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TORONTO

Canadian Druggist

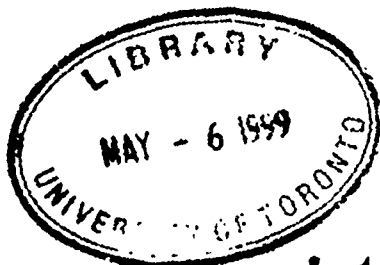
A MONTHLY JOURNAL

Devoted to the Interests of the General Drug Trade and to the
Advancement of Pharmacy

VOLUME VIII.

January to December, 1896.

W. J. DYAS,
11½ RICHMOND STREET WEST, TORONTO, CANADA.



The Canadian Druggist

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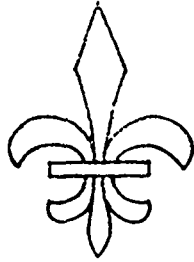
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Our New Year.

The readers of the CANADIAN DRUGGIST have entered upon another year of the nineteenth century, taking with them the remembrances of the past, striving to gain what is best and most valuable in the present, and trusting to a prosperous future. We might enlarge on many thoughts which come to our mind as to what the year 1895 has done for pharmacy in Canada, and as to what its prospects are for 1896; but our readers need not be told of their past experiences, whether they have been of prosperity and progress or of adversity and misfortune. The past, whatever it has been, should only be to us a remembrance of how difficulties are to be avoided, successes to be pushed forward, and a stimulus to renewed efforts for the future. The pessimist may look at the darkest side of everything; the man who cries "dull times" continually is bound to have them; and the grumbler, who sees no good in anything or anybody outside of himself, will always find something to find fault with; but the pharmacist who is a *man* in the true sense of the word will always find that steady, persevering effort, honest and diligent application, and a spirit of gratitude for what he has, and a determination to make the best of everything—that the world appreciates such a man, and his efforts will be rewarded. We wish our readers prosperity, peace, and plenty. We give them our hand as brother pharmacists in the battle of business. Shoulder to shoulder we will do our best to stem the tide of evils which beset the trade, and in the year 1896, as in the past, the readers of the CANADIAN DRUGGIST throughout the length and breadth of Canada may depend on us as an ally in all matters for the protection and improvement of their interests.

The late Professor Kluydens says that figs were used for the first time as cataplasms by Hezekiah, 260 years before the time of Hippocrates.

The Condition of the Patent Medicine Trade.

WHAT IT HAS BEEN

The patent medicine trade has been as full of variety as any line of business could well be. The past twenty five years has noted the rise and fall of dozens of prominent preparations, and druggists who desire to know what they were will refresh their memories by going through their patent medicine lockers, and noting the stock they have on hand of Hop Bitters, Warner's remedies, Ayer's preparations, Pinkham's compound, purifier and wash, Bristol's, Johnston's, and other sarsaparillas, Cuticura preparations, St. Jacob's Oil and associates, Shoshonee's remedy, Vegetine, Sutherland's Rheumatine, Hamlin's Wizard Oil, Kidney Wort, Hydrohume, and a host of others of minor degree. Hundreds of thousands of dollars' worth of these remedies have in the past been consumed by Canadians, yet their light has gone or is going out, and the receipts have gone to make a living for those who furnish paper, ink, composition, and press work, for advertising purposes. The patent medicine advertiser has made fortunes and lost them, and to day comparatively few can be pointed to who have what they commenced with, yet all have contributed more or less to make the retail drug business profitable.

WHAT IT IS.

It would be useless folly to assert to-day that the patent medicine trade is satisfactory to either the maker or vendor. While prices remained normal, and the druggist was the sole purveyor, there was a reasonable degree of prestige attached to the article sold, but since the grocer, the general merchant, and the department dealer have become privileged to commend them for public use at reduced prices, that condition of things is at an end, or nearly so, and the trade in them has reached a point below which zero comes. It is doubtless true, as has been

frequently asserted, that the only remedies which are to-day paying are inexpensive pills, advertised to produce miracles at fifty cents per box. If the pills cost three or four cents per box, and can be sold retail at fifty cents, there is sufficient scope for profit to enable the proprietor to give practically unlimited advertising contracts, and thereby sustain a demand. If this is, as we have some reason to believe it is, the secret of the new era in advertising, we are certain it cannot last, as sooner or later an exposure will be made which will land such remedies high and dry out of the tide of trade.

WHAT IT MAY BECOME.

It is always difficult to foretell the future; but as it is usually generated from events of the past, a rough guess may safely be made. Considering that past events and present conditions have been from good to bad, we may assume that the latter condition will continue to prevail unless radical changes take place at an early date.

The moment the members of the drug trade realized that patent medicine manufacturers had inaugurated a new system or avenue for the distribution of their goods, that moment they, in turn, adopted new methods of treating the difficulty. First, counter distribution of advertising matter was discontinued, and the manufacturer was put to thousands of dollars expense for travelling and distributing agents; second, organized companies were instituted to manufacture substitute goods for co-operative purposes, and met with considerable success; third, druggists who felt somewhat jealous of co-operative goods saw no reason why articles of their own, of similar import, should not prove supplantive; and to this last cause the patent medicine man of to-day properly ascribes his chief difficulties, as he realizes that he has to pay for the creation of a demand for goods for which the man who fills the order by substitution has to pay nothing.

The foregoing is, in our belief, a true statement in condensed form of past, present, and prospective conditions, and, while it is no part of our duty to determine or point out the policy to be pursued by the manufacturer, we would suggest that he attach his own experience to the above description and carefully consider where he was leading. The drug trade is not as dependent upon the advertised patent remedies as many would suppose. It could exist, and possibly

with greater success than at present, if advertised remedies were unknown; and unless honest, earnest, and combined efforts are put forth by the present manufacturers to rectify matters on the lines now being suggested, we are not sure but the day of extinction for their trade is near at hand.

Review of the Year 1895.

In attempting to select the subject entitled to the first place in the discoveries of the past year, we think there can be little doubt that Argon will be *facile princeps*. Although, strictly speaking, it was discovered by Lord Raleigh, and investigated by Professor Ramsay towards the close of 1894, the whole scientific world received the first announcement with something more than suspicion. Since then overwhelming evidence of its existence has been produced, foreign savants have examined it, and the United States has awarded the discoverers one of its most substantial prizes, whilst the Royal Society has conferred its medals, and the French Academy its Lecomte prize. During the past year the progress of serum therapeutics can hardly be said to have been so great as was anticipated. Statistics, usually misleading, have been specially confusing to those who wanted a clear and unbiased reply as to the value of diphtheria antitoxin, tetanus antitoxin, etc. There can be little doubt that we are only on the threshold of the subject, and Goethe's cry, "Light, more light," is particularly applicable at the moment. As long as we are ignorant of the exact chemical nature of the antitoxins and their biological relation and therapeutical properties, the experiments are being made, more or less, in the dark. The endless series of organic derivatives still form a rich harvest to the experimental therapeutists—and the German manufacturers.

THERAPEUTICS.

Contributions to our knowledge of the physiological action of the extract of the suprarenal capsules have been made by Oliver and Schafer, who conclude they are secretory rather than destructive, and that the products act as tonics to the muscular tissues. Moore also examined the same substance and suggests that it is a powerful reducing material, and Naborro found it to consist of globulins and nucleo-albumins, pepsin and peptones being absent. Schafer and Oliver have also proved that extract of pituitary body raises the blood pressure, whilst that of thyroid lowers. This opposite action disproves the assumption that the two glands are vicarious in function. Fraser proved that the antitoxic serum of animals rendered immune to snake bites possesses definite antidotal properties. The snake poison antitoxin of one kind of venom renders an animal resistant to others. Cancer antitoxin is prepared by Richet

from a tumor rubbed up with water and injected into dogs or asses. After a few days the blood was drawn and serum separated. The successful treatment of two cases of cancer was reported in Paris. As syphilis is unknown in animals, Bayet obtained an antisyphilitic serum from the blood of cows and sheep, and treated the disease with injections of this pure serum. After fifteen days the syphilitic eruption had disappeared.

Contradictory reports are still appearing in the veterinary journals as to the diagnostic value of malline and tuberculin in detecting latent glanders and tuberculosis in cattle. Pickering has shown that the introduction of the chlorine atom into the caffeine molecule considerably modifies the action, chlorocaffeine producing far less tonic contraction of the heart than caffeine. Digitoxin has been recommended by Masius and Corin as the most prompt and reliable principle of digitalis. Its cardiac action is very marked in doses of $\frac{1}{2}$ milligram, whilst Wenzel suggested its administration in the form of an enema, in order to reduce the risk of gastric disturbance. According to Schmey, the combination of guaiacol and Peruvian balsam has given the best results in tuberculosis. Inhalations of the balsam are also recommended. Lederer proposed the use of saligenin instead of salicin, as by this means the patient is relieved of the work of splitting up salicin into saligenin and sugar in the internal economy. Saligenin is now easily prepared from carbolic acid and formaldehyde by Von Heyden's patent. The value of piparazine as a solvent of uric acid stones has been disputed. The physiological action of emetine and cephaline, the two alkaloids of ipecacuanha, isolated by Paul and Cownley, have been examined by Wild, who finds that cephaline is the more powerful emetic, acting in doses from 1-12 grain, whilst at least $\frac{1}{4}$ grain of emetine is requisite.

NEW REMEDIES.

To the production of iodoform substitutes there appears no end. Airol is the latest candidate, and is the name given by Ludy to an oxy-iodo-gallate of bismuth. It is voluminous, odorless, and stable, and as a dusting powder for ulcers, etc., has already gained some little reputation. Liebrecht and Rohmann have obtained a soluble silver albumin salt, which they call argonin, and recommend as superior to other silver salts, as it is non-irritating to the mucous membrane, an effective antiseptic, and specially active on species of gonococci. Parachlorophenol has been successfully used in the form of ointment in the treatment of erysipelas. Bismuthol is a phosphosalicylate of sodium and bismuth, and is claimed to combine antiseptic and antipyretic properties. An ointment of 10 per cent. strength and a solution of 4 per cent. have been used in the antiseptic treatment of wounds, skin diseases, etc. Mellinger has introduced the methyl ester of gallic acid, $C_6H_5O_2$, under

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The odor of this pleasing flower is quite noticeable throughout the Island during the months of our Autumn. This perfume has had a very ready sale this season.

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In two strengths—medium and strong. Put up: 40—5 cent boxes in cartoon.

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No. 1 Protector, double, chamois lined, small	\$ 7.50 doz.
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Nutritive Wine

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Cod Liver Oil

A good Tonic is the best cure for a Cold, as well as for General Debility, Impaired Digestion, Bronchial Troubles, etc., so that with a little attention a good demand should be easily worked up at this season of the year. Until samples are exhausted we will send one bottle (full size) free, with which to sample to your medical men, with every order for one-half dozen. Price, \$8.00.

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SACRAMENTAL PURPOSES

Red or White. Concentrated to one-third of original bulk, and used diluted.

BOX OF 1 DOZEN, \$5.25.

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PARIS GREEN

LINSEED OIL

TURPENTINE

WHITE LEAD (Genuine)

INSECT POWDER

Before accepting any offers we respectfully advise enquiry of us, stating quantities. In most of these lines advances are probable.

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the name of gallicin. It is readily soluble in hot water, alcohol, or ether. It is non-poisonous, and has yielded some good results in catarrhal affections of the eyes. It is used as an eye powder by means of a camel's hair pencil. Citrophene is a compound of citric acid with parphenetidin, and is claimed to be an effective antipyretic and anti-neuralgic. It is a white powder, soluble in about 40 parts of water, and incompatible with either acids or alkalis. It is given in doses of 0.5 gram, and large doses are stated to be harmless. New hematonic preparations are to be seen in corniferrin, which consists of iron in combination with phosphoric acid and ferrum caseinatum, which is obtained by precipitating a solution of calcium caseinate with a slight excess of a 1 per cent. solution of lactate of iron. Cadmium salicylate has been recommended for the treatment of suppurating ophthalmia, and strontium salicylate as an intestinal antiseptic, yielding better results than salol, etc. In doses of 10 to 15 grains, the strontium salt is stated to be very useful in chronic gouty and rheumatic conditions. Avolsyne and chlorosalol have been recently described in our columns.

PHARMACY.

The work of revising the British Pharmacopœia so as to render it of more value in the British colonies is now progressing. A large number of deletions have been published, and a very much smaller number of additions recommended by the English and colonial medical authorities. The committee of pharmacists in whose hands remains the task of devising new and improving old formulas have not suffered from want of advice or suggestions. It is definitely settled that the metric system will be adopted throughout the new edition, but many of the recommendations of medical faddists—such as the desirability of giving therapeutical information, indicating incompatibles, etc.—are receiving scant attention. It is just a question as to how far the Imperial Pharmacopœia will go in meeting the daily requirements of Canadian pharmacists and physicians, as their advice and assistance were neither asked nor offered. Should it fall short, as under these circumstances it may, some concerted action may be taken in order to produce a Canadian appendix or addendum that would make up the deficiency.

The third edition of the Norwegian Pharmacopœia has been published, and, although the names of preparations are in Latin, the body of the work is printed in Norwegian. Assay methods are introduced only for cinchona bark, opium, etc., and extracts, tinctures, etc., are not touched. The doses are given by weight in every instance. A supplement has been published to the last (1884) edition of the French Codex, in order to render official a large number of synthetic remedies, such as sulphonal, phenacetin, anti-febrin, etc.

The British Pharmaceutical Conference held a successful meeting at Bournemouth, and the American Pharmaceutical Association attracted large numbers to Denver.

A Pharmacy Fair, under somewhat too pretentious auspices, was attempted at Boston, Mass., but attracted insufficient support, and so had to prematurely close its doors. A drug trade exhibition in London was more successful, and it is stated that it will henceforth be an annual affair. Amongst the large number of papers bearing upon pharmacy that have been published during the year, the following are perhaps worthy of special notice: Ashby recommended sodium nitroprusside, in the presence of ammonia, as a test for methylated tinctures, 25 c.c. of the tincture are distilled, and the first 5 c.c. passing over are tested, and the production of a red color is due to methylated spirit. Bersegee has shown that tincture of lobelia prepared from the herb, previously freed from stems, is considerably stronger in alkaloid and extractive than when the whole herb is used. Barclay stated that the amount of extractive in tinctures varies according to the length of time they have been kept and the extent of the evaporation of spirit. Thus, strong tincture of ginger loses 26 per cent. in about six months. According to Sapin, tincture of iodine should be exposed to the light, as the hydriodic acid and ethyl iodide gradually formed are decomposed by light, with liberation of iodine again. The tincture kept in the dark for a year had lost nearly 20 per cent. of its iodine. Bird suggested an acetic extract of ipecacuanha, prepared by exhausting the drug first with acidulated spirit, and then with water. The two percolates are evaporated to dryness and then mixed. Fluid extract of cubebs, as found in American pharmacies, is stated by Hyers to vary considerably, and indicates that poor cubebs are used, or extraction is not perfect. Dillenbach suggested a menstruum of glycerine one part, water two parts, to obtain fluid extract of wild cherry (ext. pruni virg. fluid), using repercolation. M. Jurgens has given two methods for preparing fluid extract of grindelia. The first is free from resin, as the extract is obtained by hot water, and the second is obtained by percolation with three parts of strong spirit and one of water. Cripps has made a study of standardization of belladonna preparations, and recommends an alcoholic liquid extract to be standardized, and this to form the basis for plaster, liniment, tincture, ointment, etc. Boa considers that the present belladonna plaster might be improved by using the following proportions: resin, 5; card soap, 2; lead plaster, 11; alcoholic extract of belladonna, 2.

Carbolic acid should be kept in aluminium or tin vessels, according to Von Hankö, as less liable to coloration. Aromatic elixir of kola is best prepared with glycyrrhizin and saccharin, in simple elixir of the strength one in ten. Glycerine suppositories made from agar-agar are

said by Lomuller to be more elegant than when made with gelatine as the basis. A German method of making pills of creosotes, guaiacol, etc., is to mix with liquorice powder and mass with glycerine. From the same source emanates the suggestion of peppermint water and syrup to mask the flavor of ichthyol, when given internally. Harding prepares milk of magnesia by precipitating the hydrate by means of hot dilute solutions of caustic potash and magnesium sulphate. The precipitate is washed and suspended in a small quantity of water.

PHARMACOLOGY.

There has been no diminution in the published researches of last year relating to minor drugs.

Prescott has described some of the native drugs of the Philippine Islands. Dunstan has discovered the active principle—a crystallizable resin, of pellitory. Sanctis proved that conine exists in the stems and leaves of the elder (*Sambucus nigra*). The recommendation of *senecio vulgaris* by Murrell, as a remedy for diseases of the uterine system, has probably led Grandval and Lajoux to examine its constituents. Two alkaloids have been obtained, *senecine* and *senecionine*. *Cannabis indica* and *C. sativa* have been investigated by Vignolo, and the alkaloid from the latter found almost inactive, whilst the former yields a product that is highly toxic. The same author has obtained a sesquiterpene from the essential oil of Indian hemp. Palladino claims to have discovered a new alkaloid in coffee, which he has named *caffearine*. Dohme has shown that jaborandi leaves, as now found in commerce, are much inferior in pilocarpine to what they were in 1893, and to this is due the high price of the alkaloid. Ergot is still in an unsatisfactory state, and Keller can only obtain one alkaloid from it. Bohringer has described, however, a new active principle of ergot, under the name of *spasmodin*, or *sphacelotoxin*. The structure of *emeticifuga* and that of *veratrum viride* have been minutely described by Bastin. The histology of ipecacuanha has been the subject of Greenwich's investigation, whilst he has also reported upon the microscopical examination of commercial powdered ipecacuanha. Pfaff and Orr ascribe the active principle of *rhus toxicodendron* to a principle similar to cardol, and state that Marsch's toxicodendric acid is inactive.

The adulteration of kamala with morgam matter to the extent of 69 per cent. was reported by Barclay. Cubebs and its adulterations have been lengthily described by Wevre. Senega is also subject to sophistication with the roots of *trisetum perfoliatum*, which does not possess the characteristic keel. The leaves of *empleurum serrulatum* have appeared in bales of buchu leaves, and a chemical examination by Umney showed that they differ in composition. Balsams of tolu and Peru have been found adulterated, and beeswax has been the subject of an

amount of criticism in America and Europe, and some prosecutions in England. Aloin is considered by Serre to frequently contain resin, and its melting point should not be much over 116° C. Dodge and Olcott have published a delicate test for gargon oil in balsam of copaiba. According to Dohme, no aconitine was to be found in the States so pure as to have a melting point of 197° C.

CHEMISTRY.

As mentioned in the opening sentences, argon is the event of the year. Although its discovery will date from 1894, the publication of details rests with 1895. Berthelot stated that argon, when mixed with benzine and subjected to a silent discharge, undergoes condensation similar to the production of ozone from oxygen. Moissan found that lithium is not affected when heated in argon, and that fluorine will not combine with it. Olszewski has liquefied and solidified argon, and since then has liquefied hydrogen.

In a subsequent research for argon in the gases confined in rare minerals Ramsay discovered helium, hitherto an element only known to the solar photosphere. Bayley treated oxygen in two globes by means of the electric spark, and obtained gases differing in density that suggested the gas having been split up.

The application of electricity to the decomposition of salt for the production of chlorine and caustic soda has entered upon the practical stage. The invention of castner has been acquired by a company of which Sir Henry Roscoe is a director, and, having been duly floated, is now producing caustic by this process. There are several other Richmonds in the field, notably the Hargreaves' patent, where carbonate is first produced and soda ash afterwards obtained. Acetylene has been recommended to enrich ordinary coal gas, as it gives a flame of extraordinary luminosity and is easily obtainable from calcium carbide, now yielded in large quantities by the electrical furnace.

A good deal of the ground usually covered in this section has recently been traversed by Dohme, in his address on "The Progress of Chemistry" (*CANADIAN DRUGGIST*, November, page 252). Reference, however, should be made to the dispute between Freund and Dunstan on the subject of priority in discovering the chemical composition of aconitine. Two formulae are offered, and neither claimant appears able to prove the other wrong. Umney suggested a method of assaying pure aconitine by means of its hydrolysis and separation of the benzoic acid by ether. But it appears altogether premature as a means of standardizing aconite preparations until we know definitely the composition of the other alkaloids in aconite. Freund has determined the relationship of thebaine to morphine and codeine. Wolfenstein has recognized coniceine in conune, and states it to be seventeen times as poisonous as the latter alkaloid. Miller and Rhode have ad-

vanced a new formula for cinchonine suggestive of its pyridine nature. Oliveri has investigated a number of nicotine compounds and advised a new constitutional formula. Cross and Bevan have contributed a good deal to our knowledge of the chemistry of cellulose.

Wallach is still engaged on terpenes and ethereal oils, his attention at the moment being concentrated on the oils of sage and thuja. Croton oil owes its vesicating power, according to Dunstan and Boole, to a resin which they have not succeeded in crystallizing. Its molecular formula is $C_{26}H_{40}O$, and it is soluble only in alcohol, chloroform, and ether. Umney has supplied some valuable data respecting the physical and chemical constants of the pharmacopoeial essential oils. He has also drawn attention to the unsatisfactory nature of oleum pini sylvestris, as found in commerce. The physical constants of cod liver oil have been given by Parry and Estcourt, but no comparison was made between Norwegian and Newfoundland oils. The same authors have confirmed the acetylation method of detecting adulterations in santal wood oil.

The use of formalin (formaldehyde) as a preservative is extending, and various tests have been devised for its detection. Distillation and treatment of the distillate with nitrate of silver is one of the best. Denigès recommended a solution of resorcin in presence of strong sulphuric acid as a test of nitrites. Leeds determined the acetic acid in vinegar by titration with alkali, using turmeric paper as indicator.

BOTANY AND MICROSCOPY.

Chlorophyll is still the subject of Schunck's investigations, and his experiments with copper salts of phyllocyanin have been described. Several investigators are concerned in the unclear division in the pollen mother cells, as of great biological importance. Loew claims that there is an active albumin in many plants which is much less stable than ordinary albumin of protoplasm. Bokorny has shown that dilute solutions of alkalis or of caffeine have no prejudicial effect on some forms of minute life, whilst distilled water was fatal. Green has contributed a most useful paper on the botany and microscopy of the British Pharmacopoeia. He recommends that illustrations should be used where description is of little use, so as to enable pharmacists to recognize the drug. Microscopical characters should be added and micro-chemical tests made use of, such as the application of strong sulphuric acid to the tissues of true cubeb, producing a scarlet color. Blackman has described a method of accurately estimating the evolution and assimilation of carbon dioxide by plants. He found that the stomata alone were engaged, although osmosis may take place if they become blocked. Etiolated plants yield protochlorophyll, which is identical with protochlorophyll, according to Timiriaseff. Green stated that diastase in foliage is destroyed largely by electric light or exposure to the sun.

The subject of photography is daily growing more important, and many pharmacists take an active interest in it. The advances made in rapid dry plates and "printing out" papers almost suggest perfection having been obtained. New additions to the already long list of developers are constantly being made, and among the latest are glycin, para-amidophenol, amidol, metol, etc. Some progress has been made in color photography, but so far the best results are those obtained by the three color process. The colors are formed on films, in which silver salts are replaced by other substances, each ray isolating the color common to it. Solutions are made of aniline purple, Victoria blue, and turmeric in alcohol, separately, and then mixed. The paper is allowed to float on the mixture, dried, and exposed to sunlight under a colored positive glass.

Montreal College of Pharmacy.

CHRISTMAS SESSIONAL EXAMINATIONS.

The following is the result of the half session examinations of the Montreal College of Pharmacy, which closed on Monday, Dec. 23, the successful candidates being as follows:

Junior Chemistry—W. A. Smallwood, R. H. D. Benn, Geo. H. Voss, F. J. Lemaistre, L. E. B. Browne, F. W. Horner.

Senior Chemistry—None of the candidates in this class received the required number of points to pass.

Junior Materia—Henri St. Georges, Wilfred Barolet, H. Généreux, J. B. T. Biron, P. G. Mount, T. E. Gagner, A. J. Lapointe, L. E. P. Lemieux, E. Clement, Gaston St. Jacques, Romeo Casgrain, Louis Fortin.

Senior Materia Medica—W. A. Smallwood, D. R. O'Neill, W. F. Roach, James Frankum, R. J. Lunny, Louis Rogaleky.

Botany—A. Lebeau, J. A. Gillespie, J. H. Charbonneau, C. M. DuGay, W. F. Roach, E. R. DesRosiers, W. A. Ayerst.

The closing sessional examinations of the college will take place at the end of March next, when the marks then obtained will be added to the above, and the totals then received will give the correct standing of the respective students at the close of the session.

Salaktol for Diphtheria.

