochloric Acid.

"PHARMACIST."—The Ontario Act, clause 19, says: "Any person registered under this Act, and no other person, shall be entitled to be called a Pharmaceutical Chemist, and no other person, except a Pharmaceutical Chemist, as aforesaid, or his employee or employees, shall be authorized to compound prescriptions of legally authorized medical practitioners.

"Clerk."—We printed a formula for a "Tasteless Cascara Preparation" some months ago. Here is another which may be more in the line of what you want. It is a "Tasteless Extract of Cascara."

Cascara bark	.....	16 ounces.
Heavy magnesia	.....	2 ounces.
Water	.....	1½ pints (Imp.).
Proof spirit	.....	q. s.

Mix the cascara with the magnesia, add the water, macerate for twelve hours, then dry on a water bath. Powder the dried bark, pack in a percolator, and percolate with proof spirit until 16 fluid ounces result. This preparation is not quite so active as the more nauseous official preparation, so you will have to give about one and a half, or twice the B. P. dose, but this is more than compensated for by the modification of the extremely bitter taste.

Frosted Store Windows.

A correspondent of the *Montreal Star* gives the following method for preventing windows from being covered with frost or steam:—"An electric fan is placed in the window, one of the incandescent lamps removed, where the windows are so lighted, and the fan placed in connection; a current of air thus directed against the glass dispels the moisture and the result is, glass as clear as in midsummer."

Correspondence.

Correspondence is invited from all members of the profession. We do not hold ourselves responsible for opinions of correspondents. All communications must have the name of the writer attached, not necessarily for publication, but as a guarantee of good faith. Any name or plume may be used for publication. Write only on one side of the paper, and be concise.

Editor CANADIAN DRUGGIST:

SIR,—In the December issue of your journal, under the head of "British Columbia Notes," there are a few statements re the recent prosecutions against a number of the druggists in this province, ourselves among the number, to which we must take exception.

Referring to our case your correspondent says, "The apprentice ran things generally at this branch store, and yet Mr. McDowell did not look upon this as a gross infringement of the Pharmacy Act." The statement that the apprentice ran things generally at this branch store is false, that store being under the management of Mr. John K. Sutherland, a graduate of the Ontario College of Pharmacy, 1892, and a licentiate in Pharmacy under the Pharmacy Act of this Province, the apprentice in question merely acting as relieving clerk during the temporary absence of Mr. Sutherland for his meals or a few hours in the evening.

This apprentice has been over four years in a drug store, and purposes taking his final examination next April, so that under these circumstances we certainly did not look upon his doing the work he did as a gross infringement of the Pharmacy Act, in which view we were upheld by the presiding magistrates who dismissed the case where this question was the issue, and merely fining for not registering a scheduled poison as he should have done.

This is not the first occasion on which this correspondent of yours has made statements not in accord with the facts. A few months ago, in your July issue, we think, in his report of the annual meeting of the Association he made some very ungentlemanly remarks regarding Mr. Thos. Shotbolt, our late president, and a gentleman who has done more for the advancement of our association than any one else in this province. To him, with Mr. Henderson, of Messrs. Langley & Co., Victoria, are we mainly indebted for our present Pharmacy Act. Imperfect though it may be, it was the best we could get from the Legislature at that time, and we only got it after three years persistent hard work, very much of which was done by Mr. Shotbolt and Mr. Henderson, and the remarks of your correspondent, in the report referred to, were both uncalled for and untrue.

We have amendments to our Pharmacy Act already prepared to submit to the Legislature at their coming session which, if they become law, will make our Act much more effective and workable than at present.

Trusting you will pardon our infring-

Boufanger's Cream Emulsion

Of Cod Liver Oil with the Hypophosphites of Lime and Soda and Concentrated Milk. The best Emulsion on the market. Sells itself.

Le Vido Water of Beauty,

A specific for Skin Diseases, Tan, Freckles, Pimples, Blisters, etc.

Our preparations are handsomely put up and extensively advertised.

PROPRIETORS

THE MONTREAL CHEMICAL CO.'Y MONTREAL.

Sold to the Trade by LYMAN SONS & CO., Montreal, and all leading Jobbers throughout the Dominion.

THESE GOODS PAY A GOOD
BIG PROFIT TO
RETAILERS.



Write for Prices.
JOHN L. UPHAM, BROCKVILLE, ONT.

YES, IT WILL PAY YOU TO KEEP

- **DICK'S** -

Universal • Medicines FOR HORSES AND CATTLE.

They always give entire satisfaction and there are no medicines in the market that can compare with them.

Thrifty Farmers, Stock Owners & Carters all over the country, are, by actual results, realizing that they cannot afford to be without a supply of **DICK'S BLOOD PURIFIER** Price 50c.

DICK'S BLISTER for Cuts, Sprains, Swellings, Etc. Price 50c.

DICK'S LINIMENT for Cuts, Sprains, Bruises, Etc. Price 25c

DICK'S OINTMENT. Price 25c.

Circulars and advertising cards furnished.

DICK & CO., P. O. Box 482, Montreal.



It will pay you to sell Cottam's Bird Seed. No other gives like satisfaction. Its peculiar merits make it a favorite. Each packet contains a 5 cent cake of Cottam's Patent Bird Bread.

BUTTERMILK TOILET SOAP.



1 size face simile of packages.

Over 2,000,000
Cakes Sold in 1892

The Best Selling
Toilet Soap in
the World.

Excels any 25
cent Soap on the
Market. Nets the
Retailer a good
profit.

When sold at a very popular price it will not remain on your counters. Try a sample lot.

The quality of this soap is GUARANTEED. See that the name "BUTTERMILK" is printed as above "in green bronze," and the name "Cosmo Buttermilk Soap Company, Chicago," in diamond on end of package. Beware of imitations.

GOSMO BUTTERMILK SOAP CO.,
185 Wabash Ave., CHICAGO.

F. W. HUDSON & CO., - Toronto,
Sole Agents for Canada.

Two Ideal Foods for Infants.

PATENTED 1893.

Milk Granules

Is the solids of pure Cow's Milk, so treated that when dissolved in the requisite quantity of water it yields a product which is

The perfect equivalent of
MOTHER'S MILK.

This Food is specially suited for
new-born infants.

Milk Granules

WITH

Cereals.

A combination of the perfect equivalent of Mother's Milk and the finest Barley, specially treated to render it easily digestible.

Sold by all Druggists. Prepared by
The Johnston Fluid Food Co.

A Druggist's Specialty.

CURTIS & SON'S

Yankee Brand PURE Spruce Gum

Is meeting with the success its high
qualities merit.

A TRIAL ORDER SOLICITED.

CURTIS & SON,

PORTLAND, ME., - U. S. A.



PROPRIETOR.

S. LACHANGE, Montreal.



For sale at Manufacturers' Prices by the leading whole-sale druggists and druggists' sundrymen throughout Canada.

THE OLDEST. - THE BEST.



Canadian trade supplied by - The Davis & Lawrence Co., Montreal | The Northrop & Leman Co., Toronto.

ing so much on your valuable space, and that your correspondent will be more careful to state facts in future.

We remain, yours respectfully,
H. McDowell & Co.

Editor CANADIAN DRUGGIST:

DEAR SIR, I beg to take the liberty of correcting some of the erroneous statements made by your B. C. correspondent in your issue of December, under head of B. C. Notes.

First: your correspondent states as follows: "Here a prescription was dispensed containing schedule A poison by an apprentice; the apprentice at the time was quite alone and had full charge of the store." This statement is false from the fact that an apprentice was *not* in full charge of the store at the time the prescription was dispensed, there being also present and in charge a man of fourteen years' experience, registered in B. C. according to the requirements of the B. C. Pharmaceutical Society.

Second; "as a result, apprentice L. W. Hall has decided to qualify as a licentiate and is now taking a course at an American College."