This remedy has been tried by Dr. Walle (*Deutsche Med. Zeitschrift*) in fifty-two cases without a single failure. It is made of hydrogen peroxide, sodic salicylate, and sodic lactate, applied with a pencil to the affected portions of the throat, or, when this is not practicable, given as an inhalation. Also used as a gargle, and tablespoonful doses given after each local application, the latter being made every three hours, or every two hours in urgent cases. It is said to act as a rapid disinfectant, loosening and dissolving the false membrane, antipyretics being rarely necessary.—*Mo. Mag. Phar.*

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Intending Students please notify at once. The succeeding class will be held at MONTREAL on February 3rd.

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52-54 Front St. West. - - TORONTO.

J. STEVENS & SON,
78 LONG LANE, - LONDON, E.C.,
ENGLAND

Red Cross English Dressings,
Druggists' Specialties,
Glass and Earthenware,
Hospital Supplies and Instruments.

1805 List and Discounts now ready.

CANADIAN AGENCY:
145 Wellington Street West,
TORONTO

We have a
New Line of

**Hot
Water
Bottles**

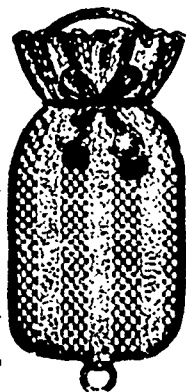
which we are offering to the
trade at

Very Low Figures

We can give you a two-quart
hot water bottle to retail at
75 cents each.

Prices and quantity discount on
application.

ALPHA RUBBER CO., LTD.
MONTREAL, CANADA.



Baylis Manufacturing Co.
16 to 30 Nazareth Street,
MONTREAL

IMPORTERS OF

Linseed Oil
Turpentine
Castor Oil
Paris Green
Glues

WRITE
FOR
QUOTATIONS

**FROG IN
YOUR THROAT**



For Sale by all Retail
Druggists, and Wholesale
by the LONDON DRUG
COMPANY.



TYPKE & KING

CHEMICAL MANUFACTURERS
7 Jeffrey's Square,
St. Mary Aae,
LONDON, ENG

Hypophosphites a Specialty

- Acids** Phosphoric and all other Pure Acids.
- Ammonia** Nitrate, Oxalate, Valerianate and all Ammonia Salts.
- Antimony** Crocus, Sulphide, Golden Sulphuret, and all parations.
- Essences** from Fruit, etc., for Confectionery.
- Hypophosphites** Baryta, Iron, Lime, Magnesia, Manganese, Potash, and Soda.

All Chemicals for Analytical, Photo-graphic, and Pyrotechnical purposes.

THE
Lyman Bros. Co.

(Limited)

TORONTO, ONT.

Wish their Customers
and Friends

**A
Prosperous
New Year**



SEASONABLE GOODS

Perforated Chamois Vests, Small	\$4.00 Doz.
" " " Medium	12.00 "
" " " Large	15.00 "

AT these popular prices many
more of these goods should
be sold than have been at
old prices. They are worth
pushing. Get a sample by
mail, or with next order.



BRAND VIAL CORKS

are long corks and best value
in the market.

TRY A SAMPLE.

Trade Notes.

J. McIntyre, druggist, Toronto, Ont., has made an assignment.

Samuel L. Green, druggist, Toronto, Ont., has made an assignment.

W. Geary, formerly of Vancouver, B.C., has moved to Innisfail, N.W.T.

W. Donaghy has purchased the drug business of W. S. Bell, New Edinburgh, Ont.

Grant Bros. have purchased the drug business of G. B. Sutherland, New Glasgow, N.S.

Thompson & Co. have purchased the drug business of R. W. McClung & Co., at Pilot Mound, Man.

Nasmyth & Davis, Brantford, Ont., have closed their business there. Mr. Davis has moved the stock to Tilbury.

J. H. Clements, formerly with Clarke & Co., druggists, Kamloops, B.C., is opening a drug store at Ashcroft, B.C.

In the Philadelphia College of Pharmacy there are fourteen women studying, seven each in the junior and senior classes.

The drug stock of Walter Ashton, Aurora, Ont., is advertised to be sold under mortgage, by auction, January 15th.

Mr. H. Thomson, Mitchell, Ont., has sold out to Mr. Bailey, formerly manager for S. A. Hodge. Mr. Thomson is taking charge of his father's oatmeal mill at Seaforth.

It is claimed that the Meyers Bros.' Drug Co., of St. Louis, Mo., is the largest drug house in the world, having a capital of \$1,750,000. They have lately absorbed the Dougherty-Crouch Drug Co., of the same city. Fifty-two travelling salesmen represent them on the road, and they cover nearly every state in the Union.

A drug company, to be known as the Canada Drug Co. (Ltd.), has been organized in St. John, N.B., with a capital of \$100,000, of which a large amount is paid up. There will be three travellers on the road. The place of business is on Prince William street, in the store formerly occupied by Burpee, Thorne & Co., wholesale hardware men.

Students' Dinner.

The annual banquet of the students of the Montreal College of Pharmacy will be held at the Balmoral Hotel, on February 5th. The officers of the Students' Society are: President, J. Genest; vice-president, L. E. P. Lamieux; secretary, P. G. Mount.

Ontario Graduates.

The movements of the graduates of the Ontario College of Pharmacy are always of interest, not only to their former employers, but also to their fellow-graduates

and friends. We have obtained news of the following:

E. A. Walters, class of '95, has taken unto himself a wife, and is manager of a drug business at Sonora, California.

R. P. Leslie, class of '94, who has been located for the past sixteen months at 936 Sixth Avenue, New York city, as head dispenser at the Cassebeer pharmacy, came to Toronto last August on a flying trip, returning with his bride, Miss Louise Mackay, the charming vocalist who so frequently delighted the Toronto public with her solos.

A. T. Gledhill, class of '95, is plying the mortar and pestle at Port Huron. He recently passed through this city, appearing as hale and hearty as when attending the O.C.P.

W. McDowell, jr., class of '95, who gave such useful Christmas boxes, is rolling pills at 94 Superior street, Victoria, B.C.

Major Kelly, class of '95, is faithfully managing a drug business in Meaford. He spent a few days in town recently, calling frequently at the O.C.P. to encourage the juniors during their preparation for the recent examinations.

The following recent graduates of the O.C.P. are occupying responsible positions as dispensers in the United States and in the Northwest:

A. W. Urquhart, class of '95, 255 Sixth Avenue, New York city.

W. J. Kirkland, class of '95, at 463 Hudson street, New York city. M. B. Annis, class of '94, at same address.

J. A. Smith, class of '93, has severed his connections with Fraser & Co., and is now engaged with Eimer & Amend, 18th street and Third Ave.

Norval Smith, class of '95, is with Chumar & Son, at 23rd street and Eighth Ave.

A. E. Hotson, class of '95, is now chemist for the International Phosphate Company, Union Square, New York city.

E. W. Scales, class of '94, is at 38 Eighth Ave., New York city.

C. T. Laird, class of '95, 154 W. 22nd street, New York city.

J. H. Seagers, class of '94, is in Newark, N.J.

G. F. Campbell, class of '95, is with Stoddart Bros., Seneca street, Buffalo, N.Y.

J. C. Morrison, medallist, class of '95, is with Stearns & Co., Detroit, Mich.

A. M. Dowsley, class of '94, is with F. E. Brownell, Orange, N.J.

E. B. Stevenson, class of '94, care of H. A. Dupee, Fairfield Ave., Bridgeport, Conn.

T. H. Powell, class of '94, care of F. H. Baxter, South Norwalk, Conn.

W. D. Simmons, class of '93, at 520 Court street, Beatrice, Nebraska.

H. W. Mitchell, class of '94, is managing his father's store at Winnipeg, Man.

J. C. Grosch, class of '95, is in New York city.

Crane, class of '92, is in Brooklyn, N.Y.

J. L. Johnston, class of '94, is in Lethbridge, Alberta.

The following graduates of '95 are located in Montreal:

O. A. McNichol, with John Lewis, 2613 St. Catherine street.

J. A. Thompson, care of Kenneth Campbell & Co.

A. E. Maret, with J. A. Hart.

Otto Dowler, at Macmillan's pharmacy.

D. Ballingall, class '95, located at Paris, Ont., with P. E. Scott.

J. A. Jamieson, class '94, located at Rodney, Ont.

Richard Henderson, class of '95, care of G. A. Sherrin, Essex, Ont.

L. B. Ashton, medallist, class of '94, is superintendent of the manufacturing department of J. J. McLaughlin, aerated water factory.

Harry Eagleson, class of '95, is with N. G. Love, Yonge st., city.

Harry A. Rowland, class of '95, is dispenser at Dr. Gullen's pharmacy, Parliament street, city.

John Lucas, class of '95, recently purchased the pharmacy owned by Mr. Turquand, class of '94, and the latter has sought the sunny clime of southern France in quest of better health.

Newton H. Brown, class of '95, who is filling a responsible position in the manufacturing department of Parke, Davis & Co., at Detroit, Mich., spent the Christmas holidays in Toronto. He is very much pleased with his present occupation, and is receiving an excellent experience in pharmaceutical manufacturing on a large scale, for which his training at the O.C.P. well fits him.

V. Mundy, class of '93, has severed his connection with the prescription pharmacy of Dugan & Merritt, and now represents the Arlington Chemical Company on the New York and Chicago route.

Harry Eagleson, class of '95, the recipient of the O. C. P. gold medal for general proficiency, and of the faculty gold medal in pharmacy, recently received the "John Roberts Scholarship Fund" of \$100 in cash. Although called a "Scholarship Fund," we can hardly understand in what respect it becomes a scholarship: certainly a misnomer.

Richard Henderson, class of '95, the recipient of the faculty gold medal in chemistry, received the John Roberts gold medal.

FLUID EXTRACT OF COCA.—Investigations instituted by L. F. Kehler (*Am. Jour. Pharm.*) show that a 65 per-cent. alcoholic menstruum extracts the alkaloids better than diluted alcohol, while a moderately fine powder is better adapted for exhaustion than a coarser one.

ADULTERATED CASSIA OIL.—Cassia oils adulterated with resin and petroleum have made their appearance on the market. The aldehyde content of all the Chinese brands is very low, and is conclusive evidence of sophistication, and a new "blend" is suspected.

Pharmacy in England.

Strychnine for Phenacetine—Responsibilities of Pharmacists—Accessories to Enema Syringes—Vanoline and Wool Fat—The Liniments of the Pharmacopœia.

(From Our Own Correspondent.)

Some six months ago I reported in these columns the unfortunate fatal accident that occurred at Birmingham through the dispensing of strychnine for phenacetine. The sequel has now taken place. The widow of the unfortunate man who received the fatal dose sued both the chemist and the wholesale druggist, and has received damages to the extent of \$14,000 from the wholesaler, whilst the chemist was practically absolved from blame. No one reading the account of the trial could help feeling that Messrs. Wyley, Limited, the wholesale druggists concerned, were very ill-advised in allowing the case to come to court. Whatever may have been the true facts of the case, the sympathy of juries is always expressed in a solid manner, and generally at the expense of the wealthiest of the defendants. This is daily seen in cases coming under the employer's liability and where insurance societies are concerned. If there had been any tangible proof that the error rested with the chemist alone, Messrs. Wyley would, no doubt, have been right in resisting the liability as reflecting otherwise upon themselves; but after the acquittal and exoneration of the chemist by a coroner's jury, it was rather late in the day to take up such a line of defence. The principal misfortune of this trial is the revival in the minds of the public of such an unfortunate event, and the opportunity it gives to the daily newspapers to pass damaging comments upon pharmacists as a body. One journal has surpassed itself by gravely suggesting that the pharmacist should not be allowed to absolve himself by proving that he sold an article exactly as he received it from his wholesaler, but that he ought to be bound to know what he is selling. From the arm-chair theory this point of view is admirable, but practically it is absurd. A druggist would have to spend the greater part of his days in his laboratory—if he had one—testing his drugs, etc., in order to fulfil this requirement. Even then his task would not be done. If this theory has to be carried out to its legitimate conclusion, it would not be enough for the pharmacist to guarantee that the article, for instance, was phenacetine, but he must be prepared to guarantee that it contained no other body besides phenacetine. Then only could his task be said to be completed. Perhaps this same editor would suggest that there still remained one other test that the pharmacist should be compelled to apply: that he should take the first dose of every medicine himself.

Messrs. Reynolds & Branson, of Leeds, have introduced another useful accessory to the necessary enema. Some time ago they devised a rack so that an enema

syringe could be suspended, and not left curled in a box so as to produce the inevitable kink, together with a drip tray attached, into which the syringe drained. Now they are introducing a registered basin enema clip that serves a two-fold purpose—of retaining the tail end of the syringe under the water, and also of providing a rest for the other end, when not in use. Their ingenious pill-box and bandage shoot has been widely recognized as a long felt want, and is simply invaluable in hospital wards.

It looks as if the revisers of the B. P. addendum were more perspicuous than at first appeared, when they declined to put lanoline into the pharmacopœia under its registered name, but adopted *adepts lanae* instead. By this means the door was left open to any other wool fat being used should it answer the B. P. tests, which were avowedly based upon lanoline. The event thus anticipated seemed a long way off when, some two years ago, Messrs. Richardson, of Leicester, Eng., defended an action for infringement of the lanoline patent and were defeated. From the judge's remarks it was evident that wool fat *per se* could not be protected, but that the incorporation of water with it was a new discovery that could be patented. Since then the Bremen company, rejoicing in the elegant title of Norddeutsche Wollkammerer & Kanim-Garnspinnerei, have introduced an *adepts lanae* which they claimed to be purer than lanoline. Whether this claim were true or not, it certainly had a lower melting-point than lanoline, and was much less sticky in consequence. But for many practical purposes it did not seem to catch on, probably because its appearance was more suggestive of petroleum jelly than wool fat. But it has now been much improved, and the hydrous preparation has the clotted cream appearance of lanoline, and is altogether an excellent article. The lanoline proprietors in Germany did not fail to notice the advent of this competitor, and lawsuits have been apparently meandering on for some time, but, according to the N.W.K., these have now been settled, and their brand is to be left undisturbed for the future. As their product is some 16 to 20 cents per pound cheaper than lanoline, it will, doubtless, fill the place of the latter article when *adepts lanae* is ordered, provided the pharmacopœial authorities revise the melting-point in the next edition.

It is fairly safe to say that wool fat is not employed generally so much as its value really merits. In cold cream, eczema, and healing ointments, it is a splendid addition, and has been recognized by the leading medical authorities. Perhaps its price has been the cause of its not being more often employed; but the introduction of the N.W.K. brand is probably only a step to the advent of much cheaper brands, and soon we shall have as much variety to select from as we now have of petroleum jellies.

The *Pharmaceutical Journal*, rather late in the day, has followed the lead of other journals, and instituted a series of critical articles upon the preparations and formulae of the British Pharmacopœia. Last month, as I reported, ointments were dealt with, and now the B.P. liniments have come in for review. The author, unlike the instance quoted in the case of other journals, remains unrevealed. Liniment of aconite is stated to possess a formula that does not appear to be capable of improvement. It is quite evident that the author has never made this liniment, or he would not make such a rash statement. The loss of spirit in its manufacture is very great, and a far better plan would be to adopt the method of making a strong fluid extract and dissolving the camphor in the product. This can best be accomplished by macerating the powder with a small quantity of spirit for two days, percolating with more spirit until about three-fourths of the quantity required is obtained. This is set aside and the remainder of the spirit forced through with water, the spirit recovered, and the extract dissolved in the first liquor, the camphor added, and the whole brought up to the proper quantity with more spirit, and filtered. The loss in this way is reduced to a minimum. Soap liniment is another absurdity that the author imagines cannot be improved upon. Perhaps he is hardly aware that there is not a hospital in the kingdom that follows the B. P. formula, and very few wholesale druggists, to judge from the products they send out. Soft soap, in spite of the variable amount of moisture, is always employed instead of hard soap, as the greater part of the latter is quite insoluble at ordinary temperatures. A useful hint, worth remembering, in the case of liniment of chloroform, is to dissolve the camphor in the chloroform and add to the oil. In this way the camphorated oil is made in the preparation, so that its separate manufacture is unnecessary. This suggestion first emanated, I believe, with Mr. Squire, but it is so frequently overlooked that it seems worth while to revive it. Turpentine liniment will always be troublesome until the revisers determine whether they desire a thin or thick emulsion. It is easy enough to make either by a slight manipulation of the proportion of water in the present formula. So far we have heard nothing appreciative of the suggestion that all liniments should approximate to the soap liniment of iodide of potassium. The public unquestionably prefer a liniment that can easily be rubbed in, and those of a consistency more resembling ointments are in little favor. So that probably we shall hear no more of this ridiculous suggestion. The author concludes his paper with the remark that there is no liniment in imitation of Elliman's embrocation in the pharmacopœia; at least that is the inference when he refers to an egg emulsion of camphor and turpentine with acetic acid vinegar.

3 GOOD SELLERS

VELROSE SHAVING CREAM
SHAVING STICK
BARBER'S BAR



PAY YOU WELL. PLEASE YOUR CUSTOMERS
ATTRACTIVE COUNTER ARTICLES

Order Sample 1/2 dozen from your wholesale house to come with next order.
We supply Samples for free distribution with first orders.

THOS. LEEMING & CO.
MONTREAL

FRONT AND BACK VIEW

AMERICAN SILVER TRUSS

LIGHT COOL
Easy to Wear
No pressure on Hips or Back.
No understraps. Never moves.

Retains Severe Hernia with Comfort.

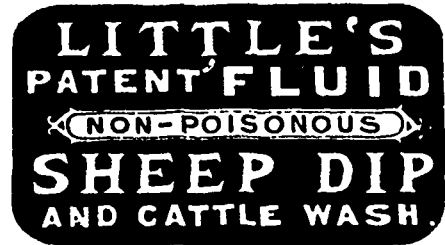
MANUFACTURED BY
The Smith Manuf'g Co., - Galt, Ont.

The Silver Truss

IS A NEW INVENTION,
NEW IN PRINCIPLE,
NEW IN DESIGN,
NEW IN APPLICATION,
and the MOST PERFECT KNOWN.

The great success of this Truss in holding with comfort all kinds of hernia, whether adults, youths, or infants, all over Canada, the United States, and Europe, is phenomenal. They have been adopted by leading hospitals, surgeons, and rupture specialists of the United States, and by Westminster and Guy's Hospitals, London, Eng. No greater recommendation could be accorded any appliance than its adoption by the physicians and surgeons comprising the staffs of these hospitals, which rank among the largest and best in the world.

MANUFACTURED BY
THE SMITH MANUF'G CO., GALT, ONT.

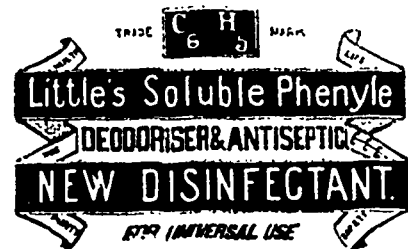


For the Destruction of Ticks, Lice, Mange, and all Insects upon Sheep, Horses, Cattle, Pigs, Dogs, etc.

Superior to Carbolic Acid for Ulcers, Wounds, Sores, etc
Removes Scurf, Roughness, and Irritation of the Skin, making the coat soft, glossy, and healthy.
Removes the unpleasant smell from Dogs and other animals.

"Little's Sheep Dip and Cattle Wash" is used at the Dominion Experimental Farms at Ottawa and Brandon, at the Ontario Industrial Farm, Guelph, and by all the principal Breeders in the Dominion; and is pronounced to be the cheapest and most effective remedy on the market. £17 Gold, Silver, and other Prize Medals have been awarded to "Little's Sheep and Cattle Wash" in all parts of the world.
Sold in large Tins at \$1.00. Is wanted by every Farmer and Breeder in the Dominion.

ROBERT WIGHTMAN, Druggist, OWEN SOUND, ONT.
Sole Agent for the Dominion.
To be had from all wholesale druggists in Toronto, Hamilton, and London.



CHEAP, HARMLESS, AND EFFECTIVE

A Highly Concentrated Fluid for Checking and Preventing Contagion from Infectious Diseases.

NON-POISONOUS AND NON-CORROSIVE.

In a test of Disinfectants, undertaken on behalf of the American Government, "Little's Soluble Phenyle" was proved to be the best Disinfectant, being successfully active at 2 per cent., whilst that which ranked second required 7 per cent., and many Disinfectants, at 50 per cent., proved worthless.

"Little's Soluble Phenyle" will destroy the infection of all Fevers and all Contagious and Infectious Diseases, and will neutralize any bad smell whatever, not by disguising it, but by destroying it.

Used in the London and Provincial Hospitals and approved of by the Highest Sanitary Authorities of the day.

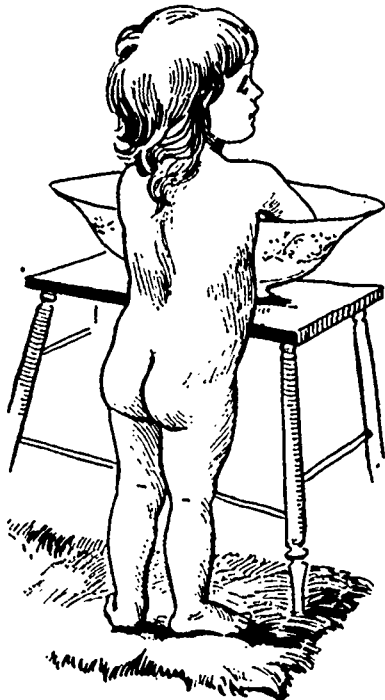
The Phenyle has been awarded Gold Medals and Diplomas in all parts of the world.

Sold by all Druggists in 25c. and 50c. Bottles, and \$1.00 Tins.

A 25c. bottle will make four gallons strongest Disinfectant. Is wanted by every Physician, Householder, and Public Institution in the Dominion.

ROBERT WIGHTMAN, Druggist, OWEN SOUND, ONT.
Sole Agent for the Dominion.

To be had from all Wholesale Druggists in Montreal, Toronto, Hamilton and London, Ont., and Winnipeg, Man.



TOILET BRUSHES

**TOOTH
HAIR
CLOTH
AND
NAIL**

BRUSHES

**NAIL CLEANERS AND EAR SPONGES
FROM BEST FRENCH MAKERS**

Tooth Brushes from \$3.50 to \$30 per gross.
Hair Brushes from \$1.25 to \$20 per dozen.

Over one hundred sizes of each in stock,
or on the way.

We are headquarters for these goods. (Can send samples to
price by mail, or small range by express.)

IT WILL PAY YOU

To write us for quotations

MEAKINS & CO.

MANUFACTURERS AND IMPORTERS
OF BRUSHES.

313 ST. PAUL STREET, MONTREAL.

Attractiveness

In the make-up of a package goes a long way
toward selling it.

"Surf" Sea Salt

Is first of all a pure salt, a genuine salt. The
package is handsome, easy to handle and ap-
propriately decorated. Sells at popular prices,
and pays the dealer good profits. A trial
order solicited through your dealer.

TORONTO SALT WORKS, Toronto, Importers.

ALL KINDS OF . . .

CRUDE DRUGS.

SPECIALTIES OF

**FREDK. GRAF, DRUG
MERCHANT.**

65 FENCHURCH ST., LONDON, E.C.

Established 1886. Prices and samples on application.

Fine Fruit Tablets



**ENGLISH FORMULA
TABLETS**

Have been our specialty
and have been a success.
Packed in elegant Flint
Glass Jars, large glass stop-
per, the finest package in
the Dominion. Also in
round jars, similar to Eng-
lish, but made two inches
shorter to fit the ordinary
shelf. A large variety.
List of flavors and prices
on application.

**G. J. HAMILTON
& SONS,
PICTOU, N.S.**



W.A. GILL & Co. COLUMBUS, OHIO, U.S.A.

PLAIN, LACQUERED AND DECORATED

BOXES

MAKE THE BEST SEAMLESS TIN

IN THE MARKET

For sale at Manufacturers' Prices by the leading whole-
sale druggists and druggists' sundrymen
throughout Canada.
Complete Illustrated Price List free
on Application

A poor wheel is like a poor horse—it costs more than it's worth to keep it. In the MONARCH the necessity of repair has been reduced to a minimum. Its strength, lightness and beauty make it a marvel of modern mechanical skill. The

MONARCH

is undoubtedly king of bicycles. A wheel that you can depend upon in any emergency. Made in 4 models. \$55 & \$100. Send for Monarch book. MONARCH CYCLE MFG. CO., Lake and Halsted Sts., Chicago.

Branches—New York, San Francisco, Portland, Salt Lake City, Denver, Memphis, Detroit, Toronto.

Canadian Branch:
6 and 8 Adelaide St. W., Toronto.
P. R. WRIGHT, Proprietor.

A DRUGGIST'S SPECIALTY.

**Gurtis & 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.**

Correspondence.

The Editor does not hold himself responsible for the opinions of correspondents. Correspondents must in all cases send name and address, not necessarily for publication.

Editor CANADIAN DRUGGIST:

DEAR SIR,—Much has been said, through the medium of the CANADIAN DRUGGIST, mostly by editorials, regarding price-cutting, but always with regard to the upholding of old standard prices, and, with your permission, I would like to state a few points from a contrary position, as well as to justify my actions, as reported in a previous editorial of the CANADIAN DRUGGIST, i.e.: "A druggist in one of our western cities, in starting a new business, has used the cut-rate as his drawing card," etc.

Although remote from you in one sense, but yet near in this and others, I have seen the report of the Retailers' Association—a laudable union for purposes of fellowship and thought, but useless in the interest which it is promulgating. It is utterly impossible, as well as impracticable, to imagine that the old-time methods of the drug profession will answer the requirements of to-day. It was once when trades-people and professions could command a higher price for goods sold and services done; but the centralization of trades and increased competition of these times are bound to affect the drug trade, as well as more mundane occupations, and the one who is quickest to adapt himself to this environment is the one who will survive. One will do the business of four or five, as it will require more goods to be sold at a less profit for maintenance; and the surviving ones will have to compete in patent medicines as a medium of advertisement, to be on a par with other centralized or department stores. The evil will not be great, for as many drugs will be sold, and when a man begins to lose he will run off his stock and go at something more profitable, thus remedying two evils—the overcrowding of the profession and prejudices of the public against high prices. The old-time method of charging seventy-five cents for a prescription, fifty cents for time, experience, and water, and twenty-five cents for a good average profit on drug and bottle, will have to be substituted for the honest and better method of charging twenty-five cents for the same. The druggist not entering the arena of protection is the one who will have the start in the survival of the fittest, both by run and advertisement.

It is not protection we want against department stores, but free competition. In the first place, no legislature would prohibit their trading in drugs, and as long as there are druggists whose avarice and cupidity are greater than their professional honor and foresight, so long will we have to compete with such, which virtually means annihilation to the drug trade and a meagre existence; as a profession, likened to doctors' assistants.

Therefore it may be well to exercise a little foresight in establishing a protection, and within this a fabric greater than at present, but which eventually must fall and crush many more than at present.

The drug trade is sure to follow in the evolutionizing of our trade systems, and it only remains for those with clearer perceptions to forestall it, with material profit to themselves.

Yours truly,

J. N. WOODWARD.

622 to 626 Westminister Ave.,
Vancouver, B.C.

Editor CANADIAN DRUGGIST:

SIR,—An article appeared in your December number in reference to our attempt to stop McKendry & Co. cutting the price of Dr. Chase's remedies. That article is calculated to do us much harm. The reference you lend is that our attempt was not a genuine one, and that the articles which appeared in the various papers were inserted by us as advertisements.

In both your suppositions you err. Our attempt was genuine. You will readily understand that where prices are cut below wholesale figures it must necessarily injure the wholesale business. As for causing the insertion of the items in the press, the annexed documents speak for themselves.

We first observed the article you refer to in the *Toronto News*, and were so pleased at its tone that we asked the *Globe* and *Mail-Empire*, papers in which we advertise very largely, to notice the matter also. That they have charged for these references we do not know. But if they have, they will certainly be paid.

These are the facts of the case and the only foundation for your article. We regret exceedingly that you did not take the trouble to ascertain the real state of affairs before publishing the article in question, and trust you will give this correction as prominent a place in the CANADIAN DRUGGIST as you gave the article against us.

The following documents speak for themselves.

Yours truly,

EDMANSON, BATES & Co.

Toronto, January 4, 1886.

[Copy]

WM. DOUGLAS, Esq., Manager *News*.

SIR,—An article appeared in the *News* early in December re our attempt to prevent J. N. McKendry & Co. selling Dr. Chase's remedies below wholesale prices.

In a comment on that article the CANADIAN DRUGGIST infers that we caused the insertion of it as an advertisement. As far as we know, the first reference to the matter appeared in the *News*.

Will you kindly say whether or not it was an advertisement, and what connection we had with its insertion.

Yours truly,

EDMANSON, BATES & Co.

Toronto, Dec. 28th, 1895.

Messrs. Edmanson, Bates & Co., 45 Lombard Street,
Toronto:

DEAR SIRS,—In reply to yours of Dec. 28th, I have made full inquiries. The item about your firm and J. N. McKendry & Co. was an ordinary piece of news. It was not paid for by anyone.

The inference the CANADIAN DRUGGIST places on it is wholly without foundation. I regret very much that you should have been unintentionally made the subject of unjust suspicion.

If this letter is not sufficiently strong to satisfy the CANADIAN DRUGGIST, I have no objection to giving an affidavit setting forth the above facts, if necessary.

The News Printing Co.

WM. DOUGLAS, Manager.

Toronto, Dec. 29th, 1895.

[Copy.]

J. J. Crabbe, Esq., Manager

DEAR SIR,—Your paper early in December had a comment on our attempt to prevent McKendry & Co. cutting the price of Dr. Chase's medicines. The CANADIAN DRUGGIST assumed that the article in question was published as an advertisement by us. As we do not desire to rest under this imputation, would you oblige us with the facts in a way that we can publicly use?

Yours, etc.,

EDMANSON, BATES & Co.

December 30th, 1895.

Messrs. Edmanson, Bates & Co., 45 Lombard Street,
Toronto.

GENTLEMEN,—The article you refer to was not published as an advertisement—was not paid for by you or any other person. It was never charged to your account, or McKendry & Co., nor will it be.

Respectfully yours,

The Evening Star Printing and Publishing Co. (Ltd.)

H. R. H.

Toronto, January 4th, 1896.

The above letters speak for themselves, and any comment on them is unnecessary. Our readers will see that they fully justify our article in the December issue.

"Fellitin" is the name applied by K. Fr. Tollner (*Pharm. Ztg.*) to a "natural" medicinal soap, prepared from bile, and recommended against chilblains. Fresh bile has long been used, in certain portions of Europe, as a domestic remedy against chilblains; but the very unstable qualities of the article, and the difficulty with which it is obtained sufficiently pure, have prevented its more general employment. Fellitin appears to be blue especially prepared as a remedy against this annoying complaint. It is said to be nearly odorless, and very stable. *Merk's Report.*

A new bottle is made which indicates the hour at which the medicine should be taken

Lady Pharmacists in Russia.

After Hungary, Russia. The present Tsarina is a strong partisan of higher education for women, and it is said that in consequence of her expressed wish the question of the admission of woman students to the examinations of pharmacy at the University of Jurjev (Dorpat) has been brought before the council of that organization. This is not the first time that the question has been discussed by that body, for some years ago a proposal in favor of throwing the profession of pharmacy open to women was rejected by the council, mainly at the instance of the professor of pharmacy, Dragendorff, who declared that his faculty was over-filled already. The present professor of pharmacy, Kondakov, is strongly against the admission of women, but several members of the council spoke in the opposite sense. It is now stated that Professor Kondakov is about to vacate his post, whether in consequence of the woman question, or because he had had rather the worst of it in a bitter scientific war which he has waged with Professor Tichomirov, of Moscow, is not known.

Commercial Travellers in Russia.

The London Chamber of Commerce has called the attention of this department to the following telegram which appeared in the English press: "In future, foreign commercial travellers will only be permitted to engage in trade in Russia when provided with an authorization by their respective firms, in order that the latter may come under the provisions of the Russian civil law. Commercial travellers are also to pay a special tax." Her Majesty's Minister at St. Petersburg, having been requested to make inquiries on the subject, now reports that new regulations on commercial travellers are contemplated in Russia, and that they will probably be such as were described in the press telegram above mentioned; but they will not come into operation before May or June next. Certificates issued to commercial travellers by chambers of commerce in the United Kingdom will continue to be accepted, and endeavours will be made by the Russian authorities to assimilate the form of certificate to that now used by the London Chamber of Commerce.—*Board of Trade Journal.*

Brains in the Finger Ends.

The blind, as we all know, have the sense of touch most singularly sensitive. A writer in a medical contemporary now cites the case of a post-mortem examination of a blind man which revealed the fact that in the nerves at the ends of the fingers well-defined cells of gray matter had formed, identical in substance and in cell formation with the grey matter of the brain.—*Science Siftings*

Medico-Pharmaceutical Code of Ethics.

The value of a specific code of ethics, founded upon broad principles, is attested by the experience of all nations and professions. "To do right," it may be said, comprehends everything in ethical conduct, but in what does "doing right" specifically consist, as applied to the relations of the individual to his profession, or of one allied profession to another? The New Jersey Pharmaceutical Association has endeavored to answer this question by the formulation of certain propositions which are to be submitted to the state medical society as a basis for agreement. These rules are, for the most part, terse, moderate in tone, and just. Both because of their intrinsic interest, and that they may serve as suggestions for similar action in other states, we present them in full:

PROPOSITIONS.

- (1) Ethical principles or standards of right conduct exist irrespective of their formulation or codification.
- (2) Ethical rules are calculated to elevate standards of moral conduct and to foster a spirit of harmony between professional men.
- (3) A code of ethics is designated, not only for the restraint of those who are actuated by unworthy motives, but for the guidance of those, also, who seek to be governed in their actions by high and true principles.

THE DUTIES OF THE PHYSICIAN TO THE PHARMACIST.

- (1) The physician has no moral right to discriminate in favor of one pharmacist to the detriment of another, except for dishonesty, incompetency, or unscientific methods of work.
- (2) The physician is never justified in receiving from a pharmacist gratuities in return for patronage, in depositing secret formulas with an individual pharmacist, or in jeopardizing, by word or deed, his professional reputation.
- (3) The physician may sometimes find it an advantage to the patient to dispense the medicine, yet, in the main, it must be regarded as a subterfuge and a hindrance to all interests involved. The physician should, if practicable, avail himself of the superior technical skill of a trained pharmacist in the preparation and dispensing of medicines.

THE DUTIES OF THE PHARMACIST TO THE PHYSICIAN.

- (4) The pharmacist who recommends drugs or medicines, for specific remedial purposes, either directly or through the avenues of advertisement, thereby exceeds the limits of his profession, and commits an act unworthy of his calling.
- (5) The pharmacist who consents to diagnose disease or prescribe for patients, except where emergencies arise, without a proper medical training, assumes responsibilities for which he is not quali-

fied, and justly incurs the disapproval of physicians.

(6) The pharmacist transgresses his true province when, for commercial purposes, he issues to physicians printed matter setting forth the therapeutic indications for the use of drugs or medicinal preparations. The constituents of a drug or compound, together with its chemical and physical properties, should be a sufficient guarantee of its utility.

DUTIES OF THE PHYSICIAN AND THE PHARMACIST TO THE PUBLIC.

(7) The combined efforts of the physician and the pharmacist are required to protect the public from the nostrum maker, the pseudo-scientific pharmacist, the sectarian physician, and the drug vendor; and the two should be in continual alliance to demand the extermination of these commercial and mercenary institutions.

(8) The physician and the pharmacist should, as far as possible, limit the multiplication of manufactured proprietary compounds. It must be regarded as reprehensible to encourage the use of these remedies to the exclusion of those which are official in the pharmacopœias. It is also their plain duty to discourage the use and sale of all medicines which lead to baneful drug habits.

(9) The best interests of the patient are undoubtedly conserved by the custom of physicians to practice rational therapeutics, to the exclusion of those methods which tend to the use of many remedies, or those of unknown composition, and the supreme effort of the dispensing pharmacist should be to complete the circle of therapeutics by supplying the demands of experimental and clinical teaching with eligible and trustworthy preparations.

The above rules cover pretty nearly all questions affecting the welfare of the pharmacist and druggist.—*Western Druggist.*

Peppermint Oil as an Antiseptic.

A native doctor, in the *Indian Medical Reporter*, recommends peppermint oil as an antiseptic. He says its utility is beyond question. He has tried it in every kind of open ulcer, and it has proved most efficacious. He has a liking for oil of cinnamon for the same purpose. Either that or peppermint oil has many advantages, he avers, which should ensure them a trial, and help to dispose of the presence of carbolic acid and iodoform, both of them somewhat evil-smelling articles. As far as odor is concerned, there can be no question as to the pleasant nature of the change.

The new gas, argon, appears from the latest researches to be present in atmospheric air to the extent of 0.935 on 100 volumes of air, or nearly 1 per cent. Its properties are exceedingly similar to those of nitrogen.

About Cough Drops!

Should Druggists handle those lines every Confectioner and Grocer sells?

Should Druggists drive the trade to the Confectioners by limiting their line to the nauseous and old brands that the public are tired of?

Why not carry and push the sale of

Honey and Horehound Cough Drops

when they sell well, and are sold only to the Drug Trade?

Mr. J. S. Armitage, Paris, Ont. writes:
 "Send another pail of those Honey and Horehound Cough Drops at once. I sold the first pail in only ten days."

It will pay you to use our five and ten cent sizes of folding cartons to encourage the sale of Cough Drops; and advertise your Cough Syrup on the back of them.

LAWSON & JONES
 LONDON, CANADA.

Have You

Somerville's Pepsin Gum?

It is the Gum the others are selling.

It is admitted to be the best Pepsin Gum made in Canada.

Our Carving Set Premium Packages are having a great sale.

C. R. SOMERVILLE
 LONDON, ONT.

Harris H. Fudger

TORONTO.



SPRING, 1896



Our many friends and customers, to whom we wish a prosperous New Year, will be pleased to learn the following well-known Salesmen will represent this house for 1896:

- MR. E. B. ANDREWS
- MR. W. E. BLAKE
- MR. R. W. EVANS
- MR. JAS. ANDERSON
- MR. W. J. ANDERSON
- MR. J. H. WOOD
- MR. J. H. GALLAGHER

No pains have been spared to have them fully equipped, and no merchant can afford to place his orders without first seeing their line.



HARRIS H. FUDGER

Wholesale

FANCY GOODS AND WOODENWARE, FIELD SPORTS, WHEELED GOODS, BABY CARRIAGES AND BICYCLES, DRUGGISTS' AND STATIONERS' SUNDRIES,

50 Yonge Street, - Toronto.



“Blue Seal”
**BIRCH
 BEER**

(For Soda Fountains) is
THE COMING DRINK

for it gives unbounded satisfaction to both the dealer and his customers. It is prepared from perfectly healthful materials and has, even to the last drop, that always-to-be-remembered flavor of the real herbs, barks, and roots, fresh from the woods. It is guaranteed to be a non-alcoholic, temperance drink, which can be freely used by both old and young with invigorating results. Its regular use promotes digestion and alleviates dyspepsia, and it is therefore a winter as well as a summer drink.

Send To-day for Free Sample *and see what a delightful draught of super-excellent Birch Beer you can prepare. Complete directions always given.*

Blue Seal Genuine Birch Beer Extract.
 \$1.00 for pound, \$3.75 for five pounds,
 and \$5.00 for gallon bottles.

HANDSOME SHOW CARDS WITH EVERY ORDER.

We trade on honor, and guarantee everything to be absolutely right, or returnable at our cost.

McKEY & CO.,
 36 Hamilton Street - - - BOSTON.
(Ask your wholesaler for “Blue Seal” Goods.)

Analoea in Pepsin Testing.

By J. B. NAGELVOORT, Professor of Applied Pharmaceutical Chemistry in Northwestern University School of Pharmacy

Every man has a right to be heard if he has something to say, and this is especially true if he has to defend himself.

Mr. Snow's principle laid down in the *Era*, in his recent article furnishing results of tests of the prominent pepsin of the market, is praiseworthy. All druggists ought to follow his example and examine what they dispense. It would do much good if they did.

What I want to be heard about is in regard to the expression: *Loco citada*, pepsin—Parke, Davis & Co., claimed, 1:3000; found, 1:1875.

I cannot understand how a man of the ability of Mr. Snow, a gentleman as well posted in our literature as he has frequently proved himself to be, should revive the unsavory pepsin war.

It is my duty, however, to ask permission to take up the glove thrown down by Mr. Snow, since I am personally involved in the controversy.

In the first place, from an experience as their chemical adviser, covering a good many years, and in this case covering the whole history of pepsin manufacturing on the modern basis, I know too well that no pepsin manufactured by Parke, Davis & Co., is allowed to leave the house, as the business term is, which has not been fully verified as to its strength as represented; furthermore, that if the pepsin was found to be 1:1875, the analyst in charge would reject it. Every dealer with said manufacturing concern must testify to the fact that my late employers did not hesitate to express their disapproval of, and to reject, material, supplies, etc., not, in every particular, satisfactory to their chemical adviser. And never was any distinction made between their own products and those of others; it came to the expression of an opinion.

It is irrelevant what an anonymous author states in a recent pharmaceutical journal. American druggists are not governed by directions of the B. P. It would be just as lame an excuse for failure to say that the whole matter of testing the converting power of pepsin is a delusion.

There is but one question at issue. According to the established American standard this question is, "How much coagulated egg albumen is dissolved by a certain quantity of pepsin?"

A stranger to the seller, I bought four samples of the pepsin in question in the open market in Chicago, and received the original packages labeled, in part: "Pepsin, 1:3000. Parke, Davis & Co., manufacturers." I selected twelve students of the Ph. C. class of '95 of the School of Pharmacy of Northwestern University, assigned to two of them one of the four original packages, directed and superintended their work, and had them assay the pepsin according to the directions of the U. S. P.; instructed them to report to me in writing, and to enter their reports in a

journal kept in the school for such purpose. One day one of them made the pepsin solution and prepared the diluted hydrochloric acid, while the other boiled the eggs, divided the coagulated albumen, and attended to further details. The required labor of shaking the coagulated albumen with the acid and the pepsin was divided between the two. The second day the labor was reversed, the gentleman who attended to the eggs the previous day making the pepsin solutions, and vice versa. I managed it that all the four samples were treated in like manner.

Their reports are on record in my school and read: "Claimed, 1:3000; found, 1:3500, between four and five hours."

Having thus secured as impartial a trial as I could possibly give to the case, I did the testing myself, and found that the four samples referred to possessed a dissolving power for coagulated egg albumen, assayed according to the U. S. P., of 1:3500.

Now, I proceeded differently. I took four quantities of 10 grams each of coagulated egg albumen obtained as before; transferred to proper test tubes; divided each equally with 90 cc. of water; added 5 cc. of 2-per-cent. hydrochloric acid to the mixtures; introduced into the acid fluids respectively 2.8 cc. and 3 cc. of a solution of 0.100 gm. of pepsin No. 1, 2, 3, and four in 100 cc. of water, and agitated the test automatically and evenly, during four to five hours, at a temperature constantly kept at 40° C. By this *modus operandi*, I found that the four samples of pepsin above referred to had a dissolving power of 1:3500; claimed, 1:3000.—*The Western Druggist*.

Practical Uses of Liquid Oxygen.

G. Buchner ("Pharm. Centralh.,") states that liquefied oxygen is now employed for various purposes, and points to the possible uses to which it may further be put with increased facilities for its production. By introducing pure oxygen into the flames produced by hydrogen, illuminating gas, carbon monoxide, acetylene, etc., a degree of heat is attained which cannot be reached in any other way. We might, thus, employ pure oxygen instead of air in the various processes in which heat is necessary. Above all, however, the chemical industry, metalurgy, and metal techniques will reap the greatest benefit from the use of liquid oxygen. Steel, forged iron, gold, platinum, and other difficultly fusible metals can, in a few minutes, be melted in a current of oxygen. This will be of particular value to the iron industry, where oxygen bellows, instead of air bellows, as at present, might be used in the production of the heat necessary to melt this metal. In the cast steel industry it could also be employed to advantage. For the purpose of lighting ships, lighthouses, etc., it may be used in the production of Drummond's calcium light and of the zirconium light. In the glass industry, oxygen is now used

to advantage to melt and clear the glass flux; by means of the oxy hydrogen blow pipe it is used to solder lead and glass plates in making large glass reservoirs for accumulators. Oxygen is used in large quantities in the manufacture of anhydrous sulphuric acid. For this purpose a mixture of sulphur dioxide and oxygen is lead over red hot platinum asbestos. In the chemical laboratory oxygen has also long been used to facilitate combustion in various processes. Oxygen will probably some day be employed in oxidizing drying oils in the paint industry, for inhalations, and in the production of ozonized oxygen, which latter might some day play an important part in the bleaching industry. This gas, the author states, might, in the future, be conducted into our houses for the purpose of enriching our rooms with oxygen.—*Merck's Report*.

Simple Method of Preparing Hydrogen Phosphide.

As Fourcroy and Vauquelin have shown (says *Naturwissenschaftliche Rundschau*), phosphorous and free (molecular) hydrogen cannot be combined. Retgers, proceeding under the idea that the melting point of yellow phosphorus (44° C.) is too low for such a reaction to occur, repeated the experiments of the French chemists, using red phosphorus, whose melting point is considerably above that of the yellow, and obtained, on heating a glass tube to the former in a stream of hydrogen, a great quantity of hydrogen phosphide (phosphorous trihydride, PH_3). The gaseous result gave out the characteristic odor, and when mingled with phosphorous hydride, P_2H_4 , gave the conclusive reaction of spontaneous ignition. With both reactions a by-product of solid phosphorous hydride P_2H_2 was formed, in the shape of a yellow efflorescence in the tube. Outside of any chemical or economic uses that this action has, it will furnish a most valuable lecture demonstration of a simple method of showing at once the formation of the three hydrides, as well as an example of the direct union of two elementary substances. *National Druggist*.

Cumarin.

This excellent body, of which the usefulness as a perfume-material is as yet insufficiently appreciated, is now supplied at a somewhat reduced rate, owing to an improvement in the mode of manufacture. The use of cumarin in the manufacture of toilet soaps is said to be steadily growing. There is, in fact, no better preparation for softening down different odors and blending them into a harmonious whole.

CITRAI IMPROVED BY CITRONELLON.—Experiments have shown (*Schimmel's Report*) that 1 part of citronellon (a natural constituent of lemon oil) added to four parts of citrai greatly enhances the lemon flavor of the latter.

Canadian Druggist

WILLIAM J. DYAS, Editor and Publisher.

JANUARY 15TH, 1896.

Ontario College of Pharmacy.

One hundred and nineteen students have registered at the O.C.P. for attendance at the senior course, which commenced on the 7th. inst.

As the college is equipped and fitted for the accommodation of 120 students, there is scarcely room for any more. In fact, it has already outgrown its present accommodations, indicating that the increase in size of building made a few years ago is hardly adequate to the present needs of the institution.

American Pharmaceutical Association.

We ask our readers to bear in mind that the annual meeting of the American Pharmaceutical Association will be held this year in Montreal, commencing August 12th. The attendance at the meeting held in Denver in 1895 exceeded five hundred, and we have every reason to believe that an equally large number of members and their ladies will be in Montreal. We hope to see Canadian pharmacists well represented there, and all who possibly can should endeavor to make their arrangements so that they may be enabled to be present at this meeting.

You do not lose anything, but, on the contrary, gain a great deal by mingling with brother pharmacists, learning their methods of business, cultivating friendships amongst the craft, and getting your eyes opened to what is transpiring around you; and to attend a representative meeting of this kind, where subjects in which you are particularly interested are discussed, will be a lasting benefit. Date, Aug. 12th; place of meeting, Montreal. to be present, all pharmacists.

A Valuable Article.

With this number we commence a series of articles by Mr. Lionel Laurance, of the Optical Institute of Canada, on the "Science of Optics." These will be found especially interesting and profitable reading, particularly for those who are making a study of optics and the proper fitting of glasses.

The articles will be liberally illustrated, and will appear regularly each month.



Frank C. Simson.

At the annual meeting of the Maritime Commercial Travellers' Association, held recently in Halifax, N.S., Mr. F. C. Simson, of the firm of Simson, Bros., & Co., wholesale druggists of Halifax, was chosen president for the year.

Mr. Simson has been a very active member of the association, having acted as director and vice-president for several years. The above portrait is taken from one appearing in the Halifax *Herald* of Dec. 28th.

Ontario College of Pharmacy.

The following is the result of the senior examinations of the Ontario College of Pharmacy, being the fifth semi-annual examination:

College gold medal—W. H. Lee, Toronto. College silver medal—J. E. Gayfer, Ingersoll.

The following candidates have passed in all subjects: G. H. Bean, Toronto; E. W. Cameron, Brantford; T. S. Dawe, Toronto; Frank Dowling, Blessington; N. W. Emerson, Zimmerman; Wm. Evans, Elmwood; Frank Farr, Sarnia; J. E. Gayfer, Ingersoll; J. E. Gorrell, Gore Bay; W. H. Lee, Toronto; E. E. Miller, Owen Sound; G. E. Smeaton, Belleville.