This statement like No. 1 is also false as I (L. W. Hall) had left the city for the college referred to, before anything was known or thought of by me or Hull & Co. proprietors of Central Drug Store, regarding the intentions of the B. C. Pharmaceutical Society in connection with the enforcement of pharmacy law. It is therefore difficult and I might say impossible for me to see how my going to an American College was the result of something the knowledge of which came to me several weeks after I had left for the United States, I therefore claim the statement is entirely false. I also beg to state for the benefit of your correspondent that when next he is in need of *correct* information regarding my actions I will be delighted to supply him with the true version, if he condescends to ask me for it. I have no doubt that Messrs. Hull & Co. will be equally willing to furnish him with any information he may require regarding matters in connection with their business which would be of public interest, provided the information is sought in a gentlemanly manner, trusting your correspondent may find it more convenient to write the truth or nothing at all about my affairs.

I am yours etc.,

Lewis W. Hall.

BISMUTH SUBNITRATE made into a creamy paste with the aid of water, is considered preferable by Osthoff for the treatment of burns and scalds to dry bismuth powder as recommended by Bardeleben. The paste is applied by means of a soft hair pencil. This forms a dry cuticle which may be easily repaired, to exclude air, should it crack in any place. In one case of an extensive burn albumen was detected in the urine.—*Pharmaceut. Monat.*

Business Notices.

As the design of the CANADIAN DRUGGIST is to benefit mutually all interested in the business, we would request all parties ordering goods or making purchases of any description from houses advertising with us to mention in their letter that such advertisement was noticed in the CANADIAN DRUGGIST.

The attention of Druggists and others who may be interested in the articles advertised in this Journal, is called to the SPECIAL CONSIDERATION of the Business Notices.

J. Whier & Co.

have placed in stock a full line of Blondeaux & Co.'s Vinolia goods direct from London, England, including the *bulk* perfumes in new odors: *Vinolia Boquet, Lotosari, Sequilla and Mareuil*, also the 1s. 9d. size, and samples *Lait Vinolia*. Soaps—*Toilet Pommier, Floral and Shaving* Soaps and *Lypsil* in metal tubes.

After The Fair.

After the Fair is over,
After the Ferris Wheel,
After the ride on the camel,
After the Dahomey reel,
After the Phaisance music—
Picola, cornet and drum—
Didn't you feel like chewing
Somerville's Pepsin Gum?

After the ride in the wheel chair,
After the gondolier,
After you paid for your dinner,
There wasn't much left for beer.
How did you spend the balance?
It wasn't a very large sum,
'Twas enough to purchase an old friend,
Somerville's Pepsin Gum.

The streets of Cairo have vanished,
So has the wild west show,
So have the beauties of nations,
And the muscadin dance, oh! oh!
But a sound I cannot get rid of
Is the man calling bum, bum, bum,
Candy direct from Turkey
As sweet as our "Mexican" gum.

Old Vienna is now in the background,
The cliff dwellers are out of sight,
The Esquimaux have snapped all the pennies,
Blarney Castle went up in a fight.
Glass-blowers from old Bohemia,
Japs, Chinese, and African gum,
All return to my memory plainly,
As I chew Somerville's Pepsin Gum.

The Story of Tutti Frutti.

Krupp's monster cannon received no higher distinction at the World's Columbian Exposition than Tutti Frutti and the other famous brands of chewing gum exhibited by Adams & Sons' Co. The most discriminating tests of experts gave the award to Adams' Tutti Frutti at the great fair, just as popular favor had given this beneficial and delicious mastic preference over all others since its introduction years ago. The World's Fair certificate of highest award bestowed upon the celebrated Adams' chewing gums is for the highly appetizing quality of the choice material, the delicious delicacy of the various popular flavors, and the artis-

tic form in which the tablets of Adams' chewing gum are packed and sold.

FOR DYSPEPTICS.

The highest medical authorities have long ago indicated that Tutti Frutti is not simply a dainty for mere pleasing and soothing mastication, but that its use is of exceptionally beneficial value to relieve the distressing cravings of atonic and other forms of dyspepsia.

Dr. Cyrus Edson, the famous specialist, and an authority recognized by medical practitioners everywhere, states that in nearly all cases of atonic dyspepsia he unhesitatingly advises the use of Adams' Tutti Frutti chewing gum, with the most gratifying results. Dr. R. Ogden Doremus, LL. D., another eminent authority, says there is no question about the benefits derived from chewing Tutti Frutti before and after meals in many forms of dyspepsia, and Dr. P. E. Doolittle writes:

FOR CYCLES.

"As an old bicycle racing man, I can heartily endorse the chewing of Tutti Frutti gum in long, hard races, as it very much diminishes the dryness and thirst which are so distressing at such times."

FOR SKATERS AND OTHERS.

The use of Tutti Frutti chewing gum, during sleighing, skating and other winter outdoor recreations is an almost infallible preventive of sore throats and hoarseness and its use invariably allays the irritating throat sensations which frequently arise from inhaling the dry, hot air of warm rooms.

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Provincial Pharmaceutical Association of Ontario.

The regular meeting of this Association will be held at the College of Pharmacy building, Toronto, on Thursday and Friday, Feb. 8th and 9th. It is hoped that there will be a large attendance of the druggists of Ontario. Meetings of this kind cannot but be beneficial to members of the craft and go a long way towards smoothing any differences that may arise in regard to whatever transpires relative to pharmacy. The meeting will commence at 1.30 p. m., on Thursday, 8th inst. This is the only notice that will be given of the meeting. The programme of proceedings as given elsewhere will be adhered to as strictly as possible.

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CANADIAN DRUGGIST

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Pharmacy Abroad.

CANTONAL PHARMACIES IN SWITZERLAND.—The Continental pharmacist is notoriously a thorn in the side of the socialist body, probably as much on account of his greater or smaller measure of official recognition of his position as because of the widely-spread popular notion that the Apotheker piles up enormous gains out of the prescriptions. Some five years ago the Government of the Swiss Canton of Basel, in obedience to the socialistic impulse, actually brought in a Bill for the rendering by the State of medical and pharmaceutical assistance. The pharmaceutical requirements of the citizens were to be supplied by a central pharmacy with five branches, where remedies would be obtainable free of charge. No compensation was to be given to existing pharmacies. The Bill was rejected by the "referendum" or plebiscite of the Basel citizens, but shortly afterwards a project for compulsory sick and accident insurance was accepted by a large majority, and a commission of 40 members was appointed by the Federal Council to draft a Bill. This commission has recently commenced its labors. The Government of the Canton of Aargau is now about to propose the establishment of State Pharmacies. Before these can be provided, however, the Bill will have to be sanctioned by the popular vote of the Canton. *Chemist and Druggist.*

†††

FOREIGN PHARMACISTS cannot exercise their profession in France without having the French diploma. It is in the power of the Minister of Instruction to dispense with some of the necessary examinations. Hospital apothecaries are allowed to practice during an epidemic; this authorization holds good for three months. A pharmacist can only have one shop, and he must inhabit the locality where he carries on his business. After the death of a pharmacist the heirs can carry on the business for a year, provided another pharmacist is placed in charge. It is forbidden to a medical man to have any understanding with a pharmacist concerning the sale of drugs. In those localities where there is not a pharmacist the medical man can supply his patients with medicine. In order to be prepared for urgent cases, medical men, even where there are one or two pharmacists, can keep certain drugs, which will be mentioned in a list drawn up by the authorities. In every department there will be an inspector pharmacist. This body of pharmaceutical inspectors will be chosen by the *Comite Consultatif d'Hygiene*, and ratified by Government.—*American Druggist.*

†††

U. S. NAVAL APOTHECARIES.—Hitherto it has been a reflection upon the organization of this service that the dispenserships could be filled by anybody who had influence enough to get a berth. Whether they had a pharmaceutical qualification

or not did not matter. This anomalous condition is now to be put an end to, regulations having been issued which require the candidate for an appointment must be a graduate of some recognized college of pharmacy and must be between 21 and 28 years of age. Apothecaries for duty on cruising vessels will be enlisted for three years' general service, and will receive the benefits of honorable discharge and continuous service. Those for duty on receiving and on stationary ships, or for duty on vessels of the Fish Commission, will be enlisted for one year's special service; those for duty on vessels of the Coast Survey will be enlisted for the cruise, not to exceed five years. There will be an examination in general subjects, such as arithmetic, orthography, grammar, geography, and United States history. The examination in professional subjects will require a knowledge of materia medica, pharmacy, chemistry, and toxicology.—*Amer. Druggist.*