Candidates who have passed now, taking part subjects on previous occasions: M. S. Ballard, Ottawa; A. W. Buschlen, Arthur; Albert Chambers, Millbrook; H. W. Chambers, Guelph; R. C. Houston, Toronto; Arthur D. Jackson, Clinton; J. C. Keogh, Guelph; W. H. Medley, Kingston; F. W. C. Ross, Toronto; G. A. Rowe, St. Catharines; C. E. Swaisland, London.

Passed in part subjects, viz.: Dispensing—R. H. McNally, Chesley; D. W. Sutherland, Guelph. Prescriptions—R. H. McNally, Chesley; D. W. Sutherland, Guelph. Chemistry—R. H. McNally, Chesley. Pharmacy, D. W. Sutherland, Guelph. Materia Medica—D. W. Sutherland, Guelph. Botany—H. R. Carter, Picton, E. M. Laird, Sarnia:

R. H. McNally, Chesley; H. G. Robertson, Hamilton.

Following are the results of the annual junior examinations in connection with the Ontario College of Pharmacy:

First-class honors in order of merit: John T. Mitchell, R. Arthur Gausby, Wm. Renwick, John McDougall, Fred P. Coates, Hugh A. Gourlay, W. J. Lalonde, J. G. Anderson, S. T. Hopper, B. F. Darby, James H. Bennett, Albert P. McKenzie, W. H. Robson, W. H. Parish, Robert A. Land, A. Bedford, A. H. Fowlie, M. H. Allen, W. H. Crossland, F. A. Jacobs, R. A. Westbrook, A. R. Anderson, T. H. Atkinson, Frank T. Carey, H. R. Hurlburt, Wm. Cochrane, E. F. McKechnie, R. McKay.

Second-class honors in order of merit: Otto G. Palm, E. L. Colling, Wm. C. Burns, Edward J. Mitchell, A. C. Denike; A. J. Johnson and Charles N. Hoy, equal; J. P. Wilson, Colin C. Laing, F. W. McClung, John R. Byers, A. C. Thorburn; L. J. Harvey and H. S. Pannell, equal; D. E. Munro, Geo. T. Stenson, Alex. C. Lohead, F. Dunham, W. J. Greenshields, E. A. Caughell, R. J. Patton, W. J. Quinsey, H. J. Barber, W. G. Lauchland, Robert M. Glen, E. F. Crosher, J. E. Elliott, Herb. F. Spencer, R. P. Weeks, Bruce Greer, J. A. Mathieson, Alf. W. Cowan, T. E. Schaaf, T. Ernest Reid, Gilbert McCorvie, Sinclair Smith, R. U. Belanger, Albert T. S. Reid, G. H. Edmison.

Pass list—Edward Allan, G. A. Begg, K. B. Cameron, Harold Carnahan, Clayton Copeland, J. W. Dougherty, A. S. Greenwood, Hugh S. Hopkin, George Horton, A. C. Hutton, Hattie A. Johnson, W. J. McCutcheon, J. A. McLachlin, Robert McLeod, A. F. McLachlin, A. D. MacLennan, J. A. Mitchell, T. E. Mullett, Daniel Nairn, J. Nicoll, H. E. Pass, J. M. Plaunt, J. S. Reid, John F. Ross, Robert Rawley, James Walker, G. E. Watson, E. C. Wilson, Herbert N. Winter.

Starred in part subjects only—Chemistry—Thomas O'Reilly, R. Scott Dickson, J. W. Lawrence. Pharmacy—J. M. Sissons, E. H. Allan, D. H. Jessop, W. Gibson. Pharmacy, materia medica, and chemistry—James B. Gordon. Pharmacy, chemistry, botany—M. Buckle.

Highest in subjects—Pharmacy (including practical)—R. Arthur Gausby, F. A. Jacobs, F. P. Coates. Latin, *posology*, etc.—W. J. Lalonde, J. T. Mitchell, H. S. Pannell. Botany—J. T. Mitchell, R. A. Land; John McDougall and Albert P. McKenzie (equal). Chemistry—John McDougall, Wm. Renwick, R. A. Westbrook. Practical chemistry (all equal)—Fred P. Coates, E. F. Darby, Bruce Greer, D. E. Munro, John T. Mitchell, George T. Stenson, R. A. Westbrook, J. G. Anderson, W. J. Lalonde, R. Arthur Gausby, Wm. Renwick, Hugh A. Gourlay, H. E. Hurlburt.

The semi-annual meeting of the council for granting certificates of competency, and for general business, will be held in the city of Toronto on Tuesday, Feb. 4th, 1896.

Splitting Headache

Cured by
One-Minute
Headache
Cure

For Sale by Wholesale Druggists, and

The Key Medicine Co.,
395 Yonge St., Toronto

10c.

Sovereign . . Lime Fruit Juice

Is the Strongest, Purest, and of Finest Flavor

We are the largest refiners of LIME JUICE
in America, and solicit enquiries.

For Sale in Barrels, Demijohns, and twenty-four ounce Bottles
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TORONTO, HAMILTON, KINGSTON, AND WINNIPEG

SIMSON BROS. & CO., Wholesale Druggists
HALIFAX, N.S.

Cluthe's Bankrupt Stock of Trusses Shoulder Braces ETC.

Druggists if you have any customers wearing or wanting this make of appliances, now is the time to secure them. We bought the stock, and, as we want to get rid of them quickly, we are offering them at less than half the old prices. We have also the whole stock of Instruments for Deformities, etc., which will likewise be sold cheap.

WRITE FOR PRICES.

DORENWEND ELECTRIC BELT & TRUSS COMPANY

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Manufacturers of Trusses, Electric Belts, Insoles, Abdominal Supporters, Suspensories, Instruments for Deformities, Etc., Etc.

Have you our **TEETHING NECKLETS** in Stock?

RETAIL AT 50 CENTS. WHOLESALE, \$3.00 PER DOZEN.

TRY A FEW!

1855  1896

"Ring out the old, Ring in the new"

Is the watchword of the time, and we have no objection to taking it up as we swing into our forty-first year in the business world—in fact, it always has been the motto of the house of Frederick Stearns & Company ever since its small beginning in 1855 up to the present time. In the era of forty-one years, through which our house has grown up to its present extensive proportions, wonderful progress has been made in all lines, but in none more than in pharmacy, and in none have more false ideas, erroneous theories, and crude methods been rung out, and new thought and improvement rung in.

We rang in the Non-Secret Idea several years ago, which proved to be such a good and original one (supplying the druggists with prescriptions of known composition and proven value) that our competitors have been trying to get a pull at the ropes ever since.

We have seen the idea die out that all medicine must necessarily be disagreeable and nauseous, principally through our successful efforts to place in the hands of the professions palatable and concentrated preparations of bitter drugs, prominent in materia medica and extensively used.

Old, crude, and imperfect methods of manufacturing have been rung out, and new devices, apparatus, and machinery, the result of the latest modern thought and study, have been ushered in. In many instances we have been the first to adopt these, and in some instances we have been the originators.

We have rung in and out for forty-one years, and wish to assure our friends that we intend to keep right on doing so, and are ready at all times to give them all the information they may want regarding the old and the new. And although we expect some of the benefit accruing from the energetic and scientific manner in which we ring the bells, we believe we always have been, and will continue to be, liberal, considerate, and just in our treatment of our friends, the druggists, whose patronage we respectfully solicit.

Frederick Stearns & Co.

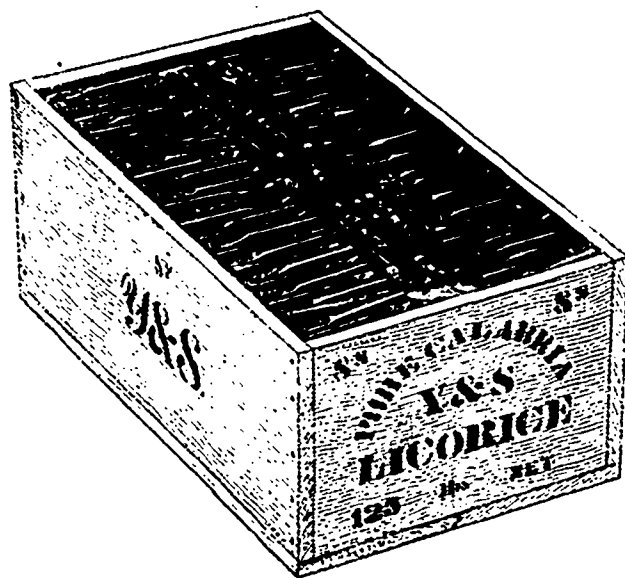
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CAN BE CURED OF

THE TOBACCO HABIT

BY OUR METHOD

We offer by mail a Remedy that will FREE EVERY SLAVE to Tobacco in ten days

Read the strongest endorsement ever given any remedy, and if you are not fully satisfied write for leaflet containing over 6,000 testimonials.

UNITED STATES HEALTH REPORTS (Official Endorsement, June 19, 1895, page 10.)

"In the interest of the masses for whom these Reports are compiled, the United States Health Reports have examined and investigated many preparations having for their object the cure of the tobacco habit, but among them all we have no hesitancy in giving the editorial and official endorsement of these Reports to the remedy known as **Uncle Sam's Tobacco Cure**, manufactured by the Keystone Remedy Co., at 217 LaSalle Street, Chicago. We have demonstrated by personal tests that this antidote positively destroys the taste and desire for tobacco in ten days, leaving the system in a perfectly healthy condition, and the person using the same forever free from the habit.

"In the light of our examinations and tests of **Uncle Sam's Tobacco Cure**, we are but performing a duty we owe the public when we endorse the same, and stamp it as the crowning achievement of the nineteenth century in the way of destroying a habit as disgusting as it is common (for only \$1.00), hence we earnestly advise you to write them for particulars."

For Sale by all Wholesale Druggists

Ontario College of Pharmacy.

JUNIOR EXAMINATIONS, DECEMBER, 1895.

PRACTICAL CHEMISTRY.

Examiner—GRAHAM CHAMBERS, B.A., M.B.

1. Detect the acid in the substance marked "A."
2. Detect the acid in the substance marked "B."
3. Detect the acid in the substance marked "C."
4. Detect the metal in the substance marked "D."
5. Bend the necessary glass tubing, and set up Marsh's apparatus for testing for the presence of arsenic.
6. How would you distinguish :
 - (a) Calcium oxide from phosphorous pentoxide.
 - (b) Nitrous oxide from oxygen.
 - (c) Carbon monoxide from hydrogen.
 - (d) A nitrite from a nitrate.
7. Write equations representing the action of :
 - (a) Water on nitrogen pentoxide.
 - (b) Hot concentrated sulphuric acid on hydriodic acid.
 - (c) Dilute sulphuric acid on ferrous sulphide.
 - (d) Chlorine on hot solution of caustic potash.
8. What products are formed by the action of heat upon the following (give equations):
 - (a) Ammonium nitrate.
 - (b) Hydrogen peroxide.
 - (c) Orthophosphoric acid.
 - (d) Strong sulphuric acid with oxalic acid.

CHEMISTRY AND PHYSICS.

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

Time allowed : 2 hours.

1. State the law of multiple proportion, and illustrate by means of the oxides of nitrogen.
2. Give the history, occurrence, preparation, properties of, and tests for chlorine.
3. What volume of chlorine can be obtained from 1,000 grammes of sodium chloride (a) at normal temperature, and pressure (b) at 20°C., and 785 mm. pressure?
4. What impurities may be looked for in well water, and how would they be detected?
5. Give preparation, properties, and uses of hydrogen nitrate. What are the usual impurities? How would they be detected?
6. How are yellow and amorphous phosphorus prepared? How do they differ from each other? How many atoms in a molecule of phosphorus, and why?
7. How much sulphur would it require to use up by burning the oxygen in a vessel of air 1 metre in diameter and 2 metres high?

8. What is the action of chlorine on :
 - (a) A cold solution of potassium hydrate;
 - (b) A warm solution of potassium hydrate?
9. Explain the principles involved in a Sprengel air pump.

LATIN, POSOLOGY, ETC.

Examiner—J. T. FOTHERINGHAM, B.A., M.B., M.D., C.M.

Time allowed : 2 hours.

1. Decline the following. *Pilula, in fustum, haustus, hydras.*
2. Rewrite this prescription (meant for an adult), reducing the quantities to suit a child of twelve years. Give the rule by which you work.

R. Tinct. Digitalis.
Tinct. Strophanthi aa \mathfrak{v} ii.
Tinct. Chloroformi... \mathfrak{v} iii.
Syr. Zingiberis..... \mathfrak{v} ii.
Aq. ad \mathfrak{v} iv. M.

Sig. \mathfrak{v} ii. ex. aq. \mathfrak{v} ta. q. h.
3. Write out in full Latin the directions in the above prescription and translate them.
4. Divide the above prescription into its main portions and subdivisions, according to the plan of a classical prescription, naming each part.
5. Describe the essential structures of a *villus* of the small intestine, and say what part each plays in absorption.
6. Give maximum dose of each of the following: *Vin. ferri, tr. cinch. co., tr. cannab. ind., tr. jaborandi, tr. gelsemii, syr. chloral, pulv. jalapæ co., pulv. cretæ arom. c. opio, pil. ferri iodidi, pil. colocynth co., inf. digitalis, extr. nuc. vom., e. tr. taraxaci, extr. opii, extr. filicis liq, extr. bellad. alcoholicum, acet. scillæ, aq. camphoræ, sp. chlorof. et. morph., sp. æth. sulph. co.*
7. Write short notes on ferments, idiosyncrasy, anesthetics, hæmatics, soporifics.
8. Classify foods, giving the main use of each class in the animal economy.

BOTANY.

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

Time allowed : 2 hours.

1. Distinguish between epiphytes parasites and saprophytes.
2. What are the functions of a leaf? Describe fully, giving a drawing of the transverse section of a leaf. What is the distinction between foliage and floral leaves?
3. Describe fully the ovule of a plant.
4. What is meant by fertilization and pollination? How is self-fertilization prevented in many plants?
5. Describe four forms of indefinite inflorescence, giving a drawing in each case.
6. Name the various parts of a vegetable cell. How are new cells formed?
7. Name the parts of a flower and give

their functions. Which would you term essential? Describe a perfect, a complete, and a regular flower. What is a phanerogam?

8. Explain the following: Leaf cycle, bark, primordial, uticle, stipule, raphides.
9. Practical.

PHARMACY.

Examiner—CHAS. F. HERBNER, Ph. C., Pharm. B.

Time allowed : 2 1/2 hours.

1. METRIC SYSTEM.—Explain fully the relation existing between (a) the gram and meter; (b) the meter and the litre. What are the metric equivalents for (c) one inch, (d) one gram, (e) one fluid ounce.
2. Add together 2 1/2 kilos, 345 milli grams, 24 dekagrams, 12 deci grams, 3 myriagrams, 4 1/2 centigrams, 8 hectograms, and convert the result into avoirdupois weight.
3. AMMONIUM CHLORIDUM.—(a) Source; (b) how prepared; (c) usual impurities of the commercial salt; (d) describe method of purification, explaining how each impurity is removed.
4. SPECIFIC GRAVITY.—What will be the weight of 500 c.c. of (a) *Chloroformum P.B.*; (b) *Spiritus Tenuior P.B.* (c) Given a verified pycnometer, capacity to mark on its neck 50 grams distilled water at 15°C.; a powder weighing 7.5 grams placed in it, and then distilled water (15°C.) added to fill up to established mark; powder and water together weigh 55 grams; what is the specific gravity of the powder?
5. State the meaning of the following terms, as applied to pharmaceutical preparations: (a) galenical; (b) official; (c) officinal; (d) magistral.
6. (a) Define comminution. (b) How are dusted powders made? (c) Mention and explain the processes resorted to in the preparation of *creta preparata*.
7. Required 185 grams of scammony containing 78 per cent. of resin to be made up from portions containing 90 per cent., 75 per cent., and 68 per cent. of resin; how much of each portion may be used?
8. (a) How would you verify a drachm graduate as to its marks for 30 minims and 60 minims? How test a single beam equal arm balance, (b) for parallelism of knife edges, (c) for equality of length of arms?
9. DIALYSIS. (a) Define, (b) describe the apparatus used; (c) what forces are exhibited during the operation, and (d) what are the respective directions of their action? (e) During the preparation of *Liquor Ferri Disyatus*, in what part of the apparatus will the finished product be found?

10. Mention the conditions required for the formation of large and perfect crystals from solution.

PHARMACAL LABORATORY.

Examiner: CHAS. F. HERRICK, Ph.C., PH.D.

Time allowed: 2½ 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 . . . 125.0 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. Filter, and make up to proper weight.

REPORT 1.

(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.
Equivalent in fl. ozs
Equation

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

REPORT 2, 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 rating.

SENIOR EXAMINATIONS, DECEMBER, 1895.

MATERIA MEDICA.

Examiner: J. TOLBERT PEPPER.

Time allowed: 2 hours.

1. Name ten drugs of the natural order leguminosæ, official in the British Pharmacopœia.
2. Oleum Morrhuæ—Give origin, class, order, family, habitat, a description of the method of production, and of the oil as you have seen it in drug stores. Give good reasons

why some samples of oleum Morrhuæ are so much better than others. Give constituents and medicinal properties.

3. Name plants in which the following constituents are found: pil carpine, caffeine, cocaine, emetine, vanillin, inulin, jervine, atropine, amygdalin, salicine.
4. Give in one or two words the therapeutic action of each of the following drugs: ergot, cantharides, belladonna, cubeba, buchu, nux vomica, asafoetida, cascara, senega, sarsaparilla.
5. Give natural order and habitat of the following: ricinus, galbanum, rheum, gelsemium, colocynthis.
6. Name part used and medicinal properties of the following: digitalis, camphora, opium, ulmus, scilla.
7. What seeds are official in the British Pharmacopœia?
8. What is benzoin? How is it procured? What varieties are found in commerce? Where is it obtained? Name its properties and uses. What acid is obtained from it? Is this acid, as usually found in drug stores, made from benzoin? If not, what is its source?
- 9 and 10. Recognition of specimens and oral examination.
- Values—10, 10, 10, 10, 10, 10, 10.

CHEMISTRY.

Examiner: PAUL L. SCOTT.

Time allowed: 2 hours.

1. Explain fully the application of the law of Avogadro in determining the number of atoms in a molecule of mercury.
2. The hardness of a sample of spring water is found to be due to the presence of carbonate and sulphate of calcium. State—giving equations—how the hardness of the water would be affected by
- (a) Boiling.
(b) The addition of lime water, not in excess.
(c) The addition of solution of ammonia.
(d) The addition of carbonate of potassium.
3. Show by means of equations the action of
- (a) Hydrochloric acid on the official calcium phosphate.
(b) Cream of tartar on wet oxide of antimony.
(c) Sodium carbonate on magnesium sulphate in solution.
(d) Corrosive sublimate on lime water.
(e) A stream of carbon dioxide on ferrous sulphate in solution.
(f) Dilute nitric acid on iron.
4. Define compound and haloid ethers,

and give the name and formula of an official compound of each class. State what is meant by a homologous series, and give the general formulæ of the homologous series to which chloroform and ether respectively belong.

5. Give the formula, and tests for identity and purity of the official carbonate of lead, explaining, with or without equations, precisely what facts as to identity or purity are indicated by each test. Show how
- (a) Carbonate of bismuth, or
(b) White lead, adulterated with carbonate of barium, would fail to conform to these tests.
6. What weight of acetic ether would, upon heating, yield a quantity of vapor which, at a temperature of 182° C., and a pressure of 950 mm., would measure 10 litres? What quantity of 90% alcohol would theoretically be required to produce this quantity of acetic ether? Show work.
7. Give the sources and usual method of preparation of boracic acid and of borax. Give tests for identity and purity of boracic acid, and state what changes are effected upon it by heat.
8. Give the formulæ of iron and potassium alums, and state how much N. and how much Al. are contained in 1000 gm. of ammonium alum B.P. Show work.
- Values—8, 8, 12, 10, 12, 10, 10, 10.

PHARMACY.

Examiner: F. T. HARRISON.

Time allowed: 2 hours.

1. Give in detail the B.P. process for preparing the solid extracts made from the fresh leaves and flowering tops of the plant; and state reasons for each step.
2. The following preparations, being more or less unstable, require to be tested from time to time to see if they are in proper condition for dispensing: Spirit of nitrous ether, diluted hydrocyanic acid, and sulphurous acid. State in each case how you would perform such tests.
3. Give the percentage of morphine in extract of opium, liquid extract of opium, aromatic powder of chalk and opium, and compound tincture of camphor, and the per cent. of total alkaloids in extract of nux vomica and liquid extract of cinchona.
4. State what excipients you would use in making pills of the following: Sulphate of quinine, phosphorus, nitrate of silver, permanganate of potash, and sulphate of iron. Give reasons for your choice in each instance.
5. From what materials are prepared: Simple ointment, Donovan's solution, Hoffmann's anodyne, compound pill of soap, and Griffith's mixture.

6. Describe fully, giving reasons for various steps, the preparation of two of the following: Strong solution of perchloride of iron, spirit of nitrous ether, ointment of nitrate of mercury.
7. Give strength, menstruum, and method of exhaustion employed for the following preparation: Liniment of aconite wine of ipecacuanha, tincture of tolu, ammoniated tincture of valerian, and vinegar of squills.
8. Express: 10° C., 40° C., and 45° C., in F. degrees; and 90° F., 18° F., and 0° F., in C. degrees.
- 9 and 10. Oral and recognition of specimens.
- Value—8, 12, 12, 10, 10, 10, 10, 8.

PRESCRIPTIONS.

Examiner: W. MURCHISON.

Time allowed: 3 hours.

MR. TENNANT.

- R P. camphoræ, granum.
P. ammon. carb. grani semissem.
P. opii, grani tres quartas partes.
Misce. fac pilulas tales duodecim.
- Sig. cap. unam pro dosi ut necesse sit.
- MRS. LANG.

- R Magnes. sulph. grana decem.
P. carbo. ligni, granum.
Misce. fiat charta, mitte tales septem.
- Sig. cap. unam statim ante jentaculum per septem dies.
- MR. DONAGH.

- R Emp. lyttæ (round 2 inches diam.)
Super emp. adhesiv. extend.
- Sig. lateri dolenti applic. usque ad vesicationem.
- MISS FERRIS.

- R Capsulæ terebinth. minima septem,
mitte quinque.
- Sig. unam hora somni per hebdom. sum.
- JAMES ELDER.

- R Sp. terebinth, drachmas quatuor.
P. tragacanth, quantum sufficiat.
Magnes carbonat, drachman.
Aquæ ad uncias quatuor.
- Misce bene ut fiat emulsio, cujus cap. aeger cochl. min. his terve in hora si necesse sit.
- Value—18, 12, 12, 12, 16.

BOTANY.

Examiner: D. A. WHITE.

Time allowed: 2 hours.

1. Explain fully what plants were made for.
2. What term is used to describe the arrangement of flowers on the stem? Name ten different varieties, and state whether determinate or indeterminate.

3. Name the parts of a leaf, and give the names of some of the special forms of leaves.
4. Define the terms phyllotaxy, monogynous, caulescent, scape, perianth, connate, tomentose, stigma, embryo, sessile.
5. What are the essential parts of a flower, and what the non-essential?
6. Explain the difference between a root and a stem. Distinguish between herbaceous and suffrutescent stems. Define rhizome, corm, and tuber.
7. Describe the process of fertilization.
- 8, 9, 10. Oral.

PRESCRIPTIONS.

Examiner: A. R. FRASER.

Time allowed: 2 hours.

1. Translate—describe fully the manner of dispensing the following, pointing out any errors which may occur.

R Phosphorus granum unam zinci valerian giana duas extracti aloes granum unam cum semisse.
Extracti nucis vomicæ grana tres.
Misce fiat pilulæ unam, mitte tales triginti, capiæ unam tertia quarta quaque horæ et hora decubitus.
p.r.n.

2. Translate and give manner of mixing the following:

R Codeine gr. viii.
Ol. jecoris asselli ℥ii.
Ol. gaultheri q.s.
Pu. tragac q.s.
Pu. sacch. alb. ℥ii.
Syr. prun virg ℥ii.
Aq. calcis ad. ℥vi.

M
Coch. med. t.d.s. ex.: Aq. ℥ii. p.c.
pro tussi urgenti.
N.B.—State quantity of pule-tragac used.

N.B.—State quantity of ol. gaultheria used.

3. What is the dose given of hydrarg. perchlor. in the following mixture:

R Liq. hydr. perchlor. ℥ii.
Glycerin ℥ss.
Aq. dist. ad. ℥ii.
coch min ter die ex aq.

N.B.—Show work.

4. Give adult dose of Donovan's solution; nitrite of amyl.; decoct aloes co.; creasote, white precipitate; arsenious acid; acetum cantharides; ether. liq.; strychnine; croton oil; iodofom.