†††

PHARMACY AT THE CAPE OF GOOD HOPE.—The first issue of *The Medical and Pharmacy Register* of the Cape of Good Hope has just been published under the joint direction of the Colonial Medical Council and the Colonial Pharmacy Board, constituted under the Medical and Pharmacy Act, 1891. The *Register* contains the full text of this Act and the rules and regulations framed under it; together with reports of the Medical Council and Pharmacy Board for 1892; and lists corrected up to June 30 last, of licensed medical practitioners, dentists, chemists and druggists, certificated midwives, and trained nurses. The Colonial Pharmacy Board consists of a president, secretary and five other members. Two of the members are nominated by the Governor of the Colony, one is deputed by the Colonial Medical Council, and three are elected by the chemists and druggists of the Colony, one of the present elected members being Mr. W. K. Mager, who holds a British qualification, and will be remembered as a visitor to this country during the past summer. There appears to be only one grade—that of chemists and druggists—recognized in the Colony, and the certificates of the Pharmaceutical Societies of Great Britain and of Ireland are accepted by the Board as sufficient evidence of the competency of any person holding the same to practise as a chemist and druggist in the Colony, without further examination.

†††

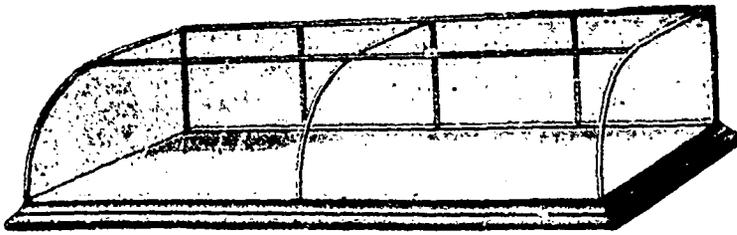
RESTRICTIONS ON THE USE OF MORPHINE IN HONGKONG.—An ordinance has been enacted by the Governor of Hongkong, with the advice and consent of the Legislative Council, for the purpose of suppressing the practice, widely prevalent in the Colony, of injecting morphine. It prohibits the administration by injection of morphine or its salts, except on the prescription of a duly qualified medical man, the onus of proving the exception lying on the person administering the injection,

and the penalty, on conviction of an offence, being a fine not exceeding fifty dollars or imprisonment, with or without hard labor, for a period not exceeding two months. A further offence, liable to similar penalties, consists in furnishing morphine or its salts, or solutions of the same, to any person except a duly qualified medical practitioner or a chemist and druggist, the onus of proof of the exception again resting with the person charged with the offence, whilst the section does not apply to the furnishing of morphine for the purpose of *bona fide* exportation. Constables or Officers of the Police, duly authorized by warrant of any Justice of the Peace, are permitted to break into any place which the said Justice shall have reasonable grounds to suspect and believe to be a place kept or used for the injection of morphine, contrary to the provisions of the Ordinance, and to arrest any persons found in the place suspected of an offence, whilst seizing all morphine, hypodermic syringes, and other appliances that may be found, capable of being used for the injection of morphine. These, on conviction of the offender, are directed to be forfeited.—*Phar. Journal.*

Poisoning by Misadventure.

The *British Medical Journal* says:—Setting aside the deaths attributed to chloroform, the great majority of the fatalities included in this dismal catalogue were doubtless due to the fact that the poison was given or taken out of the wrong bottle. The way to prevent this is obvious, and has been pointed out over and over again by Mr. Ernest Hart in the *Journal*, and an appeal, hitherto fruitless, has been made by him officially to the Pharmaceutical Society. All poisons should be sent out in bottles of a kind that will automatically warn the most careless handler by appealing sharply to his sense of touch. The poison label, though useful as a danger signal, is insufficient by itself, even if it were in all cases compulsory, which is not the case with regard to remedies prescribed by qualified medical practitioners. The luminous label which has been proposed, however efficient in the night, would be useless in the day. All bottles containing poisons should be made of fluted glass, and provided with screw stoppers. The Pharmaceutical Society has the power to make the use of such precautions compulsory on all chemists, and it is not too much to say that if, in the face of the facts we have brought forward, it now fails to use this power, it will be guilty of a grave neglect of its public duty.

SALACETOL IN DIARRHŒA.—Contagious diarrhœa has been treated successfully by Bourget with salacetol in doses of from 2 to 3 grams dissolved in 30 grams castor oil. It should be given in the morning on an empty stomach, and repeated, if necessary, for two or three mornings. Bourget considers 0.5 gram. or even more, a safe daily dose for a child 1 year of age.—*Phar. Zeit.*



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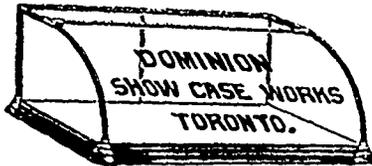
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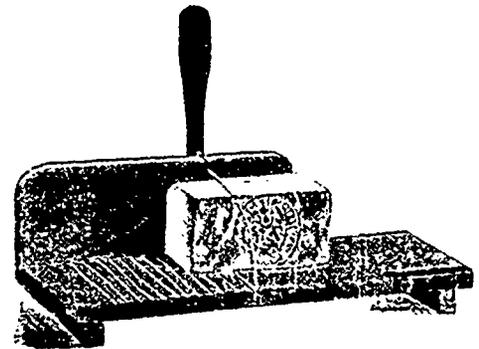
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Pharmaceutical Notes.

PHEURETIN is a new phenol derivative whose exact chemical nature has not yet been determined. It presents itself in the shape of minute white, glistening, silky needles, inodorous, and but slightly soluble in cold, and but a trifle more so in hot water. According to Jules Orient, pheuretine is readily soluble in the gastric juices, and is absorbed in doses of from 1 to 2 gm. in twenty four hours. In heavier doses it reacts on the nervous system, producing abundant urinary secretion. It seems to be valuable in neuralgias, especially to migraine, in which it may be given in doses of from 50 cg. to 1 gm., repeated twice daily.

§§§

DISINFECTIN is the name (*Pharm. Zeitschr. f. Russl.*) of a preparation intended for ordinary disinfection, said to be obtained as follows: 5 parts of the residue left in distilling crude naphtha are thoroughly mixed with 1 part (by volume) of concentrated sulphuric acid, and allowed to cool. The fluid portion is separated from the sediment, and gradually mixed with an equal volume of 10 per cent. soda solution, and well shaken. Thus it obtained a yellowish-brown emulsion—disinfection—which, when intended for use, is diluted with four parts of hot water, and thoroughly shaken.

§§§

IODOSO-BENZOIC ACID.—A patent for this compound has been taken up by Meister, Lucius and Bruning. To prepare it orthiodo benzoic acid is dissolved in pure nitric acid, the solution warmed, and after cooling added to water, the resulting iodoso-benzoic acid, $C_6H_4(9.0.)COOH$, is crystallised once from water, and then melts with decomposition at $209^\circ C$. This compound is being employed in medicine.—*Pharm. Zeitung*.

§§§

TO DISTINGUISH ALPHA FROM BETA-NAPHTHOL.—Aymonier (*L'Union Pharm.*) employs a solution of potassium bichromate and nitric acid (c p), 1 part each, in 10 parts of distilled water. A few drops of this solution allowed to fall into an aqueous or dilute alcoholic solution of alpha-naphthol, will at once cause a black precipitation, increasing as more of the reagent is added; on beta naphthol, the reagent has no effect.

§§§

CRYSTALLINE, according to Dr. L. Phillips (*Sem. Med.*; 1893, No. 59), is a solution of pyroxylin in methylic alcohol. It is analogous to collodion, but evaporates much more slowly, and forms a perfectly translucent and imperceptible coating.—*Flexible crystalline*, analogous to flexible collodion, consists of crystalline, 4 parts; castor oil, 1 part; balsam fir, 2 parts.—An excellent white varnish, for cutaneous diseases, may be prepared by intimately mixing 15 parts of crystalline, 2 of castor

oil, and 1 of zinc oxide.—Crystalline, it is stated, easily dissolves pyrogallie and salicylic acid, chrysoarobin, corrosive sublimate, and many other medicaments. The author reports having employed it advantageously as a vehicle for divers remedies in the treatment of ringworm, warts, *eczema marginatum*, lupus erythematosus, syphilides, acne, and keratosis. Owing to the transparent nature of the film, the progress of the treatment can be easily followed up. *Merck's Report*.