5. Give full Latin and English for following abbreviations: C. M. S.; si febris adest.; cochleat.; sum tal.; F.H.; sesunc.; post jerstaculum; ss; pocil.; si n. val.

6. Give full Latin name for following: Parrish's syrup; Glauber salts; salts of sorrel; hiera picra; monseis solution; Iceland moss; red lavender; Scotch paregoric; basilicon ointment; citrate of magnesia.

7 to 10. Oral examination.

10, 10, 10, 10, 10, 10, 40.

Phosphergot, a Tonic.

Phosphergot is the generic name given by Luton to a mixture of sodium phosphate and ergot, recommended in general debility. It appears in the following three modifications: The variety intended to be taken as a mixture (in sweetened water) contains 1.5 gm. (23 grm.) of sodium phosphate and 1 gm. (15 grm.) of powdered ergot; this quantity constituting a daily dose. In the case of phosphergot powder each dose represents 0.25 gm. (3/4 grm.) each of dried sodium phosphate and powdered ergot, and this dose is intended to be taken in the morning, on an empty stomach. For pills, the following proportions are used: Dried sodium phosphate and extract of ergot, of each 2 gm. (31 grm.); made into 20 pills; 2 to 4 pills to be taken daily. —*Pharm. Ztg.*

Glycerine.

Perhaps no other subject connected with the trades represented by this journal is more interesting than that of glycerine. The great rise in price and the increased demand, together with the fact that there is every indication that the price will go still higher, make the subject one which practical men may with advantage turn their attention to at this time. The increase in price may, doubtless, be attributed very largely to the Japanese war against the Chinese. Up to that time smokeless powder, cordite, etc., seemed to possess great advantages; but it was only in actual warfare that the value of them could be demonstrated beyond doubt. All doubt on the question having finally been set at rest, the demand for glycerine, which is an important constituent of smokeless powder as well as dynamite and nitro-glycerine, increased, with a corresponding advance in price.

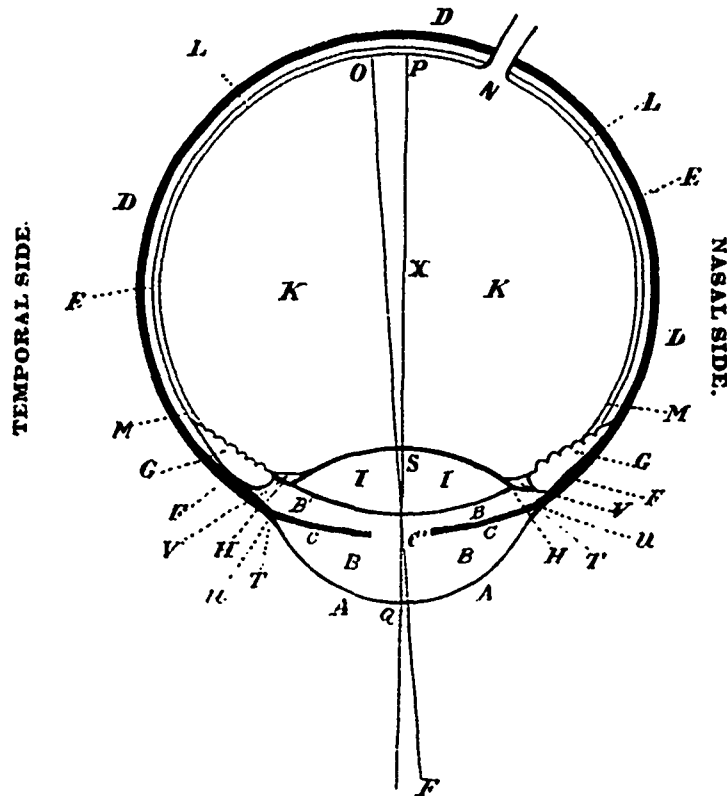
We learn on an authority that cannot be questioned that one of the leading glycerine manufacturers has recently refused quotations because the demand exceeded the supply, which in the case of this manufacturer is very large. We also learn that a number of the smaller soap manufacturers—not, of course, the smallest—are putting in glycerine plant, so that there is every indication that the market in this material will bring about some interesting developments in the not distant future.

Comparatively small soap manufacturers, who have for years been pouring their spent lye down the drains, will, by the enhanced price of glycerine, now find it profitable to put in plant of their own for the recovery of it.—*Oils, Colors, and Drysalteries.*

Salithymol, or salicylic thymol ester, is an antiseptic, and is a white crystalline powder of faintly sweet taste, slightly soluble in water, but readily so in alcohol and ether.

The Science of Optics.

BY LIONEL LAURANCE,
Principal of the Optical Institute of Canada.



Horizontal Section of the Eye.

AA—Cornea. BB—Anterior chamber of the aqueous humor. BB'—Posterior chamber of the aqueous humor. CC—Iris. C—Pupil. DDD—Sclerotic. EE—Choroid. FF—Ciliary muscle and ligament. GG—Ciliary process. HH—Suspensory ligament of the lens. II—Crystalline lens. KK—Vitreous humor. LL—Retina. MM—Ora serrata, where the retina terminates. N—Blind spot; entrance of the optic nerve into the globe. O—Yellow spot—Macula lutea. P—The posterior pole. Q—The anterior pole. PQ—Imaginary line from back of eye through the centre of the globe, called the optic axis. OR—Imaginary line from the macula lutea to the object looked at, called the visual axis. S—Nodal point, near the back of the crystalline lens, where the visual and optic axes cross each other. TT—The sclero-corneal margin. UU—The canal of Schlemm. VV—The canal of Petit. X—The centre of rotation.

Elementary Anatomy of the Eye.

The eyeball is almost a perfect sphere, with a segment of a smaller sphere projecting from it in front. The length, when normal, is nearly one inch. It is located in an orbit which is almost square, and about $1\frac{3}{4}$ inches deep. The orbit is thickly coated with a fatty tissue, which forms a cushion, against which the globe lies. The globe weighs about $\frac{1}{3}$ of an ounce.

COATS OF THE EYE.

DDD The sclerotic or white coat is a very tough membrane, which covers $\frac{2}{3}$ of the globe. It is perfectly opaque, and serves to keep the interior portions of the eye in place, and maintain the shape of the globe. The blood vessels of this coat are very small and scattered. The continuation of the sclerotic in front is

AA The cornea, which is round, perfectly transparent, covers the remaining $\frac{1}{3}$ of the globe, and is united with the sclerotic just as a watch-glass is let into the bezel of a watch, at the sclero-corneal margin TT. It consists of five layers—

the conjunctival epithelium, the anterior elastic, the true corneal, the posterior elastic, and the internal lining. The true cornea is itself formed of several laminae. The elastic layers seem to serve the purpose of preserving the proper curvature of the cornea. There are no blood vessels in this coat. The sclerotic is the wall, and the cornea is the window of the eye, and they constitute together the first tunic.

EE The choroid lines the inside of the sclerotic. It is a pigmentous, extremely dark brown or black coat, and is thickly overlaid with blood vessels. It absorbs superfluous rays of light, and serves as a bed, on which lies the retina. It consists of three layers—the external or venous, the middle or arterial, and the internal or pigmentous. In front the choroid branches into two, the continuation of the external layer being the ciliary muscle and iris, while the middle and internal layers become the ciliary processes.

FF The ciliary muscle forms a circular yellowish white fibrous band continuous with the choroid, and joining that coat to the iris at the sclero-

corneal margin. It lies over the processes, and consists of two sets of muscles,—anteriorly, the radiator or straight, and, posteriorly, the sphincter or circular. At the junction of the iris and ciliary, cornea and sclerotic is the canal of Schlemm.

GG The ciliary processes, 70 or 80 in number, lie behind the ciliary muscle, and consist of the fluting of the internal and middle layers of the choroid. They surround the crystalline lens, but are not attached to it. Within their folds and corresponding to them is the ciliary zone, or suspensory ligament of the lens.

CC The iris has two muscular layers—the dilator, which consists of radiating or straight fibres in front, and the sphincter, which consists of circular fibres behind. In the centre is a round opening called the pupil, C. The posterior layer is dark purple, and the anterior is of almost any color, from intensely dark brown to very light gray, and from this the name, which, means a rainbow, is derived. The iris is the curtain of the eye. The choroid, ciliary body, and iris, sometimes called the uveal track, constitute the second tunic.

LL The retina is a fine gray-colored tunic, which, although only $\frac{1}{2}$ th in. at its thickest, and $\frac{1}{80}$ th in. thick at its thinnest part, consists of seven layers. One of these layers is a direct continuation of the optic nerve, which enters the eye at N. Another, called Jacob's membrane, is arranged in rods and cones; this is the true perceptive part of the retina. The cones are thickest at O, the macula lutea, which is the most sensitive point of vision, and then gradually thin down until where the retina terminates at MM, the ora serrata, they are extremely scanty. The point N, where the optic nerve enters the eye, is devoid of rods and cones, and is insensitive to light, and so is called the blind spot. The retina is the third tunic of the eye.

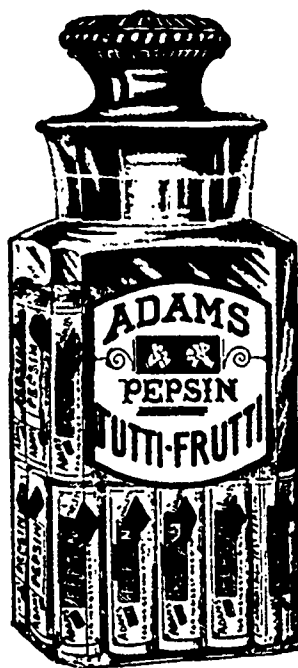
HUMORS OF THE EYE.

BB B¹B¹ The aqueous humor divided by the iris into the anterior and posterior chambers. This humor is so called because it is watery in its consistency, and freely gives to the iris, which expands and contracts within it, also to the encroachment of the crystalline lens when accommodating.

K The vitreous humor occupies the greater part (four-fifths) of the eyeball, and derives its name from glass. It is a comparatively hard and jelly-like substance, which does not alter its shape, and it keeps the eye in its spherical form. It is enclosed in a capsule called the hyaloid membrane, which gives off as a branch the suspensory ligament of the lens.

I The crystalline lens is situated behind the iris and between the aqueous and vitreous humors. It is very transparent, and is formed in concentric layers, somewhat like an onion; these are at the centre considerably harder than on the outside. The lens has a spring-like tendency enabling it to alter its form, which

You Pay Nothing



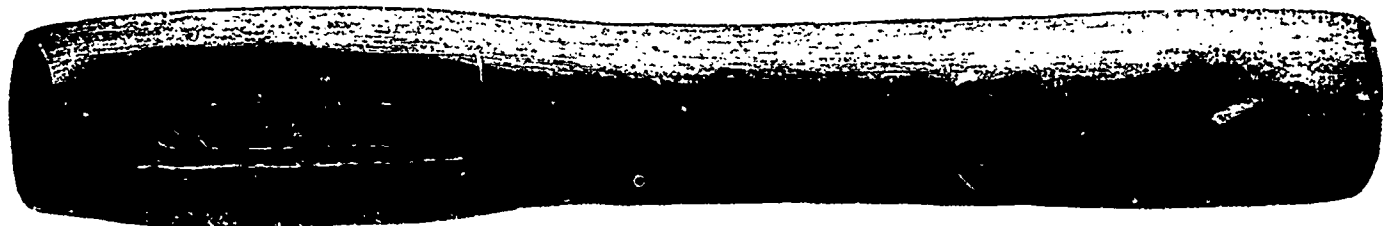
extra for this Glass Jar. It contains the equivalent of five boxes of Pepsin Tutti Frutti, and you pay the same as you do when you buy five of the boxes. That's all. There is nothing taken off your usual profit on the gum to help to pay for the jar. You get it free.

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“Solazzi”

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141 to 151 St. Maurice Street, - Montreal.

RADLAUER'S ANTISEPTIC PERLES

Of Pleasant Taste and Fragrance.

Non-Poisonous and strongly Antiseptic.

These Perles closely resemble the sublimates and carbolic acid in their antiseptic action. A preventive of diphtheric infection.

For the rational cleansing and disinfection of the mouth, teeth, pharynx, and especially of the tonsils, and for immediately removing disagreeable odors emanating from the mouth and nose.

A perfect substitute for mouth and teeth washes and gargles. Radlauer's Antiseptic Perles take special effect where swallowing is difficult in inflammation of the throat and tonsils, catarrh of the gums, periostitis dentalis, stomatitis mercurialis, salivation, angina, and thrush.

A few of the "Perles" placed in the mouth dissolve into a strongly antiseptic fluid of agreeable taste, cleanse the mouth and mucous membrane of the pharynx, and immediately remove the fungi, germs, and putrid substance accumulating about the tonsils, thereby preventing any further injury to the teeth.

METHOD OF APPLICATION:

Take 2-4 Perles, let them dissolve slowly in the mouth, and then swallow. Being packed in small and handy tins, Radlauer's Antiseptic Perles can always be carried in the pocket.

MANUFACTURED BY

S. RADLAUER - Pharmaceutical Chemist
BERLIN W., GERMANY

W. J. DYAS, Toronto, Ont., Wholesale Agent for Canada.

OZONE

Ozone Specific is a valuable non-toxic, non-irritating antiseptic for either internal or external use. Our **Ozone**, concentrated form, is the most powerful blood purifier and germicide ever produced, and will be found a specific in all forms of Asthma, Bronchitis, Whooping Cough, Croup, Measles, or Diphtheria. For Catarrhal Troubles it will prove invaluable as a tonic and constitutional remedy, and is especially efficient in preventing or combating fermentation of food in the stomach, breaking up the worst forms of Dyspepsia and Sour Stomach.

For dressing Ulcerations of all kinds, preventing suppuration, and assisting towards rapid granulation and healing, **Ozone** has no equal.

Ozone is also used as a gargle for all manner of Throat Diseases; destroying all fermentation of the tissues brought forth by impregnation of disease germs. No germ life can exist where it is used.

All Druggists should keep this remedy, as it will prove a genuine friend to their customers.

Physicians owe it to themselves to try it.

OZONE SPECIFIC CO.

TORONTO, ONT.

I Want You

... IF ...

You Want Money

Made in an honest way while doing a public good, and building for yourself a larger business.

I want one druggist in every county in the United States and Canada to act as my General Agent and keep supplied every other dealer in that county with my goods.

I am no quack doctor with a dope, no Gee-Hee Pagan-Chinese Joe-Hee Indian long-haired poke-root decoctor, or returned missionary from India, but a plain every-day honest American Geologist, with a discovery made in the mines—a nature-made article, nothing added or extracted. Nothing ever made by man sells like it sells and holds its friends, and I am able, ready, and prepared to prove it at my own expense to any honest druggist in every county as above. It has never before been offered to the trade, and will not be sold to the wholesale dealers for its weight in gold.

I want to correspond and conclude a deal with one dealer as above, who wants to increase his business and expects to stay where he is, and who is worthy of credit and confidence.

Remember I am only going to deal with one in a county, and in such a way that he will be protected from all outsiders. This is no humbug or swindle, and not a cent will be required of you until after you have made money at my expense.

Address,

THEO. NOEL, Geologist
857 West Polk Street
CHICAGO, ILL.

is convex on both sides, with a sharper curve behind than in front. Its length is about one-fifth, and its depth, when at rest, about one-third of an inch. It is, however, much more rounded in a child than in an adult, and becomes flattened in old age on both surfaces, when it also loses some of its transparency. It is contained in a firm elastic capsule, thicker in front than behind. To the anterior surface of the capsule, at the margin of the lens, is attached the ciliary zone or suspensory ligament. This ligament retains the lens in its proper position, and by its tension on the anterior surface keeps the lens flattened. It branches off from the hyaloid at the ora serrata, where the retina terminates and the ciliary processes commence, and thus forms a connection between the retina and the lens. It is received between and corresponds with the flutings of the processes, and stretches out with these when necessary to relax the tension of the lens. The triangular canal of Petit surrounds the crystalline lens, being the space between the back of the suspensory ligament, the front of the vitreous humor and the edge of the crystalline lens.

and then backwards obliquely, and is attached to the top of the globe towards the back of it. When it contracts it pulls the back of the eye up and in, and therefore causes the cornea to be turned down and out. The inferior oblique passes from the nasal side also, under the globe and by its contraction pulls the back of the eye down and in, and so causes the cornea to be turned up and out. The eye can be directed to any intermediate point by the combined action of some two or more muscles, and the muscles of the two eyes work in such unison as causes the latter to be turned to the same object.

The motor muscles are in pairs. The superior and inferior recti constitute one pair; the external and internal recti are another; and the superior and inferior obliques are the third. Each of the two muscles of any pair is the antagonist of the other, and it is the constant tension of each one of the six muscles that keeps the eye in its proper position. When one muscle of any pair contracts, its antagonist relaxes its tension, and so the eye is turned by the contracted muscle into the desired direction.

The movements of the eye are on three different axes of rotation, and the central point of the motion (where the axes cross each other) is the centre of rotation. This is about the middle of the vitreous. The muscles, when at rest, keep the eyes in such a position that they are directed straight forward but inclined rather downward. The action of the motor muscles is called convergence.

A line drawn from P to Q straight through the centre of the eye is the optic axis; this is not the line of vision. The latter is the visual axis, which may be considered as a line drawn from O, the macula

lutea, to R, the object looked at. The macula is situated about 6 mm. from the blind spot, rather below and to the temporal side of the posterior pole. The visual axes of the two eyes are so inclined towards each other that they meet at a point about twenty feet distant; each visual axis issues from the cornea slightly to the nasal side of, and slightly above, the anterior pole. Thus with the two eyes perfectly at rest the same object is pictured upon corresponding parts of the retina of each. To have perfect binocular vision, that is, vision in the two eyes at the same time of the same object, it is absolutely necessary that the images of the object seen be so refracted on to the retina that the macula occupy the exact centres of each picture.

(To be continued.)

According to reports from the Lipari Isles, so extensive are the deposits of pumice-stone that the supply is practically inexhaustible. The only menace to the pumice industry is said to be an artificial pumice introduced by the Germans.

Practical Hints on Advertising.

Copyrighted 1885, by CHARLES AUSTIN BATES, New York.

I don't believe in cute advertising. It may pry in the show business. I've heard that it does.

The other day I asked a theatrical manager whether he had ever tried newspaper advertising alone and unaided by posters. He said he had. Said he had tried posters alone, too, and that a combination was better, but he said: "Novel ties and startling effects are best of all."

That is for theatricals.

Business methods and show methods must, of necessity, differ. A show stays a day, or three days, or a week. May never come again. Must get all it can then, and get it quickly. There must be a "hurrah." The more people are startled, and the more their curiosity is aroused, the better.

It isn't that way in a mercantile business. That stays. The longer it stays in one spot the better—if it is properly conducted.

Show methods of advertising will beget suspicion. Can't have "startling reductions" and "bankrupt" sales every day. That doesn't mean never have a sale. Have plenty of them, but find a good, honest reason for each one, and "fight it out on that line." Remember the boy who cried "Wolf!" and don't say anything startling unless it can be backed up with the facts. If you cry "Wolf!" let folks hear him howl.

Don't be too distinctly original in your advertising. Don't try to startle people with your wit.

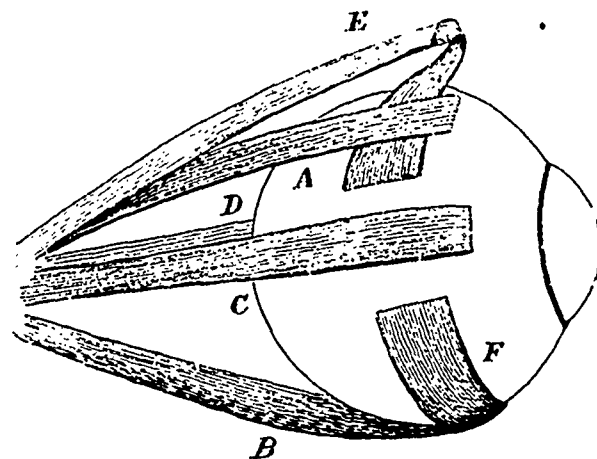
The successful new idea is the one that everybody has unconsciously recognized for a long time. Don't get beyond the age.

Do you advertise (God save the mark!) on the backs of restaurant bills of fare? Do you put a card in the hook "for the benefit of the fire department"? Do you subscribe to the "Industrial Progress" book, and have your picture in it as a prominent business man? Does the "society" programme catch you? Are you susceptible to the blandishments of the gentleman who puts beautiful charts in all the railway stations?

Do you take "a space, the only one left, in a thousand and one schemes that come around every year? Do you suppose you ever got a cent's worth of benefit out of any \$10 you ever spent that way?

If all the dollars that are diverted from the newspapers into these and similar channels were used in buying space in the best paper in town, there would be fewer merchants who say that advertising is a doubtful undertaking.

There's nothing doubtful about it. It is as sure as any other business transaction. The funny part of it is, that it is generally given less attention than any other department of a business.



The external muscular system consists of the external or motor muscles which move the eyeball. They are, described simply: *

A	The superior rectus	which pull the eye	upwards
B	" inferior "	" "	downwards
C	" external "	" "	outwards
D	" internal "	" "	inwards
E	" superior oblique "	" "	outwards and downwards
F	" inferior "	" "	outwards and upwards.

These muscles, except the inferior oblique, take their origin at the back of the eye from a ring that surrounds the sheath of the optic nerve. They are all attached to the sclerotic, the insertion of the four recti being not far behind the cornea.

The action of the four straight muscles, the recti, is very simple and easily understood. They are attached to the front part of the globe, and by a direct action move the front of the eye to a certain position. The action of the obliques is, however, rather more complicated; the superior oblique takes its origin on the nasal side of the orbit, passes forward through a loop

* The more complex working of the motor muscles will be described later.

The contract once made, and the space decided upon, the average merchant advertiser's interest seems to die. Even a neglected ad. in a good paper will do some good, in spite of the advertiser's apathy. A good advertisement will always bring profitable returns, if placed in a paper whose price for space is based on an honest circulation statement.

And if I were an advertiser I would not use a paper that refused to prove its circulation. Circulation is what he is buying, and he has the right to know the quantity. And bare assertion isn't proof—not by several thousands sometimes.

* * * *

Advertising is business news. It tells of things which are of great daily importance. It is of more account to the frugal housewife to know where she can get certain necessary commodities at a less price than usual than are all the troubles in Siam or Alaska.

The news should be news. It should not be allowed to grow stale with repetition in the same old way.

* * * *

It is continuous effort that pays in advertising, as in everything else. A business man doesn't keep his store open one day in the year, or one week in the month, or three months in the year. If he advertises that way, that is the impression people will get. It is continuousness that has made each letter in the word "Royal" before the words "Baking Powder" worth over \$2,000,000. The owner of Royal Baking Powder recently refused \$12,000,000 for his business—a business built up and fostered by persistent advertising.

* * * *

People are very forgetful. They have to think pretty hard to remember the vice-presidential candidate two campaigns back, and yet he was pretty well advertised at the time. It has been truly said that the time to advertise is all the time. In business there is no such thing as standing still. A business man must go forward or he will fall back. Even if you do just as much business this year as you did last, some other fellow is doing more business, and he is getting ahead of you.

Each year's effort should be to exceed last year's sales. The only sure way to do it is to advertise. Advertise in busy times, because the iron must be struck while it is hot, and advertise in dull times to heat the iron. It can be done.

* * * *

When a contractor is in a hurry to drive a long plank down the side of a new sewer, he sets two men at it. Each, with a big maul, hits it alternate blows as often and as hard as he can. The strokes come as evenly as a pendulum swings.

One man and one maul would drive the plank down, but it would take longer.

The bigger the maul, the quicker and easier he will do the work.

Two men, or a dozen, with tack hammers, would not get the plank driven in a hundred years.

There's a parallel to this in advertising. If you're in a hurry to drive your business, use two papers, and make the advertising maul—the space—as big as possible.

If you haven't money enough to buy two big mauls, only buy one, use only one paper—the best—and make the space big enough to be felt.

You'll do more good with one maul than with half a dozen tack hammers. You'll get more benefit from a regular advertisement of sufficient size, in a reliable paper, than you will from half a dozen smaller ads. in a weaker paper.

* * * *

If you have only one ad., have it right. You don't believe in cutting your store in two, do you? You don't establish a branch until you feel sure you are doing all you can in the main store. Be sure you are doing enough in the best paper before you think of adding another.

Preparation of Compressed Tablets.

MANIPULATION IN SPECIAL CASES.*

Ammonium chloride, in a slightly moist and finely granulated condition, can be compressed into tablets without any preparation.

Calomel with sodium bicarbonate requires special treatment. Sodium bicarbonate, 630 grains, and gum arabic, 30 grains, are mixed and damped with water, then passed through a No. 40 sieve, dried, and bottled. Calomel, 90 grains, is added in the bottle, and the latter shaken until all the granules are coated. Finally compressed into tablets (McFerran).

Charcoal and similar spongy bodies must be in impalpable powder, and should be granulated by the addition of at least 25 per cent. of cane sugar. They require no lubricant, as a rule, and should be fed to the machine in a very fine granular form. The granules should be passed through a No. 12 sieve, dried, and then reduced until they will pass through a No. 60 to 80 sieve. A solution of gelatin may be employed instead of sugar, in which case a little French chalk should be added afterwards.

Effervescing mixtures should have their constituents granulated separately, and mixed in a perfectly dry granular condition just before being compressed.

Extracts require varying treatment, according to their condition. Powdered extracts should be mixed with starch powder before treating by the foregoing general process of Coblenz. Solid extracts should be rubbed to a syrupy consistency by the aid of a little water; the excess of water is then absorbed by the addition of about 25 per cent. of starch powder, the mixture being left sufficiently moist to form a proper consistency or granulation. Fluid extracts should be evaporated to a syrupy consistency, and

*For convenience of reference details are here given of a number of special cases considered by Coblenz (*Handbook of Pharmacy*), McFerran (*Pharm. Jour.* [3], xviii, 972), and Remington (*Practice of Pharmacy*), whose writings may be consulted for further particulars. Though sieves with meshes of various sizes are mentioned, a No. 30 sieve will usually prove fine enough in almost every case.

then treated in the same manner as solid extracts.

Hygroscopic or deliquescent bodies will need the addition of gum in the proportion of one-tenth the weight of substance, water being used for moistening.

Hypodermic tablets may be made with sugar of milk (see below) as a basis, but dried neutral sodium sulphate and purified sodium chloride or ammonium chloride are frequently preferable.

Insoluble substances, such as acetanilid, phenacetin, sulphonal, etc., are best granulated with one-tenth their weight of cane sugar, water being used for moistening.

Pepsin in solution should be prepared by adding to it one-tenth its weight of cane sugar, then spraying with diluted alcohol (50 per cent.), and mixing to insure moistening of all the particles. The powder should then be capable of passing through a No. 50 sieve, and, after drying, is ready for compression. Scale pepsin requires only to be reduced to No. 30 or 40 powder and then lubricated.

Potassium bromide and iodide simply require crushing, and should then be treated in the same way as ammonium chloride.

Potassium chlorate should be used in the same condition as ammonium chloride, and is very readily compressed.

Quinine sulphate requires similar treatment to charcoal, but if, instead of French chalk, a little finely powdered arrowroot or ethereal solution of white paraffinum molle be added, the tablets will disintegrate more readily.

Rhubarb and soda, in combination, require one-tenth their weight of cane sugar, and should be granulated by means of a mixture of liquid glucose, 1 volume; water and alcohol, 3 volumes.

Salicylic acid should be treated like charcoal, quinine sulphate, and substances of similar nature.

Salol and phenacetin can be made into tablets by adding starch, moistening the mixture with alcohol, passing through a No. 20 sieve, then slightly warming, granulating, and drying prior to compression.

Salts containing water of crystallization should be reduced to fine powder, then mixed with one-twentieth their weight of powdered gum arabic, moistened, and passed through a No. 12 sieve. The granules must then be dried and again powdered, mixed with one-tenth their weight of cane sugar, and moistened with just enough water to pass again through a No. 12 sieve. After drying, first spontaneously, but finally by the aid of heat, pass the mixture through a No. 20 sieve, lubricate, and compress.

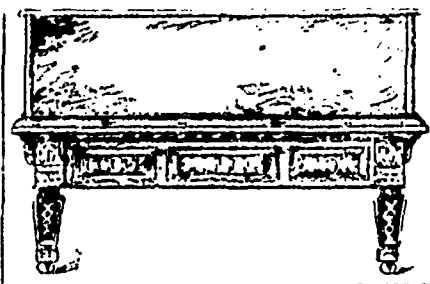
Scale preparations generally require the same treatment as scale pepsin, which see.

Sugar of milk, when used as a vehicle for powders to be compressed into tablets, should be moistened with a mixture of 1 part of syrup and 2 parts of water.—*Western Druggist*

W. Millichamp, Sons & Co.

MANUFACTURERS OF
**SHOW
CASES**

And all
Interior
Woodwork
FITTINGS.



Special
New
Designs

Best
Workmanship

**Cigar Cases with Patented Moistening Trays.
Sponge Cases.**

Send for Catalogue.

234 1/2 Yonge Street, Toronto.



C. Schack & Co....

Manufacturers of

SHOW CASES
STORE AND OFFICE
FITTINGS



Choice Designs in
CHERRY, OAK, WALNUT and MAHOGANY.

FIRST-CLASS WORKMANSHIP.
LOWEST PRICES.

Special Attention Given to Fitting Drug Stores

Estimates and Designs
Furnished on Application.

21-23 Alice Street, - - TORONTO.

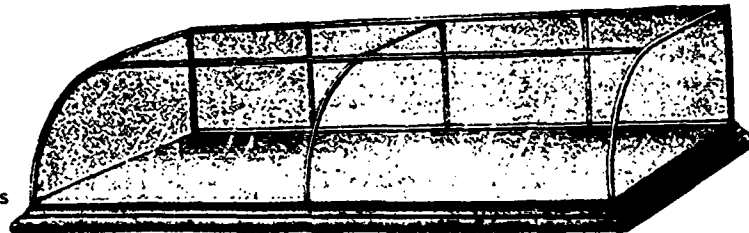
LONDON SHOW CASE WORKS

Manufacturers of

**SHOW
CASES**

Of all kinds

FOR



COUNTERS, WALLS, OR DISPENSARIES.

SHOP FIXTURES ♦ COUNTERS ♦ TABLES ♦ SHELVING ♦ MIRRORS, Etc.

Send for Catalogue
and Price List

237 King Street,

LONDON, ONT.

Gray's

CASTOR-FLUID

For the hair.

DENTAL PEARLINE

An excellent antiseptic tooth wash.

SULPHUR PASTILLES

For burning in diphtheritic cases.

SAPONACEOUS DENTIFRICE

An excellent antiseptic dentifrice.

These Specialties

All of which have been well advertised,
more particularly the "Castor-Fluid,"
may be obtained at all the wholesale
houses at Manufacturer's price.

HENRY R. GRAY

ESTABLISHED 1859.

Pharmaceutical Chemist

22 St. Lawrence Main Street

(Cor. of LaGauchetiere)

MONTREAL

DICTIONARY OF ..UNITED STATES HISTORY..

By J. FRANKLIN JAMESON Ph.D.

Professor of History, Brown University, formerly of Johns
Hopkins University, Editorial Contributor to Cen-
tury Dictionary. Author of "History of His-
torical Writing in America."

ILLUSTRATED WITH NEARLY 300 ELEGANT PORTRAITS
OF DISTINGUISHED AMERICANS

The subject is of the greatest interest.
The author has a national reputation.
The Book is comprehensive and accurate.
It is written in a clear, attractive, and interesting
style.
Every College Professor, Teacher, Minister, Lawyer, and
Doctor needs it.
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English language.
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form to use.
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the United States.
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Fine English Cloth : Back Stamped in Gold.....\$2.75
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Full " " Gold Back and Side Stamps, " 4.50
Full Sheep, Sprinkled Edges..... 4.75

Exclusive Territory Agent's Outfit, \$100.

Salary paid to successful agents.

PURITAN PUBLISHING CO.
36 BROOMFIELD ST. ■ BOSTON, MASS.

Camphor Industry.

The island of Formosa, or, as named by the Portuguese, "the beautiful island," and known to China as Taiwan, signifying "terrace bay," is the place where most of the camphor of Western commerce is produced.

The island is a most productive one, alike rich in vegetation and minerals, but it is the geographical position which makes it a place of extreme importance with regard to the Eastern trade. Swatow, Amoy, and Foo-choo lie within the Formosa Channel, while every vessel bound to and from the northern ports and Japan must pass through it. The total value of the foreign trade of Japan is over twelve millions, and of this Great Britain absorbs more than two-thirds. Of the many products of Formosa, the chief is camphor, and the greatest part of this product is obtained from the wood of a tree, the *Camphora officinarum*, belonging to the natural order, *Lauraceae*, but, unfortunately, the laurel grows only in certain districts in the island, chiefly in that portion included within Chinese territory; it is mainly confined to the country of the aborigines and its immediate borders. In consequence of the disturbed relations between the races of the island thus induced on the borderlands, the risk attending camphor collection is very great, the distillers requiring to be always on their guard, for a Chinaman's head is a patent of nobility to an aborigine, for without one he is excluded from the council of his tribe, and, owing to the disturbed state of affairs in the East generally, camphor is likely to be a somewhat scarce commodity for years yet to come. The trade returns for four months to April 30th last show only 4,785 packages imported into England, as against 13,204 in 1894, and 8,631 in 1893, for the same period. To such as are unacquainted with Formosa, it is quite impossible to describe a virgin forest such as those met with in the island. The vegetation generally is characterized by tropical luxuriance, and in the mountain regions in the dense forests the various species of palms, aloes, and the magnificent camphor trees are conspicuous; the last covers the whole line of mountains from north to south up to an elevation of 2,000 feet above sea level. The tree grows to a considerable height, sometimes as much as 50 feet, and has a girth of 20 feet, with branches of 8 or 9 feet in circumference; the leaves are smooth, and the trunk is covered with a flat, greenish bark; the whole, with the roots and wood, have a strong odor of camphor. This product is found to lodge everywhere in the interstices of the fibres of the wood, also in the pith, but most abundantly in the crevices and knots. From the dangerous circumstances connected with the collection of the drug, there is a great possibility of its extinction, as the extraction of the camphor entails the destruction of the tree, and this destruction has never

been compensated by re-planting; so that the forests are being gradually cleared away, the aborigines receding, and the Chinese encroaching as the work of destruction has progressed. But, somewhat to counteract this evil, the laurel has received attention from experts, and has now become naturalized in some of the tropical and warmer countries, such as Java, Brazil, Jamaica, and the West Indies generally, Mauritius, Madeira, and the Mediterranean region. It forms a large and handsome tree in sheltered spots in Italy, as far north as Maggiore; it may be found in the nurseries of Paris, and is not altogether unknown in England.

But it is Formosan camphor that we specially note, and it is a novel and exciting adventure to accompany a band of camphor merchants meaning business, taking our lives in our hands, as the whole work, from beginning to end, has to be done in an enemy's country, and that enemy of a relentless character. Preparations being duly made, not only for collecting and producing the drug, but for our own sustenance and protection, the party sets out, the district having been prospected beforehand and the spots selected. The trees chosen are those remarkable for the abundance of their sap, many being too dry to repay the cost of time and labor. The best part of the wood is secured for timber, which is in much request for carpentry and cabinet work. The branches and refuse are then taken while freshly cut, and chopped into small pieces for distillation.

The stills, built up in sheds, are of the simplest and rudest construction; these are moved as the advance is made from stage to stage, so that elaborate fittings would be cumbersome and out of place owing to this shifting at short intervals. About eight or ten fires are laid on the ground, over which is placed a long trough made of wood; this trough is lined with clay and half filled with water; upon this boards are placed, pierced with holes which fit the trough; then rough jars are fixed containing the chips, which have been already prepared. These, again, are covered with inverted jars, and the whole made air-tight by packing.

The fires are now lit, and the steam passes up through the holes in the boards, this soaks the chips in the jars and causes the sublimated camphor to settle in crystals on the insides of the pots, from which it is scraped off, and then passes through a second process of distillation in order to remove impurities. At the bottom of a copper still is placed a bed of dry, powdered earth, if possible from an old wall—but this is not often get-at-able in a primeval forest—for the sake of the lime it contains, and on this is laid the crude camphor; this is again covered with earth, and so on alternately, until the vessel is full, the whole terminating with a layer of earth, which is finally covered with green mint. A second vessel, generally made of straw smeared with clay on the out-

side, is placed over the still and luted on. This is then fixed over a fire, and allowed to remain for a considerable time. After cooling, the camphor is found sublimed and attached to the upper vessel. When a sufficient quantity is obtained, it is then packed in large vats or tubs provided with escape holes at the bottom, and through these holes exudes an oily liquid known as camphor oil, of a yellowish brown color. The exudation from the mass is to the extent of about 3 per cent. This liquid is of a very strong smell, and holds in solution an abundance of common camphor, which it deposits in crystals when exposed to a low temperature, its density being 0.910. By exposure to oxygen, or the action of nitric acid, it absorbs oxygen and becomes solid camphor. This oil is much used by Easterns as an embrocation in rheumatic diseases, and bids fair to become a valuable European import as a cheap substitute for *Lin. camphora*. It is not, however, saleable on the spot, as it is inferior to the Malagan camphor oil, from which it is distinguished by the odor of sassafras. In Japan the oil is used for lighting purposes by the poor folk, and it is said to be superior to kerosene both in cheapness as well as in illuminating power.

The product of the forests, in a crude state, is shipped from Tamsui, which is a free trade port at the northern extremity of the island, this being the characteristic export of the place, forming, as it does, the main supply of the European markets.

From this place it is conveyed by native crafts to various ports of China. Until the year 1868 the Chinese government enjoyed a monopoly of the Formosan camphor trade, but it was then thrown open, with very beneficial results. In 1870 and 1871 attempts were made to re-establish the monopoly under cover of a tax of less than a farthing per pound, in itself unimportant; but with the removal of the objectionable feature of the import the merchants have rested content. But as the supply of the trees and laurels in the island is being gradually exhausted, other countries have considered the matter, especially those adjacent. A small quantity of the drug is produced at Chinchew, in the province of Tokien, on the China mainland. The method of preparation here differs somewhat from that of Formosa. The freshly gathered branches of the laurel are chopped into small pieces and steeped for some days in water, they are then boiled in a suitable vessel, being continuously stirred with a stick until the grains adhere to it in the form of a white jelly. The fluid is then poured off into glazed vessels and allowed to rest for some hours, when the camphor is found in a concentered mass. In Japan the laurel is found in the three principal islands. It flourishes best in the southern portions of the empire, Toza and Sikok; the mild, damp sea air favors its growth, and the principal preparation of

the drug is carried on in these localities. Japanese camphor is distinguished from Formosan by being coarser grained, clearer, of pinker hue, and by subliming at a lower temperature.

It is also known as "Dutch" or "tub" camphor, the latter name arising from its being imported into Europe in tubs covered with matting, each placed within a second tub, secured on the outside by hoops of twisted cane. No metal lining is used, and the camphor is thus drier than the Formosan. Each tub holds about 1 to 1 1/4 cwt. The selling price is nearly twice as high as the Formosan, and the imports to Europe are about as 1 to 6.

In India the refining of common camphor is a process of itself. The oil is absorbed by means of quicklime; two earthen pots are luted together, having a small aperture for the escape of the air on the first application of heat. Camphor is mixed with water in proper proportions, and put into a copper still; more is added, and a copper lid is then put on, and to make it perfectly tight an iron bar is passed through it and the vessel, by holes made for the purpose. The still is then lifted by handles and set on an earthen *chula*, below which fires are burning. The lid and edges of the still are smeared with wet clay, which is piled up into the shape of a cone. In about fifteen minutes steam comes through the hole where the bar goes, whereupon a cloth attached to a bamboo is dipped into a receptacle filled with water and mopped over the clay cone on the still, so that the water keeps the upper portion cool. This is maintained for three hours, when the sides of the still are beaten by a stick. If this produces the sound of an empty vessel, it is known that the process of sublimation is complete; the still is then removed from the *chula* and the lid is opened. The camphor is found in a thick crust lining the upper part of the sides of the still; it is divided into four pieces by a knife, then packed, and is ready for market. Such is the Indian process.

The refining of camphor was for long confined to Venice, but it is now carried on in England, Holland, Hamburg, and Paris, the product being much finer and purer than that obtained by crude processes such as that described.

One other kind of camphor still remains to be mentioned—that is, the Ngai camphor. This is manufactured at Canton and in the Island of Hainan, the plant from which it is obtained being the *Blumea balsamifera*, called in Chinese, Ngai, abundant in tropical Eastern Asia. As this product is about ten times the price of Formosan camphor, it never finds its way into Europe as an article of trade. It is consumed in China, partly in medicine and partly in perfuming the finer kinds of Chinese ink. The export of this camphor by sea from Canton is valued at about £3,000 per year. It is also sent from Kiung-chow, in the Island of Hainan.

—*The Produce World.*

A Fluorescent Constituent of Calumba.

By ALEXANDER GUNN, F.C.S.

There are probably few pharmacists who have not experienced the difficulty of obtaining fluid preparations of calumba in a brilliant condition. Whether tincture, fluid extract, or infusion, it is found to be a matter of impossibility to remove the turbid appearance by any mode of filtration.

In dealing with concentrated liquid preparations of calumba the difficulty is accentuated, the appearance of such preparations being frequently akin to that of pea-soup. Careful observers may, however, have noticed that such solutions, when examined by transmitted light, are perfectly translucent, and that there is evidently no trace of solid matter in suspension.

The firm with which I am connected frequently receives complaints from pharmacists of the turbidity of its calumba preparations, and occasionally the preparation itself is returned as "unfit for use." When it is pointed out that the turbidity is only apparent, and that the opalescence is due to phenomena of optical interference, the explanation is accepted with more or less hesitation, and it appears desirable that some positive evidence should be obtained to prove the correctness of the theory. During the last fortnight I have been engaged in investigating the matter, with results sufficiently encouraging to induce further research.

To demonstrate in a striking and simple manner that calumba contains a fluorescent body, half fill a test-tube with B.P. tincture of calumba. Examine this by reflected light, and it will be seen that there is a fluorescence of a pronounced green tint. Add now a few drops of liquor potassæ, and again observe by reflected light; the fluorescence now is of a velvety deep blue or violet color.

Although I have not at present been able to obtain the fluorescent constituents in a sufficiently pure condition to ascertain its nature, I have found the following plan successful in partially separating it from the coloring matter of the tincture:

Take 50 c.c. of the tincture and acidify with 5 c.c. dilute hydrochloric acid. Shake with a sufficient quantity of ether to form a distinct layer on separating. The yellow ethereal solution is shaken with purified animal charcoal during a quarter of an hour and then filtered. The filtrate is now gently shaken with a 1 per cent. solution of ammonia in water. There is a floccy precipitate thrown out of the ammoniacal solution, but on filtration the fluorescence will show up beautifully.

In order to isolate the fluorescent body and to ascertain its composition, I take a strong proof spirit percolate of calumba (say, of such a strength that 1 = 1), mix with about three times its volume of distilled water, and stir in some magnes. calc. and kieselguhr, which help, although im-

perfectly, to remove something that interferes with the proper extraction of the fluorescent body. Allow to stand for a day or so, shaking up occasionally, and then filter; add about an equal volume of dilute sulphuric acid, shake with ether, and separate the ethereal liquor, which is of a slightly yellow color. The acid liquid will then be free from fluorescence. The ethereal solution when shaken with ammoniacal water yields the fluorescence to the latter.

I cannot imagine that this fluorescence is due to any already known constituent of calumba. Such a property as fluorescence in an isolated body is, one would suppose, too obvious to be overlooked.—*Pharmaceutical Journal.*

Disinfection of Vaults and Cesspools.

Dr. Vincent recently reported to the Academy of Sciences at Paris the result of experiments for the purpose of determining the best disinfectant for rendering fecal matters innocuous. He required of each disinfectant that it should kill all pathogenic microbes, including the bacillus coli communis and the bacteria of putrefaction. His experiments showed that the best of all disinfecting agents for the destruction of fecal matters in vaults and cesspools is sulphate of copper employed in connection with one per cent. of sulphuric acid. The quantity of sulphate of copper required was one pound for every three cubic feet of fecal matter mixed with urine. Half this quantity was found sufficient to destroy the cholera bacillus. It was found necessary that the disinfectant should remain in contact with the infectious material for at least twelve hours.—*Modern Medicine.*

The New Zealand Pharmacy Bill.

The New Zealand Pharmacy Bill is dead. It has suffered shipwreck upon the unwillingness of the bulk of the registered chemists of the colony to allow men, now unqualified, but carrying on business as herbalists, etc., mostly in out-of-the-way places, to be incorporated into their ranks. That was the price the pharmacists were asked to pay for an Act that would have conferred substantial benefits upon them, and they refused. The signal was a letter from the New Zealand Minister of Railways (who had charge of the bill) to the Pharmacy Board, stating that, owing to the very conflicting opinions among members of Parliament, and the number of letters and telegrams received by the Government, complaining of various clauses of the bill, as well as the feeling that the proposed amendments would not be favorably received by the chemists themselves, the Government had come to the conclusion that there was no alternative but to drop the measure altogether.—*Chemist and Druggist.*

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not injure or stain the most delicate fabric, and is therefore useful as a general disinfectant. Borine is highly recommended as a Mouth Wash, as a Gargle, Spray or Lotion in inflammations of the throat, nose and mucous membranes; for Inhalation in croup, diphtheria and whooping cough; as a soothing and antiseptic application to wounds, burns, etc., and internally as a sedative, antifermentative and carminative in digestive troubles and in intestinal disorders.

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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.

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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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Formulary.

Ichthyol Powder and Paste.

Leistikow calls attention to the remarkable efficacy of ichthyol in relieving the pain of burns. He recommends its use as powder in soft paste and as a salve mull, giving the following formulae:

Powder—	
Zinc oxide.....	20 parts.
Magnesium carbonate....	10 "
Ichthyol.....	1 to 2 "
Paste—	
Calcium carbonate.....	10 parts.
Zinc oxide.....	10 "
Starch.....	10 "
Olive oil.....	5 "
Lime water.....	10 "
Ichthyol.....	1 to 3 "

—*Monat. f. prakt. Dermat., Pharmaceut. Journal.*

SALICOL CREAM.

The following is accredited to *l'Union Pharmaceutique* in the *Drugisten Zeitung*:

White wax.....	100 gm.
Spermaceti.....	100 "
Almond oil (sweet).....	450 "
Distilled water.....	100 "
Glycerin.....	100 "
Salicylic acid.....	5 "
Coumarin.....	3 gm.
Essence of musk.....	6 drops.
Oil of neroli.....	4 "
Attar of rose.....	4 "
Oil of bergamot.....	4 "
Oil of wintergreen.....	8 "
Attar of Ylang Ylang.....	2 "

Mix and make a cerate.—*National Druggist.*

FAVORITE COUGH SYRUP.

Syrup of tolu.....	2 fl. oz.
Glycerin.....	4 fl. "
Compound syrup of squill.....	6 fl. "
Syrup of ipecac.....	6 fl. "
Tincture of lobelia.....	6 fl. "
Paregoric.....	6 fl. "
Fluid extract of pilocarpus.....	2 fl. "
Chloride of ammonium.....	1 "

Mix.

Take a teaspoonful three times during the day, and every hour or two before going to bed.—*Meyer Bros. Druggist.*

DEPILATORY PASTE.

Metlinger (in the *Revue Internationale de Médecine et de Chirurgie*, etc.) gives the following formula for an epilatory paste:

Glycerin.....	4 parts.
Lard.....	5 "
Cacao butter.....	5 "
Castor oil.....	16 "
Liquor sodæ (1:4).....	16 "
Starch.....	1 "
Sodium sulphide.....	5 "
Essence of citronella.....	1 "
Water.....	17 "

Mix.—*National Druggist.*

WITCHHAZEL PILE OINTMENT.

Lanolin.....	4 oz.
Petrolatum.....	12 "
Glycerin.....	8 "
Distilled extract witchhazel.....	4 "

Tannin.....	2 dr.
Opium, powdered.....	2 "

Mix the lanolin and petrolatum; add the glycerin in which the tannin has been dissolved; then rub the extracts and opium with the distilled witchhazel, and incorporate with the ointment.—*Bulletin of Pharmacy.*

A NEW AND EFFECTIVE LAXATIVE.

Leube (*Pharmaceutische Centralhalle*) recommends the following:

Rhubarb in powder.....	1 oz.
Sodium sulphate, anhydrous.....	4 "
Sodium bicarbonate.....	4 scr.
Essence of peppermint.....	10 drops.

M. A teaspoonful in a glass of water at night on retiring.

LICHTNING IODINE LINIMENT.

Iodine.....	10 gr.
Camphor.....	75 "
Oil rosemary.....	25 "
Chloroform.....	100 "
Alcohol.....	600 cc.

Dissolve and add

Tincture opium.....	75 "
Ammonia.....	enough to make 1000 "

Put up in amber, rubber-stoppered vials.—*F. Edel, in Bulletin of Pharmacy.*

INDELIBLE INKS FOR METAL AND GLASS.