§§§

NEW REACTION FOR ESERINE AND ITS SALTS. M. Fereirade Silva, in *Comptes Rendus*, gives the following delicate reactions for the identification of eserine and its salts. A fragment of the alkaloid or of one of its salts, the size of a small grain of sand, is dissolved in a small white capsule, with one or two drops of strong nitric acid; the solution is of a light yellow color, becoming darker on warming on the water bath, passing to orange; if evaporated to dryness, with constant stirring, the residue is of a green color. This reaction is very delicate. This green coloring matter is soluble in water and in alcohol. The solutions are green, non-fluorescent, and leave the green substance unaltered on evaporation. Sulphuric acid also dissolves this body, giving a green solution. If another drop of nitric acid is added to the green residue while on the water bath it becomes blue, where it is not touched by the acid, and a reddish violet solution, becoming green, is obtained. The solution in nitric acid diluted with water is fluorescent, and gives a blood red color with reflected light, and a greenish yellow with transmitted rays.

§§§

EUGENOL IODIDE is a compound analogous to aristol, and is obtained by treating alkali solutions of eugenol with iodine—8 2 kilos of eugenol are dissolved in 700 litres of water, and 2 kilos of sodium hydroxide and 2.7 kilos of sodium carbonate are added. Then 12-13 kilos of iodine and 18 kilos of potassium iodide are dissolved in 60 litres of water, and mixed the first solution. The resulting precipitate is gathered and recrystallized from alcohol or benzin. The finished product is a colorless to yellowish, tasteless powder, which is insoluble in water, melts at $150^\circ C$ [$302^\circ F$], and decomposes at a higher temperature with the liberation of iodine.—Definite therapeutic data are yet wanting.—*Giorn. di Chim. e Farm.*

§§§

ANOTHER NEW EXPLOSIVE.—M. Raoul Pictet, whose work in connection with the creation of low temperatures is well known, is in negotiation with the Swiss Federal authorities for the sale of a new liquid explosive invented by him, which is said to exceed all known explosives in power, and can also be used as a charge for firearms. M. Pictet's explosive is said to be uncongaleable, and to burn smokelessly while its preparation and transport are entirely free from danger. The Swiss military authorities have already made

experiments with the explosive, and after some further trials the Federal Council will decide the question of the purchase of manufacture.

§§§

CINNAMOL.—Basing his experience upon the publication of Chamberland, Championniere (*Jour. de Medicin et de Chirurgie Pratiques*, June 10th, 1893), states that the former showed that many essences are strong antiseptics joined to a direct and immediate action, and even more valuable remote effect, perhaps due to the tension of the vapour, and experimented at length with the essence of cannella (oil of cinnamon), since this had been proved to have the most powerful scientific effect. As an excipient in itself antiseptic and non irritant, retinol was found to serve admirably. This completely dissolves the essence and allows of the use of strong solutions. The essence of cannella as found in commerce is altered by the light and by contact with air. When double distilled, and kept from air and light, it is much more powerful as an antiseptic lotion. Thus purified it has been named cinnamol by Andre to distinguish it from the preparation of commerce. In addition to the cinamol, another antiseptic has been added, which is more fixed and permanent, but is yet non-irritant; this is naphthol. The preparation now made and employed by Championniere is as follows:—

R Retinol	75 grammes.
Sterilized Wax	25 grammes.
Cinnamol	1 gramme.
Beta-naphthol	1 gramme.

A piece of lint is spread with this pomade and applied directly to the wound. Championniere has thus dressed a series of laparotomies, wounds with drainage and without, such as radical operation for hernia and wounds of the breast, etc. All of the wounds remained antiseptic. When drainage was employed the track of the tube remained sterile. The dressing is kept in place for ten or eleven days. When applied to affected surfaces it rapidly diminishes suppuration and exerts a happy effect upon the inflammation.—*Therapeutic Gazette*.

§§§

ANTIPIRETTICS.—Some notes appear in the *Pharmaceutische Post* on the value of several fairly new antipyretics. Anti-hermin (phenylhydrazin levulin), given in doses of .5 grammes, reduces the temperature by $.6^\circ$ in two hours. Given in doses of 1 gramme, it produces very disagreeable feelings of headaché and nausea. Anti-nervin is weaker in its action than antipyrin, but much safer. Asaprol can be taken in doses of 4 grammes per diem. Euphorine is a powerful antipyretic, but its action is not reliable. It reduces the temperature by nearly 4° . Phenocoll hydrochloride and salophen are recommended, the former of which will reduce the temperature 1° in as many hours.

Muawine is a poisonous alkaloid found in a Mozambique tree called "muawi." Its action very closely resembles that of erythrophleine.

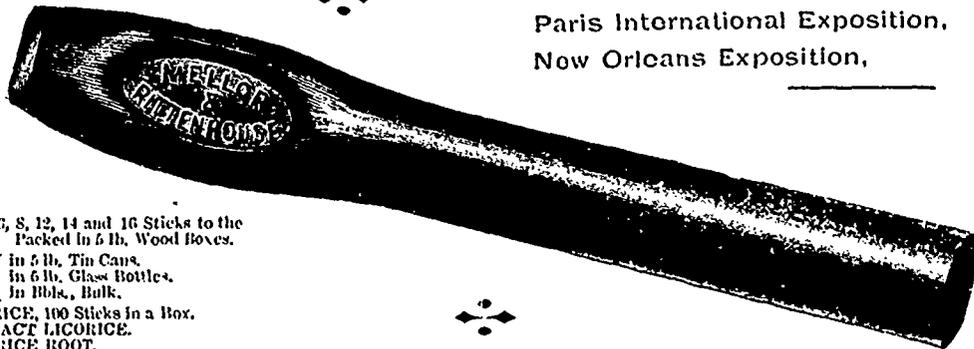


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(SALICYLE BROMANILIDE) in the form of Powder, the most efficacious Antipyretic, Antineuralgic, and Antinervine.

ANTINERVIN replaces and surpasses Antipyrin, has no harmful secondary effects, and is cheaper. Taken in doses of 8 grain four times a day, it is an excellent remedy for Feverish, Catarrhal and Rheumatic Pains.

ANTINERVIN is of especial service in cases of Influenza, Neuralgia, Asthma, Tuberculosis, Yellow Fever, Malaria, Migraine, Gout, Rheumatism in the Joints, Diphtheritis, and other typical Fevers.

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Formulary.

ONJMENT FOR BROKEN CHILBLAINS.

Ung. terebinthina	5 ij.
Ung. elemi	5 iss.
Ung. zinci	5 iss.

— Practitioner.

ANTI-ASTHMATIC PASTILLES.

Tinct. iodine	ʒi.
Po. stramonium	ʒiij.
Po. lobelia	ʒiij.
Po. enheb	ʒvj.
Po. sage	ʒss.
Potassium nitrate	ʒij.
Mucilage acacia	ʒss.

To the well mixed powders add the tincture of iodine and incorporate thoroughly; then add sufficient mucilage to make a stiff paste, which roll out flat and cut into small oblong pieces.

STERESOL.

This, says the *Repertoire de Pharmacie*, is the name given to an antiseptic combination intended for the treatment of skin diseases. It is a bactericide of considerable energy. The formula is as follows:

Gum lac, pure and entirely soluble in alcohol	270 parts.
Benzoin, pure	10 parts.
Balsam of tolu.	10 parts.
Phenic acid, crystallized	100 parts.
Essence of camella (Chinese)	6 parts.
Saccharin	6 parts.
Alcohol, sufficient to make	1000 parts.

Mix and dissolve.

SOZOIODOLATE OF MERCURY SOLUTION.

E. Schwimmer reports in the *Ph. Post* that a solution of soziodolate of mercury is easily prepared with the addition of iodide of potassium:

Soziodolate mercury	0.8
Iodide potassium	1.6
Distilled water	10.0

The mercury salt is to be rubbed with a little of the distilled water, the iodide added and finally the balance of the water. The solution should be filtered. The author used the solution in all syphilitic affections, and achieved excellent results with it. He administers it subcutaneous-ly.

UNG. NAPHTHALINI COMP.

A correspondent of *Phar. Zeit.* gives the following formula for this ointment, which is used in eczema and psoriasis:

Naphthalin	5 ij.
Acid. benzoic	5 j.
" boric	5 j.
Vaseline, c. cera flav. (3:1)	5 ij.
Bals. peruv	5 j.
Tinct. benzoini	5 ij.

M. Ft. unguent.

CODLIVER OIL WITH SACCHARIN.

Saccharin	40 egm.
Acetic ether	2 gm.
Codliver oil	100 gm.
Peppermint or cinnamon oil	ʒss.

Dissolve the saccharin in the ether, and add the codliver oil, little by little, with frequent agitations. Finally add the peppermint or cinnamon oil.—*Wiener Klinische Rundschau*.

KOLA WINE.

The following formula for a wine of

kola, combining excellent tonic properties, is taken from the *Bull Med*:

Fluid extract of kola	3 parts.
Syrup of orange peel	10 parts.
Tincture nux vomica	1 part.
Malaga wine	90 parts.—M

VOICE-LOZENGE.

A physician recommends as the best lozenge to counteract the ordinary hoarseness of singers and orators, one composed according to the following formula:

Cubeba	3 gr.
Benzoic acid	4 gr.
Hydrochlor. of cocaine	1/70 gr.
Pulv. tragacanth	1 gr.
Extr. of liquorice	5 grs.
Sugar	13 grs.
Eucalyptol	1/20 minim.
Oil of anise	1/20 minim.
Black currant paste, enough to make	20 grs.

A small piece of the lozenge is to be allowed to dissolve in the mouth just before using the voice for singing or reciting.

TO SOFTEN AND WHITEN THE HANDS.

Borate of soda	5 ij.
Glycerine	5 iv.
Lanolin	5 j.
Eucalyptol	5 j.
Ess. of bitter almonds	ʒxx.

Apply at night, and afterwards dust the hands with Indian chestnut flour, and cover with gloves.—*Med. Press*.

CEMENT FOR GLASS, &c.

Take of—

Russian glue	5 iv.
G. acacia	5 j.
Water	5 iv.

Dissolve in a water bath, then add two ounces Russian isinglass, dissolve again, strain and then add

Acetic acid	5 iss.
-------------	--------

Mix, and bottle immediately.

VETERINARY CHLORODYNE.

The *Chemist and Druggist*, in answer to a correspondent's inquiry, give the following formula for veterinary chlorodyne:

Extract of Indian hemp	5 ij.
Capsicin	ʒv.
Oil of peppermint	5 iss.
Rectified spirit	5 ij.

Rub up the extract and capsicin with a little spirit, and gradually add the rest of the latter, then add the oil and the following:

Methylated chloroform	5 j.
Methylated ether	5 j.

Mix.

Separately prepare the following mixture:

Acetate of morphia	5 j.
Dilute acetic acid	5 iss.
Distilled water	5 iv.

Dissolve by heat, and add to—

Compound tragacanth powder	5 ij.
Treacle	5 x.
Liquid extract of liquorice	5 ij.

To this mixture gradually add the chloroformic solution, shaking well after each addition.

The dose of this preparation for a horse is 5 j. to 5 j. Ten minims of acid. hydrocyanic, dil., R. P., may be added to each ounce, if desired.

COLLODIUM BELLADONNE OR LIQUID BELLADONNA PLASTER.

Liquid extract of belladonna	10 fl. ʒ
Ether	10 fl. ʒ
Camphor	130 grs.
Pyroxilin	183 grs.
Camela balsam	365 grs.
Castor oil	183 grs.

Mix the liquid extract and the ether, and set aside for twelve hours. Decant and dissolve therein the remaining ingredients in the order in which they occur in the formula. The liquid extract of belladonna, which should be prepared from English leaves in fine powder by reprecipitation with rectified spirit, so that each ounce of the finished product represents two ounces of the leaves, has a specific gravity of .944, and contains 1 per cent. of alkaloid, or 4.154 grains per fluid ounce. The mixture of equal volumes of the liquid extract and ether, after decantation, had a specific gravity of .800, and contained .439 per cent. of alkaloid, or 1.534 grain per fluid ounce. The above was recommended at the last British Pharmaceutical Conference in place of the present unofficial formulary which does not give entire satisfaction.—*Therapeutic Review*.

Boron-Eisen.

This compound described by H. N. Warren, is prepared by mixing solutions of borax and ferrous chloride, pressing the resulting white precipitate to free it from adhering water, and, after thoroughly drying, reducing it with an equivalent proportion of carbon in a plumbago crucible. In this way four to five per cent. of boron is said to enter into union with the iron, a compound being produced which breaks with the fracture of metallic manganese and possesses sufficient hardness to readily scratch glass. At the same time it is with difficulty soluble in acids, whilst its melting point approaches that of cast-iron. A more economical method of preparing the compound is to reduce ferric carbonate or oxide, mixed with boron oxide and charcoal. The average of several analyses is represented by the following figures:—Iron, 94.08 per cent.; boron, 4.02; combined carbon, 1.50; phosphorus, 0.09; sulphur, 0.31; silicon and manganese, traces.—*Chem. News*.

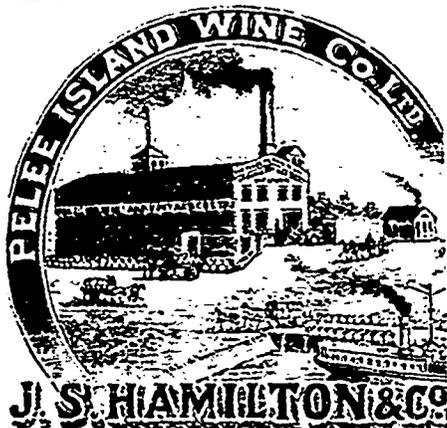
Gallopatoroluide.

The preparation of gallanilide by acting upon tannin with aniline has suggested to P. Cazeneuve that by dealing with the homologues of the base he might be able to obtain those of gallanilide, by an analogous decomposition of the tannin of nut galls, but experiments proved that paratoluidine alone behaves in this respect in a similar manner to aniline. On heating paratoluidine with gallic acid and then treating with water acidulated with hydrochloric acid, a white crystalline product was obtained which melted at 211° (m. p. of gallanilide is 205°), was but slightly soluble in cold water, though very soluble in boiling water, and also soluble in alcohol and ether.—*Comp. rend.*

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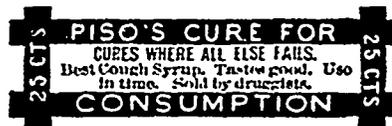
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Photographic Notes

Developing Films.

H. H. BUCKWALTER.

Believing that many photographers, amateurs and professionals, have trouble with films, the writer feels that an explanation of a few original "dodges" will lessen no small amount of profanity regarding the "pesty things."

Having developed as high as a thousand 4x5 film negatives a day with amidol, without having any trouble, and having used that developer for nearly a year, the writer feels like recommending it to those who are not satisfied with the developer they are using, but at the same time strongly advises those who are satisfied and are securing good negatives to stick to their own developer. The simplicity and rapidity of amidol are points in its favor, and it is very nearly what its makers of all developers please to claim a "universal developer."

The easiest method of using amidol is to make a stock solution of sulphite of soda (crystals), 200 grains to the ounce. Then get a wooden mustard spoon and file it down so that it will hold just ten grains of amidol when the powder is dipped up and levelled off with a light jerk. For normal developer put one spoonful of the powder into a graduate and add half an ounce of the stock solution of sulphite of soda. Stir till dissolved and add water to bring the solution up to four ounces. Of course, this amount is not sufficient when a large number of films are to be developed, but it is mentioned as a convenient unit of quantity. With some makes of sulphite it is necessary to add a few grains of carbonate of soda to the stock solution. A very small quantity will usually suffice. When only one or two plates or films are to be developed, and it is desirable to save the developer, a grain or two of oxalic acid or oxalate of potash may be added to the mixed developer and its keeping qualities greatly improved, although, where much developing is done, it is advisable to use fresh developer every day, for the reason that the user will always know exactly what the strength is. The sulphite solution deteriorates very slowly if kept in a moderately cool place.