Schoebel, in the *Fortschritte der Medizin*, recommends the following inks for labeling glassware, metal, etc.:

Black.—Sodium silicate, 1 to 2 parts; liquid India-ink 1 part.

White.—Sodium silicate, 3 to 4 parts; Chinese white (Windsor & Newton's), 1 part. Barium sulphate may be used instead of Chinese white, in the same proportion.

The bottles containing these inks should be kept air-tight, and, of course, should be thoroughly shaken before using. Steel pens may be used for writing with these preparations. The editor of the *National Druggist*, from which this extract is taken, says that he has long used India-ink in silicate of sodium solution for marking microscope slides, etc.

Cure for Dead Beats.

In Corea they may not be very highly civilized, but their collection law seems to work well. A Japanese authority says the Corean law declares as follows: "One who owes money and at the promised time fails to pay it, whether the debt be to his majesty the king, or to another person or persons, shall be beaten two or three times a month on the shin, and the punishment shall be continued until the debt is discharged. If a man die in debt, his relations must pay that debt or be beaten two or three times a month on the shin."

Saccharin is used as a deodorant antiseptic in ozena and ordinary colds.

Photographic Notes

Direct Reproduction of Negatives.

The following, from *Wilson's Photographic Magazine*, is interesting. In 1880 Bolas communicated to the Photographic Society of Great Britain the following process. A bromide of silver gelatine plate is bathed in a 4 per cent. solution of bichromate of potash, then dried. Exposed in a printing frame under a negative, a very delicate positive results. It is washed and developed; here the character of the picture changes rapidly, the clear parts become dark and dense, while the places first colored by the light remain unchanged, appearing light by contrast. After washing it is fixed. Balagny, in 1889, has developed this process still further, and with the best success. He gives the following description of his modification: Both gelatine plates and films may be used. Balagny prefers the latter, because they make closer contact. The following bath is prepared. Water, 1 litre; bichromate of potash, 30 grammes. This keeps well. Before using, 50 C.m. of alcohol of 40° is added. This quantity is sufficient for twelve plates 15 × 21 C.m. The plates should be somewhat larger than the copy, for the negative must have a black margin all around. Each plate is placed into the bath, film side up, for five minutes. If air-bubbles form, they must be removed with a soft brush kept for this purpose. From the bath the plates or films are removed to a very clean plate-glass, face down, and all liquid removed with a squeegee. The backs are wiped with a linen cloth. The films are then placed on a drawing-board, face up, and fastened with wooden pins by the corners. The drawing-board, thus covered with films, is left in the dark room till the latter are dry, when they are removed and kept between blotting-papers under pressure, to prevent curling. First, exposure to light. The negative to be copied is placed in a printing frame supplied with good springs; a black paper mask is so placed upon it as to leave a margin of three-quarters of a millimetre all round. Upon this the bichromatized film is placed, and printed the same as common prints—ten, twenty, thirty minutes in diffused daylight. To avoid fog, the films should not be examined by daylight. Second, light exposure. The printing frame is taken into the dark room, the film taken out and placed into a dish with water. The water must be renewed several times, after which the washing must be continued for ten minutes in running water. Every trace of chrome salt must be removed. So far, by the first light exposure, the bichromate of gelatine has been rendered insoluble in those parts which are clear in the negative. Consequently, these insoluble parts are closed against the developer. The parts protected from the lights have not been changed, and in the half-tones solu-

bility is only partly lost. The soluble bichromate salt has been removed by washing, and there remains a non-affected bromide of silver film in the form of a latent picture. To render this visible is the next move, to accomplish which the film is exposed to diffused light, and then treated with developer. In this way a negative is obtained from a negative, a positive from a positive. To carry this operation through with uniform success, Balagny lays down very positive rules. He says the washing dish must be absolutely clean; the slightest trace of developer causes stains. The film must not be touched with the hands. The plate-glass is to be thoroughly cleaned; a strong stream of water is passed over it, and the film, face down, placed upon it. All air-bells between film and glass are removed with a squeegee; a piece of black paper, soaked in water, is now placed over the film and squeegeed till not a bubble is visible. This is important. The front of the plate-glass is now wiped; it must be perfectly clean. The plate is now exposed to diffused daylight for from two to five seconds, according to the strength of the light. The black paper backing excludes, according to Balagny, all possibility of fog formation, quite common with this process from over-exposure, and the whites remain perfectly pure. Of course, as stated, the plate must be perfectly clean, as any adhering drops of water or impurities would be rendered in the copy. The film is removed from the plate in the dark room, and rinsed with water. The development: The developer is made in the usual way: No. 1—Water, 1 litre; oxalate of potash, 300 grammes. No. 2—Water, 1 litre; sulphate of iron, 300 grammes. For use, three parts of No. 1 are mixed with one part No. 2, adding a small amount of bromide of potash. The film, with a pincte (not the hands), is placed, face up, into a very clean glass dish, and the developer poured on. In a short time the picture develops like a common negative. By retarding development, a much stronger negative than the original is obtained, thus giving greater range. After washing, the fixing is done in five per cent. solution of cyanide of potassium. If hyposulphite of soda is preferred, then the bichromate bath should be used weaker, only about two per cent. strong, to prevent blisters. Balagny prefers cyanide, because it fixes quicker and washes out more readily. After washing a soft brush is passed over the film, to remove all dust-like iron salt. Another fifteen minutes' washing in running water, and the film is ready for the next operation. Glycerin application and drying: To obviate curling, the films are placed, well separated, into a mixture of: water, 1 litre; glycerin, 40 Ccm. It is well to separate the films often, as each must have its full share of glycerin. They must remain two hours in this bath; no harm would follow if they were left twelve, or even twenty-four, hours in it. To dry

them, they are placed, face down, upon a clean glass plate, treated with the squeegee, their backs wiped with a linen cloth, arranged between sheets of thick blotting-paper, which is gently rubbed with the hand, finally, face up, upon a board.—*Archiv. (Photography.)*

Foreign Photographic Formulæ.*

Aluminium for Flashlight.—Dementjeff states that 15 gr. of a mixture of aluminium powder; the so-called aluminium bronze, 1 part; potassium permanganate, 3.45 parts, burns in one-eightieth of a second.

Blue Transparencies.—Bujakowitch recommends the ferro-prussiate process for making blue transparencies. Ferric hydrate is precipitated from a solution of ferric-chloride by the addition of ammonia or caustic soda, the precipitate washed and dried. To prepare the sensitizing solution, 154 gr. of ferric-hydrate are mixed with 230 gr. of oxalic acid and $3\frac{1}{2}$ oz. of hot water. When dissolved the solution is filtered, and it should be kept in the dark. Glass coated with plain gelatine solution, or else old dryplates, may be used; the latter should be thoroughly fixed and washed, and then immersed for three minutes in the sensitizing solution and dried. They require about thirty minutes' exposure in diffused light under a normal negative, and should then be developed with a 10 per cent. to 15 per cent solution of potassium ferricyanide till they show the necessary vigor, and should then be soaked in a 3 per cent. solution of hydrochloric acid for about five minutes, and then well washed and dried.

Glycin and Pyro Developer.—Hertzka warmly recommends a combination of these two developing agents, and suggests the following formulæ:

No. 1.

(a) Water.....	7 oz.
Sodium carbonate.....	308 gr.
Glycin.....	62 "
(b) Water.....	7 oz.
Sodium sulphite.....	618 gr.
Pyrogallol.....	100 "
Sulphuric acid.....	2 to 3 drops.

For use, mix equal parts of a, b, and water. This gives soft results, specially suitable for portrait work.

No. 2.

(a) Water.....	7 oz.
Potassium carbonate.....	124 gr.
Glycin.....	31 "
(b) Pyro solution as in No. 1.	

For use, mix as directed for No. 1. This gives negative of greater density and great clearness, which are especially suitable for platinum printing.

No. 3.

(a) Same as in No. 2, but with 61 gr. of potassium carbonate in addition.	
(b) Same as in No. 1.	

Mix as in No. 1. This is very suitable for instantaneous work.

Increase of alkali produces more details in the shadows and lessens the intensity

* From Eder's *Jahrbuch*.

of the high lights, thus giving soft negatives. This should be used, then, for instantaneous work or under-exposure. Increase of glycin and pyro produces denser high lights and more contrast, and this will be useful for over-exposure and flat subjects. Dilution of the developer with water also gives softness. Old developer acts as a good restrainer, producing clearness, and is useful also in case of over-exposure.—*Pharmaceutical Journal*.

Advertising Axioms.

By J. WALTER THOMPSON, of New York.

"The better the day, the better the deed." The better the "ad.," and the better the mediums used, the better the results.

If you have something that the people need, advertise "with courage and faith," and the people at home and abroad will respond to your profit.

Do not forget that an advertisement in "perpetual motion," if it is good, will wear its way into the people's memory with consequent results to you.

Here is a suggestion—"Make your advertisement an argument deriving its force from the situation, and present it clearly to all to whom it is addressed."

By advertisers I mean those who know that advertising well done is bound to bring results; by business men I mean a very large class of manufacturers who are "poor in the midst of great wealth," i.e., of possibilities of development.

Turpentine.

"Alas! for the future of the American turpentine industry," says *The Garden and Forest*. The long leaf pine belt of the South is being rapidly destroyed by the lumbermen and turpentine workers, both of whom conduct their business on what has been bluntly but properly termed the "robbing system." "Every evening," says the writer, "the sky is illumined by a dull red glare." The track of the turpentine workers is marked by a barren waste. The turf workers allow the fires to run through the tracks they have worked, and the resin on the scarified surface of the trees burns like paraffine. A spark is followed at once by a blaze which sweeps off thousands of acres of trees. The annual yield is 340,000 casksof spirits of turpentine and 1,490,000 barrels of resin, and to get this 2,500,000 acres of pine forest are being worked, and nearly 1,000,000 acres of forest primeval are being invaded annually. It is calculated that the long-leaf pine belt covers an area of 130,000 square miles, but the reckless cutting and tapping of trees has already caused a decline in the production, and the writer says significantly that the workers will find it more profitable in the long run to change their ways and work the forests "for fifty years instead of five."

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I have written a 700-page book called "Good Advertising." I have put into it exactly the information that I know will be valuable to every business man who reads it. My book is just as practical as it seems possible to make any book. It contains a pound of fact to every grain of theory.

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Most druggists know a drug store is not very easy to advertise. In my book I have, I believe, made it perfectly clear that any druggist can do more business if he follows my advice, and advertises in the way I have set forth.

My book will appear about February 1st. The price is \$5.

Anyone who sends me \$5 NOW for the book may have as a premium both a three months' subscription to "Brains," and a six months' subscription to "Printers Ink." "Brains" is a splendid paper, devoted altogether to retail advertisers; the regular subscription price is \$4 a year; "Printers Ink" is perhaps the highest authority on advertising that is published, and the subscription price is \$5 a year. This offer means that for \$5 sent NOW, you will get \$4.50 worth of the best advertising literature.

If you do not want to pay in advance, send me an order now to send you the book when it is published, and I will mail you a coupon entitling you to "Brains" for three months, or to "Printers Ink" for six months—take your choice.

After Feb. 1st there will be no premiums. The price will be \$5 straight.

Anyone who thinks that the book isn't worth \$5 may have his money back if he returns the book within ten days after its receipt.

Charles Austin Bates,

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My business is to plan, write, and illustrate advertising of every kind, and to give advice to advertisers. I usually charge \$1 a piece for unillustrated retail ads., or \$1.50 for one ad. and one cut. Sometimes I can make the price a little less, and sometimes I have to make it more. Write to me and I will give you definite figures. I refer to the editor of THE CANADIAN DRUGGIST.



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Ointments.

By R. H. MITCHELL.

When the 1885 Pharmacopœia was published the paraffins had become well established as ointment bases, but it is now admitted that sufficient discrimination was not exercised in their introduction into official formulæ. Hydrated wool-fat now holds a somewhat similar position, and it is to be hoped that the same mistake will not be made with this base.

Ung. Acid. Boric.—This ointment is anything but satisfactory, prepared by the B.P. method. It is much too hard for use in this country. A better preparation could be made by using five parts soft and one part hard paraffin, instead of four and two parts as ordered. Many surgeons prefer an even softer ointment, and for this reason I should suggest ung. acid. boric. molle to be made the same strength, with white soft paraffin.

Ung. Acid. Carbolici.—The same remarks *re* hardness apply to this ointment; but there is a more serious objection, and that is the strength. The B.P. ointment is too strong, and this is the cause of the dangerous crystallization that takes place. I would suggest that the strength be reduced to 1 in 30, as recommended by Squire, and the paraffins be used in the proportion of three soft to one hard.

Ung. Acid. Carbol. Molle. prepared with soft paraffin, might also be introduced, as it is largely used by surgeons for smearing on the hands and instruments when conducting operations.

Ung. Acid. Salicylic. would be better if made with lard.

Ung. Aconitin., Antim. Tart and Atropin. do not call for particular mention, except that rubbing the antim. tart. with glycerin produces a smooth ointment.

Ung. Belladonna.—Neither the medical profession nor the public has taken very kindly to the color of this ointment. As an ointment it is satisfactory; but an equally good ointment could be made by using an alcoholic extract from the leaves.

Ung. Cantharidis.—The process for the preparation of this ointment is tedious, and, as it is seldom called for, Squire's suggestion of a liq. canthar. concent. c. acetic. æther. might with advantage be adopted, and the ointment be made as required.

Ung. Cetacci.—The benzoin should be omitted from this, as it frequently causes irritation. A writer in the *Pharm. Jour.* recommends the Greek formula, which consists of equal parts of spermaceti, white wax, and olive oil. This may be all right for Athens, but in Liverpool it is more suitable as a base for wax candles than an ointment.

Ung. Chrysarobin.—The formula for this does not always yield a smooth ointment. The ointment I have here has the formula:

Chrysarobin 20 grs.
Glycerin 60 minims.
Benzoated lard 1 oz. avoird.

Rub the chrysarobin smooth with the glycerin and add the lard melted. The result is eminently satisfactory.

Ung. Conii requires no alteration.

Ung. Creasoti, Elemi, Eucalypti, and **Galle** are recommended for omission. The omission of the latter two would be a mistake. Ung. eucalypti would be better made weaker and softer.

Ung. Hydrarg.—The ointment I have here is made from Mr. Gerrard's suggested formula:

Take of
Mercury 2 parts.
Hydrated wool fat 2 parts.
Benzoated lard 1 "

I find, however, that it is better to melt the wool fat and lard and add to the mercury, instead of first mixing half the base with the mercury and then adding the other half. The result is a satisfactory ointment which is easily made at the dispensing counter and should keep well. This ointment should be called ung. hydrarg. fort., or strong mercurial ointment, and a diluted ointment known as ung. hydrargyri, or ung. hydrargyri mitius (English mercurial or blue oint.) should be introduced. The formula might be ung. hy. fort. 1 part, adeps benz. 2 parts. This I suggest not merely for economic reasons, but for medical reasons. If the B.P. preparation is sold for mercurial or blue ointment, it is apt to cause mercurialism and serious harm to the patient, or to the unsuspecting public in the habit of using such a preparation. Many doctors, too, are in the habit of ordering a milder ointment, so that it is advisable to have an authoritative formula.

Ung. Hydrargyri Co. is recommended for omission, but, as far as I can learn, it is still largely used by some practitioners. It is best made as suggested by Squire, viz., by melting all the ingredients together.

Ung. Hydrarg. Nitrat. is satisfactory. If the mild form be made with lard or simple ointment it would be a better formula from the medical point of view, and would, I fancy, not be so liable to discoloration.

Ung. Hydrarg. Oxid. Flav. should be introduced, as it is principally used for painting the eyelids for corneal ulceration. The following formula would be applicable:

Hydrarg. ox. flav 5 grs.
Paraff. molle 1 oz.

Ung. Hydrargyri Oxid. Rubr.—A little temper of criticism has centred round the B.P. formula for this ointment. Mr. Gerrard says that it is "bad, both medically and pharmaceutically," and that it can only be got smooth by making small portions and wasting much time over the final mixing. Certainly it is anything but an ideal formula; but it is not so bad as that. Medically, there is not much wrong with it, as it is used principally as a parasiticide and to check putrefaction in wounds, so that a non-absorbent

base is not inadvisable. The sample I have here is from the formula:

Hydrarg. ox. rub. 124 grs.
Paraffin. dur. 3 ozs.
Paraffin. moll. 13 "

This is the same strength as B.P., but the paraffins are 3 to 13 instead of 4 to 12.

Ung. Ichthyoli. This I should recommend as an addition. It is very largely prescribed by some physicians. I should suggest:

Sulphoichthyolate of ammonium. 50 grs.
Hydrous wool-fat 1/2 oz.
Benzoated lard 1/2 "

Ung. Iodoform.—Keeps better if made with lard and soft paraffin, and it is a better ointment medically.

Ung. Picis Liq.—A writer in the *Pharmaceutical Journal* says: "This is a faultless ointment, retaining its consistent softness," etc. I think this writer must live in a warmer climate than I have been accustomed to. My experience leads me to say that this ointment is much too stiff. Squire substitutes half of the wax with almond oil, and Mr. Gerrard with hydrous wool-fat. I have here samples of both ointments, and you will agree with me, I think, that Mr. Gerrard's formula is the most suitable.

Ung. Plumbi Aet., Plumbi Carb., and **Pol. Sulphurat.** it is proposed to delete. The two former are not much used, but still they are worthy of a place in the B.P. The latter is used fairly frequently in some parts, and, if made fresh from the formula here suggested, leaves nothing to be desired:

Potass sulphurata 30 grs.
Rectified spirit 40 mss.
Benzoated lard 1 oz.

Powder the sulphurated potash, rub smooth with the spirit, and add the melted lard. Rub in a mortar till cool.

Ung. Plumbi. Olent. I think this would be a desirable addition. The formula most favored is Kaposi's, viz., lead plaster 1, soft paraffin 1.

Ung. Resine.—This ointment, like ung. hydrarg. oxid. rub., is a constant source of annoyance. It is absurdly stiff. The ointment I have here is from the formula:

Resin 8 ozs.
Yellow wax 4 "
Olive oil 16 "

This is a little stronger in resin than the B.P., being 2 in 7 against 2 in 7 1/2.

Ung. Sabine.—It is proposed to delete. If deleted it would be advisable to substitute an ointment made with the oil and benzoated lard.

Ung. Sambuci Viride might be introduced; but I have not come across a really satisfactory formula, and the commercial samples all show a tendency to bleach. This is a pity, because it is in frequent, popular demand for cracked nipples, and is sometimes prescribed for such.

Ung. Simplex.—Unsatisfactory; being lumpy, too hard in cold weather, and apt to become rancid. This rancidity is probably caused by too much stirring and beating, to form a white ointment. I

* Read at meeting of Liverpool Phar. Students' Society.

have not seen a satisfactory solution of this difficulty; but I would not on that account delete the ointment or substitute ung. rose (as suggested by Mr. Gerrard) for it. It might with advantage be made softer. This sample is made with half the quantity of wax.

Ung. Staphisagriae.—This a very unscientific formula. The expressed oil should be used.

Ung. Sulphuris.—Those who have made this with sulph. precip. will readily appreciate the improvement in the appearance and the ease of manipulation.

Ung. Sulph. Iodid.—As this ointment is used chiefly for acne, I think a more absorbent base, as benzoated lard, is preferable to the paraffins; and I should suggest that 40 minims of S.V.R. be added to each ounce to rub down the sulphur iodide with. The difference in smoothness, if this is done, is most marked. Mr. Pratt, of Belfast, recommends dissolving the sulphur and iodine in the base; but this does not appeal to me as an up-to-date method.

Ung. Terebinthinae is recommended for deletion, but it is sometimes prescribed.

Ung. Veratrinae.—The base of paraffin in this is a mistake. I should recommend adeps benz. and hydrous wool-fat, equal parts.

Ung. Zinci and *Zinci Oleat.* are satisfactory.

In concluding these notes, I do not lay claim to any great originality, except in the case of ung. canthar. I have not suggested any changes that I have not tried and found to answer in practice. I have brought them before you with a two-fold object—first, to raise a discussion, in which may be elicited some points that may prove useful to the compilers of the forthcoming Pharmacopœia, and, second, to simplify the formulæ, so that every pharmacist can make all his own ointments with the least possible trouble. In doing this, I have cut my paper down as far as possible to leave time for discussion.—*British and Colonial Druggist.*

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.

We congratulate our esteemed contemporary, *The National Druggist* (St. Louis, Mo.), on its energetic action in producing its December issue, although burned out, "lock, stock, and barrel," on the morning of December 2nd. Fire has twice made sad havoc with our contemporary's edition when just ready for mailing, but the elements cannot "down" the enterprise and push of such a concern as *The National Druggist Publishing Company.*

A Note from "Borine."

We constantly see in the medical journals how we intend to check the substitution of drugs. Naturally, when a physician prescribes a certain remedy he expects to get it, and no other. As pharmaceutical chemists, we want to stand by the druggist, do the advertising for him, and let him reap the profit.

In providing him with our preparation, we feel quite certain that the charge of substitution can never be brought against him. What the entire medical profession in all its branches has been looking for is an antiseptic that shall be a thorough germicide and prophylactic, with no toxic or irritating qualities, and adapted to both external and internal use. Such a one we offer you in Borine, composed of the active constituents of benzoin, wintergreen, meadow sweet, golden rod, witch hazel, combined with the stearoptenes of wild thyme, eucalyptus, peppermint, and boracic acid.

We want you to use it personally, and thus be able to speak to your clients from your own experience that it fulfils all that is justly claimed for it.

As a mouth and tooth wash it will inflict no injury upon the teeth. It is a safe and reliable preventive for all affections of the tongue, teeth, and gums in both adults and children. It is indeed the ideal antiseptic.

In affections of the nose and throat, rhino-laryngologists term it a *specific*. In gynecological practice, Borine used as a douche, one tablespoonful to the pint of water in health or disease, will prove to be of most lasting benefit.

Tanglefoot—Reduction in Price.

The annual revision of the price of Tanglefoot has again been made, and the manufacturers are pleased to state to the retail trade that, owing to the favorable contracts made for raw material, new methods of production, and principally to the unprecedented demand and output of last summer, they can announce a reduction of 75 cents per case in "Regular," and 40 cents per case in "Little."

The prices to rule for 1896 will be:

"Regular" size—Less than one case, 45 cents per box; one to five cases, \$4 per case; five cases, \$3.75 per case.

"Little" Tanglefoot—Less than one case, 18 cents per box; one case, \$2.10 per case.

There is probably now no small article so profitable to the retailer as Tanglefoot, and hardly one other which receives a more hearty support from the retailer.

PHARMACISTS in France are forbidden to dispense prescriptions unless they be signed with the full surname of a medical man. A pharmacist has just been fined for dispensing a prescription with a counterfeited signature, this signature being written in an illegible style.

Books

SAMANTHA IN EUROPE. By Josiah Allen's Wife (Marietta Holley). Published by Funk & Wagnalls Company, New York. This book is one of those very readable ones which, while designed to amuse and edify, cannot fail to instruct. There is so much in it of actual life as we meet it every day, and, at the same time, told in a way which gives it a peculiar relish, that it makes the whole account of the travels of this wonderful company of travellers through Europe a most entertaining volume. We would advise our readers to procure a copy of the book; it will prove a decided diversion from the tedium of the business man.

HANDBOOK OF PHARMACY; embracing the theory and practice of pharmacy and the art of dispensing, for students of pharmacy and medicine, practical pharmacists, and physicians. By Virgil Coblenz, Ph. G., Phil. D., F.C.S., etc.; Pro-

WANTS, FOR SALE, ETC.

Advertisements under the head of Business Wanted, Situations Wanted, Situations Vacant, Business for Sale, etc., will be inserted once free of charge. Answers must be sent in care of this office unless postage stamps are forwarded to re-mail replies.

WANTED.

WANTED—SET OF MODERN DRUG FIXTURES, second-hand; must be good. "A," care CANADIAN DRUGGIST.

DRUG BUSINESS WANTED IN A LIVE TOWN or village; stock to invoice about four thousand, for which cash will be paid; correspondence confidential. Address, "Chemical," care of CANADIAN DRUGGIST.

A Few Reasons WHY

DRUGGISTS SHOULD HANDLE

Dr. Story's 5-Minute Headache Cure:

First.—Merck says the formula cannot be improved.

Second.—10 cents is the popular price.

Third.—Out of 48 dailies, Ontario, we have a six-inch display and readers in thirty; will have all in 60 days.

Fourth.—We protect the druggist in that we never sell or allow our goods sold to Department, Dry-goods, or Grocery stores.

Fifth.—The immense profit.

KINDLY SEND AN ORDER TO

J. A. Kennedy & Co., London,

for 1 Gross of Dr. Story's 5-minute headache cure, at \$5.70 a gross, or 50c. a dozen.