The writer also uses a combination of cikonogen and quinone with excellent results on Carbutt's ortho films. The following formula has given satisfaction on these and also on extremely rapid exposures on race horse and similar subjects:

A.

Water.....	1250 c. c.
Sodium sulphite crystals.....	150 grammes.
Eikonogen.....	221 "
Hydrochinon.....	71 "

B.

Water.....	250 c. c.
Potassium carbonate.....	75 grammes.

Take five parts of solution A and one part of solution B. If over exposure is

suspected add several parts of water and a few drops of bromide of potash solution.

Cut the films from the roll holder and place them in a light-tight box, and this box in another box for safety. The films should be cut in lengths suitable for the tray in which they are to be developed. After the developer is mixed and in the tray, take one of the strips of negatives and quickly slip it under the surface of the developer. It will flatten out in a few seconds. Allow it to remain face or film up until all details are out. Then turn it over and start on a new strip. By the time the second is ready to turn over the first will probably be dense enough. If not, start on the third strip. When the first is ready to come out throw it into a deep dish of water until about a dozen or two strips are finished, moving them occasionally. Then put them in the fixing bath face down, and keep them moving until all are thoroughly fixed. Wash as usual—that means thoroughly. One of the easiest and best fixing baths is made as follows:

Water.....	1 quart.
Hypo.....	3 pound.
Sulphite soda.....	1 ounce.
Tartaric acid.....	1 ounce.

Alum is not necessary with this bath. It will remain clear a very long time and increase the brilliancy of negatives. It is a magnificent fixing bath for lantern slides on account of its freedom from stain and slight clearing of fog.

After the films are well washed they must be soaked to prevent curling when dry. A bath made of water and enough glycerine to give twenty degrees hydrometer test will be found to work perfectly if the following original process of drying is followed.

One of the great trials of film developing was the method of drying a large number of films by driving tacks through the corners, as recommended by the makers. With several hundred films this was a job of considerable magnitude. An easier way is to soak the films in the above bath for five or ten minutes. Then spread out half a newspaper and lay the negatives on it face up. Lift up the paper by the corners and allow the surplus water to drain off for a few seconds. Then lay a sheet of hard blotting paper over the negatives and quickly blot off all the water on the face of every negative.

Without doubt the best blotting paper to use for this purpose is the "Royal" brand, imported by the United States Photo Supply Co. It costs only a few cents a sheet and will last a long time if carefully dried after each using. It is an improvement to lay the negatives on a sheet of this blotter instead of newspapers. It is also possible to blot the negatives with new, clean newspapers, but it is hardly as good as the blotter, although the writer has blotted over 10,000 negatives with old papers. But they must not be used more than once, and the blotting must be quickly done. The films must have every drop of water removed

from the face, otherwise the drop will not dry perfectly and will stick to the paper in printing. The sheets of paper on which the films have been blotted must be placed in a dry place free from dust until dry.

An old pepper box filled with talc powder (French chalk) is very convenient to have around when printing. Should the films show any signs of stickiness dust some powder over them and rub off with a piece of soft cloth. That will remedy the sticking. If any large spots are sticky or the paper should adhere, throw the film in water until the paper can be easily removed and then soak and thoroughly blot again.

If you have been in the habit of tacking up negatives to dry you will be surprised to find how much the easier is this method.—*Pacific Coast Photographer.*

The Blue Process.

The following process for producing cyanotypes on paper is recommended by Herr F. Veress, the well-known photographer of Hungary, in the *Photo-Almanach* f. 1893. Two solutions should be prepared:

SOLUTION A.

Iron and ammonia citrate.....	8 grammes.
Ammonium ferrioxalate.....	2 grammes.
Oxalic acid.....	1 gramme.
Distilled water.....	120 c. c.

SOLUTION B.

Ferrioxalate of potassium.....	8 grammes.
Ammonium ferrioxalate.....	2 grammes.
Distilled water.....	120 c. c.

The two solutions are mixed and then filtered. Previously moistened glossy baryta paper is floated on the filtered solution for about four minutes, when it is dried at 89° F. The paper is then printed in the usual manner beneath a negative. The prints are washed in soft water, and then placed one by one in a mixture of 100 parts water and one part of hydrochloric acid. They are allowed to remain in it about five minutes, until the image has become quite pure. Finally the prints are well washed in clean water.

To produce blue prints on canvas and silk the following process is given by the same author: 5 grammes of arrowroot are dissolved in 50 c. c. of water; 2 grammes of gelatine are dissolved in 50 c. c. of warm water; 300 c. c. of water, to which has been added 1 gramme of ordinary whitesugar, 10 drops of glycerine, and 5 drops of a saturated solution of caustic potash, are boiled, and the arrowroot and gelatine solution added to it by constant stirring. The liquid is then filtered through flannel in a flat dish resting in a warm water bath. The fabric to be sensitized is placed on the liquid and allowed to float for from four to five minutes; it is then mounted on blotting paper, which is fastened to a drawing board and dried in a warm room. The fabric is sensitized and printed as described above and it should be used soon, for it quickly loses its sensitiveness. Before fixing, the prints should be placed one by one between sheets of blotting paper, in order

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to avoid spots. Fixing is done as above described, in water acidulated with hydrochloric acid.—*Amer. J. Photography.*

Photographic Hints and Formulæ

REMOVING YELLOW, GREEN, RED, OR DICHOIC FOG.—Dr. Meniere, of Paris, advises the following treatment: Soak the negative in ordinary water for five minutes, and then immerse in

Water	100 parts.
Bromide of sodium	3 parts.
Bromine water	3 parts.

Leave in for ten or fifteen minutes. The bleached image is well washed and dried, and the image redeveloped with an amidol-sulphite developer.—*British Journal of Photography.*

Platinotypes with Sepia Tones and Hot Development.

Triner summarises his experiments on this subject. With an addition of 1 per cent of mercuric chloride to the ordinary developer, brownish black tones are obtained; increase of the mercury gives yellowish-brown prints. The oxalate solution should always be heated before the mercury is added, or else mercuric oxalate may separate out. A fresh developer should be used each time. A simpler method of obtaining sepia platinotypes is by adding the mercury to the sensitising solution as follows:

<i>Solution of Chloro-platinate of</i>	
Potash	6 parts.
Normal Iron Solution	2.5 "
Chlorate Iron	3 "
Solution Mercuric Chloride	
(1:3 to 1:14)	1.2 "

The after treatment of the prints is as usual. The prints can be toned with uranium according to Dr. Strakosch's formula.

Water	1,000 parts.
Uranyl Nitrate	10 "
Potassium Ferricyanide	2 "
Glacial Acetic Acid	60 "

—*Photogr. Corresp.*

Exposure.

In studying the image on the ground glass, it must be remembered that the brightest colors do not necessarily have the greatest effect on the plate. The initials of the seven spectrum colors spell the word "Vibgyor," those towards the beginning of the word being most effective chemically. Green foliage, therefore, stands about midway on the actinic scale, and would require more exposure than if it were blue, and less than if it were yellow and red, as in the fall of the year. At the same time, when brilliantly illuminated, so much white light is reflected that to all intents and purposes it is photographically white. In a landscape, or other subject in which the illumination is uneven, some portions will necessarily be over-exposed, and others under-exposed. It is necessary, then, to determine how far it is advisable to clog up the high

lights, in order to obtain detail in the shadows, a question into which the development also largely enters.—*Snap Shots.*

How to Print on Marble.

Mr. Villon publishes the following process: Coat an unpolished plate of marble with the following solution: Benzine 500 parts, spirits of turpentine, 500 parts, asphaltum 50 parts, pure wax 5 parts. When dry expose under a negative, which will take in sunshine about twenty minutes. Develop with spirits of turpentine or benzine, and wash in plenty of water. Now cover the plate where it is intended to be left white with an alcoholic solution of shellac, and immerse the same in any dye which is soluble in water. After a while, when enough of the coloring matter has entered the pores of the stone, it is taken out and polished. The effect is said to be very pretty.—*Photographisches Archiv.*

Paste for Mounting Photographs.

STARCH PASTE.

Arrow root	grs. 300
Gelatin	grs. 30
Alcohol	fl. drs. 5
Carbolic acid	gtt. 14
Water	fl. ozs. 7

Dissolve the gelatine in the water, then add the arrow root, and boil until the paste is clear. After cooling incorporate the alcohol and carbolic acid, or

MOUNTING GLUE.

<i>Gelatin (Nelson's photographic</i>	
No. 1)	ozs. 4
Water	fl. ozs. 16

Dissolve, then add

Glycerin	fl. ozs. 10
Alcohol	ozs. 5

The silver prints should be slightly moistened before mounting. When mounted it is advisable to subject them to pressure.

Thiosinamine as a Fixing Agent.

Thiosinamine is reported by R. E. Liesegang to be a desirable substitute for sodium hyposulphite (thiosulphate), as a fixing-agent. Its aqueous solution removes the silver salt from a silver-chloride gelatin plate just as quick as sodium hyposulphite does, it is claimed. Bromide of silver dissolves a little slower, but completely. Silver-chloride paper-prints are fully fixed after four minutes' immersion in a 1-% solution. If $\frac{1}{10}$ per cent. solution of gold-chloride is added to the liquid, a quick-acting, tone-fixing bath is obtained. Aristo pictures treated herewith have greater depths than platinum pictures. For warm tones the quantity of the gold is to be reduced. Thiosinamine can be mixed with an equal quantity of concentrated hydrochloric acid or other acids, without decomposition of the salt and without reduction of its solvent properties, it is stated. It can also be mixed with alum or chloride of sodium. An alkali

which, by the way, would be unnecessary, should not be added to the solution. Such a mixture blackens unexposed chloride, or bromide of silver, and does not dissolve it any more. Concerning the influence of thiosinamine which remained after insufficient washing upon the durability of the picture, nothing definite can be said as yet. Several prints, which, after fixing, had only been washed superficially, were kept for twenty days without perceiving the slightest change. Should this prove to be the case generally, another great advantage over sodium hyposulphite would be obtained.—*Photo. Bulletin.*

Photographing Animals.

As in the case of animal photography very often rapid movements are to be fixed by the camera, a first-class rapid lens of sufficiently long focal length, (seven to eight inches at least) should be used. If it is possible to previously determine the place where the exposures are to be made, it is well to set up a suitable background in a proper position, corresponding, of course, as regards color with the objects to be photographed. Thus, for instance, a white sheet should not be hung up if a white cat or goat is to be taken, nor a dark-colored material if dark-colored animals are to appear before it. This applies also to the ground over which the animal moves. Besides, the background should be of sufficient size to cover the whole plate, and not leave an end or side vacant. Especially if the animals are small, the background should come down fully to the ground, otherwise there will always be an unsightly space just in the rear of the lower legs. In order to ensure accurate focussing, the moving subject should arrive at a point which has previously been determined and focussed upon.

As full sunlight will have to be used in order to obtain sufficient rapidity, great attention must be paid to the shadows, which very often are thrown heavily upon the background or on the ground, or both, and are more prominent than anything else in the picture. If this defect cannot be prevented, a great deal may be done on the finished negative by retouching.

White or light colored animals can, of course, be more easily photographed than dark-brown or black ones, as can also those whose natural movements are not particularly rapid. Among domestic animals, excellent results may be obtained with dogs almost all kinds, cats, rabbits, pigs, goats, donkeys, oxen, horses and calves. Tame water-fowl of every variety may also be taken either singly or in groups.—*Photo. Pastimes.*

The magnesium light was first applied to art photography in 1864.

The *British Journal* suggest the use of Sulphate of magnesia, added to the washing water instead of alum, for the purpose of preventing softening or "frilling" of the film.

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Magazines.

The Delineator.

The February issue of *The Delineator* is called the "Midwinter Number," and its contents are as instructive and entertaining as usual. The fashions displayed are handsome and becoming, and ladies who have not yet completed their winter wardrobes cannot do better than follow the styles of this month. The wants of Misses, Girls and Little Folks are also fully considered. St. Valentine is responsible for two novel diversions, one being a Valentine Tea, and the other A True-Love Card Party; while a third entertainment for the month is provided in A Poverty or Hard-Times Party. An article appropriate to the times is on Table and Bed Linen, and another equally seasonable is What to do for the Fair. In the Household Renovation series there is practical and valuable instruction on How to Upholster, and the paper on Child Life treats of the Higher Education of Girls. Physical Culture continues the subject of the Physical Expression of the Emotions; in Around the Tea-Table various interesting matters are discussed, and the third contribution on Things that Should be Left Unsaid will be of general service. The articles on Dress Fabrics, Trimmings, and Millinery are invaluable to Dress-makers and Milliners, and that on Fur Rugs and Robes gives the latest information about these luxuries. Lovers of Knitting, Crocheting, Tatting and Netting will find much that is new in the papers on these subjects. A subscription to *The Delineator* is only One Dollar a year; Single Copies, 15 cents. Address orders to *The Delineator* Publishing Co. of Toronto (Ltd.), 33 Richmond Street West, Toronto, Ont.

An American Editor Who Favors Canadian Writers.

Last summer Edward Bok, the editor of the *Ladies' Home Journal*, the Philadelphia magazine of marvelous editorial acumen and circulation, visited Canada. Previous to this visit, Mr. Bok had written much and well of Canadian writers, but his personal visit gave him a new idea of Canada's literary people and their talents. He became interested in Canadian authors and literary matters, and the first indication of this was the announcement that he had secured Lady Aberdeen to write for his magazine. Then it was given out that the first prize in the *Journal's* musical series offered for the best waltz had been awarded to Mrs. Frances J. Moore, of London, Ontario. This waltz Mr. Bok has named "The Aberdeen Waltzes," in honor of Lady Aberdeen, and will be printed in its entirety in the February issue. Mr. Henry Sandham, the artist of Canadian tendencies, was next heard of as making a series of covers for the *Journal*. Then the names of J. Macdonald Oxley and John Lambert Paine became prominent in the magazine's contents. Now Clifford Smith, of Montreal, has had his first American

story accepted by this magazine. And so it looks very much as if this young American editor had his eyes turned squarely on Canadian writers, and intended to come closer to his Canadian readers. Mr. Bok's Canadian visit certainly did good.

World's Fair Cosmopolitan.

The second edition of the December *World's Fair Cosmopolitan* brings the total up to the extraordinary figure of 400,000 copies, an unprecedented result in the history of magazines. Four hundred thousand copies—200 tons—ninety-four million pages—enough to fill 200 wagons with 2000 pounds each—in a single line, in close order, this would be a file of wagons more than a mile and a half long. This means not less than 2,000,000 readers, scattered throughout every town and village in the United States. The course of *The Cosmopolitan* for the past twelve months may be compared to that of a rolling snowball; more subscribers mean more money spent in buying the best articles and best illustrations in the world; better illustrations and better articles mean more subscribers, and so the two things are acting and reacting upon each other until it seems probable that the day is not far distant when the magazine publisher will be able to give so excellent an article that it will claim the attention of every intelligent reader in the country.

Review of Reviews.

Mr. W. T. Stead, the distinguished London editor, has been in America for some weeks, a part of which time has been spent in Canada. Mr. Stead has long been a warm friend of Lord and Lady Aberdeen, and his recent sojourn at Ottawa as the guest of the Governor-General has resulted in a very readable and complete charactersketch of Lord Aberdeen and his accomplished wife, which appears in the January number of *Review of Reviews*. The article is one which will be interesting in North America on both sides of the boundary line and interesting also in Great Britain. The article is profusely and attractively illustrated. It is followed by a summarized report of the address given by Mr. Stead in Toronto upon the mission and destiny of Canada, in which Mr. Stead dwells especially upon the position of Canada as a connecting link between the British and American halves of the English-speaking race.

Our National Magazine.

Most welcome to the sanctum table is our national monthly, *The Canadian Magazine*. This periodical has more than justified the expectations held out by its first number, and agreeably disappointed the fears of those who thought a really superior Canadian magazine among the things impracticable. The January number is, like its predecessors, interesting throughout, and covers a wide range in thought and style, while many of the illustrations are of much merit. Attorney-General Longley tells many amusing things about Hon. Joseph Howe and his

contemporaries. Rev. Chancellor Rand relates one of the strangest psychological experiences on record. G. E. Lumsden has an interesting article, telling what may be accomplished in astronomy with common telescopes. "Longfellow's Wayside Inn," by Minnie Jean Nisbet is an illustrated chat of great interest in regard to a place made immortal by the greatest of American poets. "A Plea for Ireland," by E. Dowsley, contains not a word of politics, but is a beautifully illustrated description of Irish Scenery. Among other articles are "Vignettes from St. Pilgrim's Isle" (illustrated), by A. H. Morrison; "Neglected and Friendless Children," by J. J. Ke'so; "Two Lost Kingdoms," (illustrated), by E. B. Biggar; "In Canada's National Park," by J. J. Bell; "Algonquin Park," by Judge Fraeek; "William Wilfred Campbell," by Colin A. Scott, and "Celtic Monuments in Troubadour Land," by R. T. Mullin. A Christmas Story by C. Gordon Rogers is charmingly natural. Other short stories, and a number of poems, several of them of high ideal, make up the number. Published by the Ontario Publishing Company, Ltd., Toronto. \$2.50 per annum.

Cathartic Acid.

Notwithstanding that rhubarb, cascara, and senna are the oldest and most popular purgatives, it has not yet been found possible to isolate their active principles in chemical purity. Still it has been established with some certainty that the laxative action of these drugs is due to compounds either identical or nearly related chemically. Kuhly was the first to isolate from senna leaves cathartic acid, which he considered to be the active principle. Gensz also prepared a substance, a yellow powder soluble with difficulty in cold water but easily in hot water, which he likewise called cathartic acid. Professor Dehio, of Dorpat, has tried it clinically in twenty-one cases, administering doses of 0.15 gramme to adults, 0.05 gramme to children, and has found that it did not fail in any case. The patients praised the remedy because it caused no violent pain; it had no unpleasant taste, and, triturated with sugar, was readily partaken of by children. Cathartic acid has also the advantage over infusions or decoctions of senna that much more exact doses can be given, and the more pronounced the constipation the milder and more regular appears its action; hence Professor Dehio recommends it as a valuable addition to materia medica.—*Bulletin Phar.*

Perfumery was imported into Rio Janeiro last year to the value of £18,834, Spain coming first with £10,199, France next with £4,068, England third with £2,895, United States 4th with £1,343, and Germany 5th with £728. Of the total import of soap of 2,437 tons, valued at £63,357, into Rio Janeiro last year, Spain has supplied 2,356 tons, England 72 tons, and Cuba 7 tons.

Insect Powder.

Translated from the *Journal de Pharmacie et de Chimie, for the National Druggist.*

The Pyrethrum (*Anthemis pyrethrum*) is a little plant of the family of the Synantheria, which is found in the south of France, principally in the neighborhood of Montpellier, growing wild. Its root is sometimes used in medicine as an excitant and scialagogue. It has of late years acquired a commercial value, since its flowers are used as the principal ingredient of insecticide powders. The species mostly used for this purpose is indigenous to the Caucasus, whence its name, Caucasian pyrethrum, but the principal seat of pyrethrum culture is the principality of Montenegro, where it is an object of considerable exploitation.

The culture of pyrethrum demands great care. The earth must first be especially prepared for it, and the young plants are transplanted into it by hand. It blooms in appreciable quantities only in the second and especially in the third year. The flowers when gathered and prepared are sent to Trieste, whence it goes direct, to all the centres of commerce.

Two sorts of the flowers are found in commerce, the yellow and the violet. The first have a white corolla, but are completely yellow after desiccation. The violet flowers have a bluish corolla, and preserve their color even in the dry state. The powder obtained from the yellow flowers is of a beautiful, clear yellow and possesses a very energetic action upon all species of insect life. The violet flowers yield a grayish powder which is much less energetic in action.

It is scarcely necessary here to refer to the insecticidal properties of pyrethrum, and its advantages over all other insecticides. Everybody today regards its properties in this direction as incontestable, and recognizes its innocuity to those engaged in its preparation, as well as its harmlessness toward furniture, clothing, pictures, etc., to which it is applied. It makes no stain whatever, and is easily removed whenever desired.

Formerly the toxicity of pyrethrum flowers toward insects was attributed to the obturation of their stigmata (the mechanical closing of the orifices which serve as breathing organs), but this idea was eventually abandoned, for the reason, mainly, that other vegetable powders whose tenuity would easily have effected that end, failed to produce the lethal effects of pyrethrum. Beside this, however, the existence in the flowers of a proximate principle, soluble in alcohol, has been demonstrated, and this now appears to be the true toxic ingredient of the powder, and whose extraction renders the residual powder innocuous to insects.

The high price of the flowers, especially when they first came into use (under the name of Persian, or Dalmatian insect powder) naturally tempted the sophisticators and adulterators, who speedily mixed the genuine powder with all sorts

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The Capsule was too Large.

A. I. Husted, of Armstrong & Co., went into Lyman & Sloan's drug store on Main street, Buffalo, a few days ago and asked for a dose of castor oil. It was given to him in the form of a capsule. It takes a pretty good sized capsule to contain two table spoonfuls, and a rather large throat to swallow one. When the clerk produced the capsule Mr. Husted refused to take it, saying it was too large for a horse. The clerk laughed at this. Finally Mr. Husted decided to take the capsule, which was half the size of a hen's egg. In a moment he was choking. The envelope of the castor oil, instead of going down, remained in the throat, and it was apparent that medical aid was necessary.

Several doctors were summoned, and after hard work succeeded in dissolving the capsule. They said Mr. Husted had a narrow escape.

But this was not satisfactory to the clerk, Mr. Weston. "You fellows don't know anything," said he. "I'll show you how to take these capsules."

Thrusting one into his mouth, he proceeded to show Mr. Husted and the doctors how the trick should be accomplished. But the bolus stuck in his throat also, and despite his extraordinary efforts he choked till he was black and blue in the face. Hot water was poured down his throat, and the capsule finally dissolved, but not before he began to think his life was in danger. He will never take any more big capsules of castor oil.

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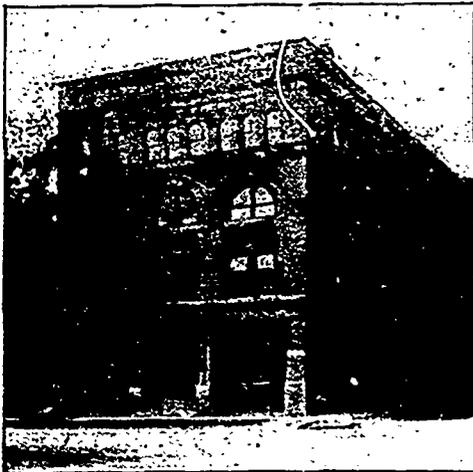
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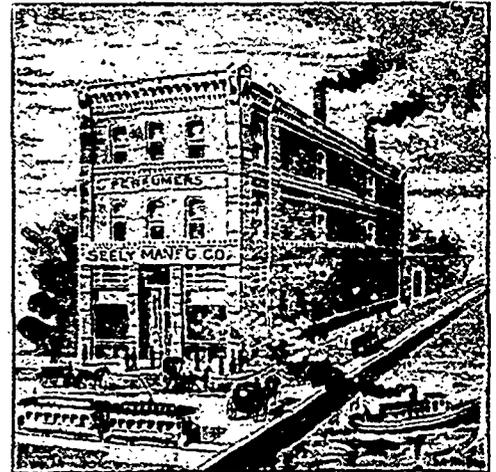


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