Get ready for the boom. Don't wait, as this journal says, till you have a dozen calls, and your neighbor gets the benefit of the advertising.

STORY MEDICINE CO.
Cleveland, Ohio.



Ave Maria

The latest Aristocratic, Fascinating Perfume is creating a furore in the hearts of American Society.

Up-to-date Ideas in Perfumes Pay

One Oz. Glass Str. Bottle, 2 in Box, \$4.80
 " " Screw Top " 1 " " 5.00
 Two " " " " 1 " " 8.00

SEND IN YOUR ORDER. EASILY SOLD.
 SATISFACTION GUARANTEED.

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DETROIT, MICH. WINDSOR, ONT.

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Corrected to January 10th, 1896.

The quotations given represent average prices for quantities usually purchased by Retail Dealers. Larger parcels may be obtained at lower figures, but quantities smaller than these named will command an advance.

ALCOHOL, gal.....	\$4 37	\$4 65	Powdered, lb.....	\$ 30	35	Myrrh, lb.....	\$ 45	\$ 48
Me, hyl.....	1 90	2 00	CARBON, Bisulphide, lb.....	17	18	Powdered, lb.....	55	60
ALIS ICE, lb.....	13	15	CARMINE, No. 40, oz.....	40	50	Opium, lb.....	3 80	4 00
Pow dered, lb.....	15	17	CASTOR, Fibre, lb.....	20 00	20 00	Powdered, lb.....	5 50	5 75
ALOIN- oz.....	40	45	CHALK, French, powdered, lb...	10	12	Scammony, pure Resin, lb....	12 80	13 00
ANODYNE, Hoffman's bot., lbs...	50	55	Precip., see Calcium, lb.....	10	12	Shellac, lb.....	40	45
ARROWROOT, Bermuda, lb.....	50	55	Prepared, lb.....	5	6	Bleached, lb.....	45	50
St. Vincent, lb.....	15	18	CHARCOAL, Animal, powd., lb...	4	5	Spruce, true, lb.....	30	35
BAL AMI, Fir, lb.....	40	45	Willow, powdered, lb.....	29	25	Tragacanth, flake, 1st, lb...	75	80
Copaiba, lb.....	65	75	CLOVE, lb.....	16	17	Powdered, lb.....	1 00	1 10
Peru, lb.....	3 75	4 00	Powdered, lb.....	17	18	Sorts, lb.....	45	65
Tolu, can or less, lb.....	80	85	COCHINEAL, S.G., lb.....	40	45	Thus, lb.....	8	10
BAK, Barberrry, lb.....	22	25	COLLODION, lb.....	75	80	HEBEN, Althea, lb.....	27	30
Bayberry, lb.....	15	18	Cantharidal, lb.....	2 50	2 75	Bitterwort, lb.....	36	40
Buckthorn, lb.....	15	17	CONFECTION, Senna, lb.....	40	45	Burdock, lb.....	16	18
Canella, lb.....	15	17	Creosote, Wood, lb.....	2 00	2 50	Honeset, ozs, lb.....	15	17
Cascara, Sagrada.....	25	30	CUTTLEFISH BONE, lb.....	25	30	Catnip, ozs, lb.....	17	20
Cascarilla, select, lb.....	18	20	DEXTRINE, lb.....	10	12	Chiretta, lb.....	25	30
Cassia, in mats, lb.....	18	20	DOVER'S POWDER, lb.....	1 50	1 60	Coltsfoot, lb.....	20	30
Cinchona, red, lb.....	60	65	ERGOT, Spanish, lb.....	75	80	Feverfew, ozs, lb.....	53	55
Powdered, lb.....	65	70	Powdered, lb.....	90	1 00	Grindelia robusta, lb.....	45	50
Yellow, lb.....	35	40	Ergotin, Keith's, oz.....	2 00	2 10	Horehound, ozs., lb.....	18	20
Pale, lb.....	40	45	EXTRACT, Logwood, bulk, lb....	15	14	Jaborandi, lb.....	45	50
Elm, selected, lb.....	18	20	Pounds, lb.....	14	17	Lemon Balm, lb.....	38	40
Ground, lb.....	17	20	FLOWERS, Arnica, lb.....	15	20	Liverwort, German, lb.....	38	40
Powdered, lb.....	20	28	Calendula, lb.....	55	60	obelia, ozs, lb.....	15	20
Hemlock, crushed, lb.....	18	20	Chamomile, Roman, lb.....	25	30	Motherwort, ozs., lb.....	20	22
Oak, white, crushed lb.....	15	17	German, lb.....	40	45	Mullein, German, lb.....	17	20
Orange peel, bitter, lb.....	15	16	Elder, lb.....	20	22	Pennyroyal, ozs., lb.....	18	20
Prickly ash, lb.....	35	40	Lavender, lb.....	12	15	Peppermint, ozs., lb.....	21	22
Sassafras, lb.....	15	16	Rose, red, French, lb.....	1 60	2 00	Rue, ozs., lb.....	30	35
Soap (quillaya), lb.....	13	15	Rosemary, lb.....	25	30	Sage, ozs., lb.....	18	20
Wild cherry, lb.....	13	15	Saffron, American, lb.....	65	70	Spearmint, lb.....	21	25
BEANS, Calabar, lb.....	45	50	Spanish, Val'a, oz.....	1 00	1 25	Thyme, ozs., lb.....	18	20
Tonka, lb.....	1 50	2 75	GELATINE, Cooper's, lb.....	75	80	Tansy, ozs., lb.....	15	18
Vanilla, lb.....	6 00	8 50	FRENCH, white, lb.....	35	40	Wormwood, oz.....	20	22
BERRIES, Cubeb, sifted, lb.....	30	35	GLYCERINE, lb.....	22	25	Verba Santa, lb.....	38	44
powdered, lb...	35	40	GUARANA.....	200	2 25	HONEY, lb.....	13	15
Juniper, lb.....	7	10	Powdered, lb.....	2 25	2 50	HORS, fresh, lb.....	20	25
Ground, lb.....	12	14	GUM ALOES, Cape, lb.....	18	20	INDIGO, Madras, lb.....	75	80
Prickly ash, lb.....	40	45	Barbadoes, lb.....	30	50	INSECT POWDER, lb.....	25	28
BUDS, Balm of Gilead, lb.....	55	60	Socotrine, lb.....	65	70	ISINGLASS, Brazil, lb.....	2 00	2 10
Cassia, lb.....	25	30	Asafetida, lb.....	40	45	Russian, true, lb.....	6 00	6 50
BUTTER, Cacao, lb.....	75	80	Arabic, 1st, lb.....	65	70	LEAF, Aconite, lb.....	25	30
CAMPHOR, lb.....	80	85	Powdered, lb.....	75	85	Bay, lb.....	18	20
CANTHARIDS, Russian, lb.....	1 40	1 50	Sifted sorts, lb.....	40	45	Belladonna, lb.....	25	30
Powdered, lb.....	1 50	1 60	Sorts, lb.....	25	30	Buchu, long, lb.....	50	55
CAPSICUM, lb.....	25	30	Benzoin, lb.....	50	1 00	Short, lb.....	20	22
			Catechu, Black, lb.....	9	20	Coca, lb.....	35	40
			Gamboge, powdered, lb.....	1 20	1 25	Digitalis, lb.....	15	20
			Guaiaac, lb.....	50	1 00	Eucalyptus, lb.....	18	20
			Powdered, lb.....	90	95	Hyoscyamus.....	20	25
			Kino, true, lb.....	2 00	2 25	Matico, lb.....	70	75

Senna, Alexandria, lb.	\$ 25	\$ 30	Queen of the Meadow, lb.	\$ 18	\$ 20	Valerianate, oz.	\$ 55	\$ 60
Tinnevely, lb.	15	25	Rhatany, lb.	20	30	AMYL, Nitrite, oz.	16	18
Stramonium, lb.	20	25	Rhubarb, lb.	75	2 50	ANTINERVIN, oz.	85	00
Uva Ursi, lb.	15	18	Sarsaparilla, Hond, lb.	40	45	ANTIKAMNIA.	1 25	1 30
LEECHES, Swedish, doz.	1 00	1 10	Cui, lb.	50	55	ANTIPIRYN, oz.	1 10	1 20
LICORICE, Solazzi.	45	50	Senega, lb.	55	65	ARISTOL, oz.	1 85	2 00
Pignatelli.	35	40	Squill, lb.	13	15	ARSENIC, Donovan's sol., lb.	25	30
Grasso.	30	35	Stillingia, lb.	22	25	Fowler's sol., lb.	10	13
V & S—Sticks, 6 to 1 lb., per lb.	27	30	Powdered, lb.	25	27	Iodide, oz.	50	55
" Purity, 100 sticks in box	75	75	Unicorn, lb.	38	40	White, lb.	6	7
" Purity, 200 sticks in box	1 50	1 50	Valerian, English, lb. true.	20	25	ATROPINE, Sulp. in 1/2 ozs. Soc., oz.	6 00	6 25
" Acme Pellets, 5 lb. tins	2 00	2 00	Virginia, Snake, lb.	40	45	BISMUTH, Ammonia-citrate, oz.	35	40
" Lozenges, 5 lb. tins.	2 00	2 00	Yellow Dock, lb.	15	18	Iodide, oz.	50	55
" Tar, Licorice, and Tolu, 5 lb. tins	2 00	2 00	RUM, Bay, gal.	2 50	2 75	Salicylate, oz.	20	25
LUPULIN, oz.	30	35	Essence, lb.	3 00	3 25	Subcarbonate, lb.	1 75	2 00
LYCOPodium, lb.	70	80	SACCHARIN, oz.	1 25	1 50	Subnitrate, lb.	1 40	1 60
MACG, lb.	1 20	1 25	SEED, Anise, Italian, sifted, lb.	13	15	BORAX, lb.	7	8
MANNA, lb.	1 60	1 75	Star, lb.	35	40	Powdered, lb.	3	9
Moss, Iceland, lb.	9	10	Burdock, lb.	30	35	BROMINE, oz.	8	13
Irish, lb.	9	10	Canary, bag or less, lb.	5	6	CADMIUM, Bromide, oz.	20	25
MUSK, Tonquin, oz.	46 00	50 00	Caraway, lb.	10	13	Iodide, oz.	45	50
NUTGALLS, lb.	21	25	Cardamom, lb.	1 25	1 50	CAFFEINE, oz.	60	65
Powdered, lb.	25	30	Celery	25	30	Citrate, oz.	60	65
NUTMEGS, lb.	1 00	1 10	Colchicum	50	60	CALCIUM, Hypophosphite, lb.	1 50	1 60
NUX VOMICA, lb.	10	12	Coriander, lb.	10	12	Iodide, oz.	95	1 00
Powdered, lb.	25	27	Cumin, lb.	15	20	Phosphate, precip., lb.	35	38
OAKUM, lb.	12	15	Fennel, lb.	15	17	Sulphide, oz.	5	6
OINTMENT, Merc., lb. 1/2 and 1/2.	70	75	Fennugreek, powdered, lb.	7	9	CERIUM, Oxalate, oz.	10	12
Citrine, lb.	45	50	Flax, cleaned, lb.	3 1/2	4	CHINIDINE, oz.	15	18
PARALDEHYDE, oz.	20	22	Ground, lb.	4	5	CHLORAL, Hydrate, lb.	1 25	1 30
PEPPER, black, lb.	12	13	Hemp, lb.	5	6	Croton, oz.	75	80
Powdered, lb.	15	16	Mustard, white, lb.	11	12	CHLOROFORM, lb.	60	1 00
PITCH, black, lb.	3	4	Powdered, lb.	15	20	CINCHONINE, sulphate, oz.	25	30
Ergundy, true, lb.	10	12	Pumpkin	25	30	CINCHONIDINE, Sulph., oz.	15	20
PLASTER, Calcined, bbl. cash	2 25	3 25	Quince, lb.	65	70	COCAINE, Mur., oz.	6 00	7 00
Adhesive, yd.	12	13	Rape, lb.	8	9	CODEIA, 1/2 oz.	70	75
Belladonna, lb.	65	70	Strophanthus, oz.	50	55	COLLODION, lb.	65	70
Galbanum Comp., lb.	80	85	Worm, lb.	22	25	COPPER, Sulph., (Blue Vitriol) lb.	6	7
Lead, lb.	25	30	SEIDLITZ MIXTURE, lb.	25	30	Iodide, oz.	65	70
POPPY HEADS, per 100.	1 00	1 10	SOAP, Castile, Mottled, pure, lb.	10	12	COPPERAS, lb.	1	3
White, lb.	3 1/2	4	White, Conti's, lb.	15	16	DIURETIN, oz.	1 60	1 65
ROSEORIN, white, oz.	25	30	Powdered, lb.	25	35	ETHER, Acetic, lb.	75	80
ROCHELLE SALT, lb.	28	30	Green (Sapo Viridis), lb.	15	25	Sulphuric, lb.	40	50
ROOT, Aconite, lb.	22	25	SPERMACEIN, lb.	65	70	ENALGINE, oz.	1 00	1 10
Althea, cut, lb.	30	35	TURPENTINE, Chian, oz.	75	80	HYOSCYAMINE, Sulp., crystals, gr.	25	30
Belladonna, lb.	35	30	Venice, lb.	10	12	IODINE, lb.	4 75	5 50
Blood, lb.	15	16	WAX, White, lb.	50	75	IODOFORM, lb.	6 00	7 00
Bitter, lb.	27	30	Yellow.	40	45	IODOL, oz.	1 40	1 50
Blackberry, lb.	15	18	WOOD, Guaiac, rasped	5	6	IRON, by Hydrogen	80	85
Burdock, crushed, lb.	18	20	Quassia chips, lb.	10	12	Carbonate, Precip., lb.	15	16
Calamus, sliced, white, lb.	20	25	Red Saunders, ground, lb.	5	6	Sacch., lb.	30	35
Canada Snake, lb.	30	35	Santal, ground, lb.	5	6	Chloride, lb.	45	55
Cohosh, black, lb.	15	20	CHEMICALS.			Sol., lb.	13	16
Colchicum, lb.	40	45	ACID, Acetic, lb.	12	13	Citrate, U.S.P., lb.	90	1 00
Columbo, lb.	20	22	Glacial, lb.	45	50	And Ammon., lb.	70	75
Powdered, lb.	25	30	Benzoic, English, oz.	20	25	And Quinine, lb.	1 50	3 00
Coltsfoot, lb.	38	40	German, oz.	10	12	Quin. and Stry., oz.	18	30
Comfrey, crushed, lb.	20	25	Boracic, lb.	13	14	And Strychnine, oz.	13	15
Curcuma, powdered, lb.	13	14	Carbolic Crystals, lb.	28	30	Dialyzed, Solution, lb.	50	55
Dandelion, lb.	15	18	Calvert's No. 1, lb.	2 10	2 15	Ferrocyanide, lb.	55	60
Llecampane, lb.	15	20	No. 2, lb.	1 35	1 40	Hypophosphites, oz.	25	30
Galangal, lb.	15	18	Citric, lb.	45	50	Iodide, oz.	40	45
Gelsemium, lb.	22	25	Gallic, oz.	10	12	Syrup, lb.	40	45
Gentian or Genitan, lb.	9	10	Hydrobromic, diluted, lb.	30	35	Lactate, oz.	5	6
Ground, lb.	10	12	Hydrocyanic, diluted, oz. bottles doz.	1 50	1 60	Pernitrate, solution, lb.	15	16
Powdered, lb.	13	15	Lactic, concentrated, oz.	22	25	Phosphate scales, lb.	1 25	1 30
Ginger, African, lb.	18	20	Muriatic, lb.	3	5	Sulphate, pure, lb.	7	9
Po., lb.	20	22	Chem. pure, lb.	18	20	Exsiccated, lb.	8	10
Jamaica, blehd., lb.	27	30	Nitric, lb.	10 1/2	13	And Potass. Tartrate, lb.	80	85
Po., lb.	30	35	Chem. pure, lb.	25	30	And Ammon Tartrate, lb.	80	85
Ginseng, lb.	4 50	4 75	Oleic, purified, lb.	75	80	LEAD, Acetate, white, lb.	13	15
Golden Seal, lb.	75	80	Oxalic, lb.	12	13	Carbonate, lb.	7	8
Gold Thread, lb.	90	95	Phosphoric, glacial, lb.	1 00	1 10	Iodide, oz.	35	40
Hellebore, white, powd., lb.	12	15	Dilute, lb.	13	17	Red, lb.	7	9
Indian Hemp.	18	20	Pyrogallic, oz.	30	35	LIME, Chlorinated, bulk, lb.	4	5
Ipecac, lb.	1 75	2 00	Salicylic, white, lb.	1 00	1 10	In packages, lb.	6	7
Powdered, lb.	2 00	2 25	Sulphuric, carboy, lb.	2 1/2	2 1/2	LITHIUM, Bromide, oz.	30	35
Jalap, lb.	55	60	Bottles, lb.	5	6	Carbonate, oz.	30	35
Powdered, lb.	60	65	Chem. pure, lb.	18	20	Citrate, oz.	25	30
Kava Kava, lb.	40	90	Tannic, lb.	80	85	Iodide, oz.	50	55
Licorice, lb.	12	15	Tartaric, powdered, lb.	35	38	Salic ate, oz.	35	40
Powdered, lb.	13	15	ACETANILID, lb.	75	80	MAGNESIUM, Calc., lb.	55	60
Mandrake, lb.	13	18	ACONITINE, grain.	4	5	Carbonate, lb.	18	20
Masterwort, lb.	16	40	ALUM, cryst., lb.	3	4	Citrate, gran., lb.	35	40
Orris, Florentine, lb.	30	35	Powdered, lb.	3	3	Sulph. (Epsom salt), lb.	1 1/2	3
Powdered, lb.	40	45	AMMONIA, Liquor, lb., .SSo.	10	12	MANGANESE, Black Oxide, lb.	5	7
Pareira Brava, true, lb.	40	45	AMMONIUM, Bromide, lb.	80	85	MENTHOL, oz.	55	66
Pink, lb.	40	45	Carbonate, lb.	14	15	MERCURY, lb.	75	80
Parsley, lb.	30	35	Iodide, oz.	35	40	Ammon (White Precip.)	1 25	1 30
Pleurisy, lb.	20	25	Nitrate, crystals, lb.	40	45	Chloride, Corrosive, lb.	1 00	1 10
Poke, lb.	15	18	Muriate, lb.	12	16	Calomel, lb.	1 00	1 10
						With Chalk, lb.	60	65

essor of Pharmacy and Pharmaceutical Chemistry in the New York College of Pharmacy, Fellow of the Chemical Society of London and Berlin. 2nd edition, revised and enlarged. P. Blakiston, Son & Co., Philadelphia. Price \$3.50.

From such a source we are led to expect a work which will be an indisputable authority on the subjects on which it treats. The first edition, published some what over a year ago, fully met these expectations in giving us a work worthy of its author and a valuable addition to pharmaceutical literature. The present edition has been improved and a chapter on the "Analysis of Urine" and another on the "Applications of the Microscope in Pharmacy" added, making it a still more valuable work for the pharmacist and physician. To the pharmaceutical student also it must prove of great value, and should be his constant companion in his studio.

"THE ART OF COMPOUNDING"; a text-book for students and a reference book for pharmacists at the prescription counter. By Wilbur L. Scoville, Ph.G., Professor of Allied Pharmacy and Director of the Pharmaceutical Laboratory in the Massachusetts College of Pharmacy. P. Blakiston, Son & Co., Philadelphia. \$2.50.

This work is one that must prove of great value to the practical pharmacist. Throughout its 264 pages there is a vast amount of information which, in the form presented, is worth many times the price of the work. Without reviewing the book extensively, we look at the chapter on Prescriptions, which is a very exhaustive one. It treats of the prescription from all standpoints, gives a complete list of Latin terms used, speaks of doses, ethics, and general suggestions for the prescription counter. The chapter on Mixtures contains seventy-eight prescription examples. Pills, powders, lozenges, tablets, etc., are all treated in the same way, and the numerous formulæ given and the explanations with them are one of the leading features. The chapter on Incompatibility is an excellent guide, especially to the student and young pharmacist. The author is well qualified for the work he has undertaken and in which he has succeeded so well.

Magazines.

Canadian Magazine. The number for January is replete with good things. Amongst the leading articles are "The Alaska Boundary" (with map), by R. E. Gosnell; a biographical sketch of Sir Mackenzie Bowell, by J. Lambert Payne, and one of the Liberal leader, Hon. Wilfrid Laurier, by James A. Barron; "Fall of Prices, and the Effect on Canada," by J. B. Peat; "Winchester Cathedral," by T. E. Champion; together with other articles of merit. The number is also liberally illustrated. Subscription price, \$2.50 per annum.

Massey's Magazine. This new monthly has made its appearance, and, if the January number is any criterion of those to follow, we predict for it a success. The general appearance, barring the cover, is good; the typography and paper are first class, and the illustrations fully up to the standard of any of the magazines. Amongst the contributors to this number are Prof. Wm. Clark, D.C.L., G. A. Reid, R.C.A., E. Pauline Johnson, T. M. Macintyre, Ph.D., Charles Gordon Rogers, Ezra Hurlburt Stafford, C. G. D. Roberts, and others. It is published by the Massey Press, Toronto, at the popular price of one dollar per annum.

No one ever thought of introducing so expensive a feature as lithographic color work in the days when the leading magazines sold for \$4 a year and 35 cents a copy. But times change, and the magazines change with them. It has remained for *The Cosmopolitan*, sold at one dollar a year, to put in an extensive lithographic plant, capable of printing 320,000 pages per day (one color). The January issue presents as a frontispiece a water-color drawing by Eric Pape, illustrating the last story by Robert Louis Stevenson, which has probably never been excelled even in the pages of the finest dollar French periodicals. The cover of *The Cosmopolitan* is also changed; a drawing of page length by the famous Paris artist, Rossi, in lithographic colors on white paper, takes the place of the manilla back with its red stripe. Hereafter the cover is to be a fresh surprise each month.

That bright and entertaining magazine for young people, *Frank Leslie's Pleasant Hours for Boys and Girls*, has some particularly good things in its January number. There is a beautifully illustrated article on "The United States Naval Cadet," by Joseph Coblenz Groff, which tells how appointments in Annapolis are secured, and describes the daily life of the cadets; Charles Frederick Holder contributes a splendid short story about some boys who caught sharks for a living; there is an article telling how a boy may build a low-priced iceboat, and learn to sail it, by Wilf. P. Pond; an illustrated New Year's story in verse, by Ethel Hutton; a paper on "Snow Igloos and Images, and How to Make Them," by J. Carter Beard; the continuation of the two serials by Edward S. Ellis and Jeanette H. Walworth; several other short stories, some tricks and puzzles, and the editor's interesting chat on the new books for boys and girls.

The January number of *The Delineator* is called the winter holiday number. The space devoted to *Woman's Work and Advancement* includes a thoughtful conversation between Edith M. Thomas and Dr. S. R. Elliott on "Women in Business"; an interesting paper by Miss Margaret McNaughton, discussing "Architecture as a Profession for Women"; a graphic de-

scription by Lucia M. Robbins of "Woman's Work at the Atlanta Exposition"; Harriet Keith Fobes' directions for "Burnt Decorations upon Cardboard," and the continuation of Sara Miller Kirby's kindergarten articles. The first of a brief series of papers on the care of the teeth, by a well known New York dentist, will be found exceptionally valuable. Mrs. A. B. Longstreet describes the carving of meats, and in *Seasonable Cookery* impromptu luncheon menus receive attention. Subscription price of *The Delineator* \$1 per year, or 15c. per single copy. Address, The Delineator Publishing Company of Toronto, Limited, 33 Richmond street west, Toronto, Ont.

The first magazine for the new year is the brilliant January number of *Frank Leslie's Popular Monthly*, illustrated with more than one hundred up-to-date pictures by the best illustrators of America and Europe. The leading article, upon "Great Ship Canals," by Arthur Vaughan Abbott, C.E., describes the world's principal artificial waterways of the present day, including the new Baltic, the Manchester, and the Corinth canals of Europe, and the Welland, the Sault Ste. Marie, and the Harlem, in America. Albert L. Rawson, the well-known artist and Orientalist, contributes, under the title of "A Bygone Bohemia," a most interesting chapter of reminiscences of the famous coterie of wits, writers, poets, and players who brought celebrity to Pfaff's resort, in New York city, a generation back. Mr. Rawson's article is enriched with some rare and hitherto unpublished portraits, including those of Henry Clapp, George Arnold, Walt Whitman, Richard Realf, Artemus Ward, Mark Twain, Josh Billings, and Petroleum V. Nasby.

Preliminary Examination of Pharmacy Students.

The preliminary Board of Examiners of the Pharmaceutical Association of the Province of Quebec held their quarterly examinations in Montreal and Quebec on Thursday, January 2nd, 1896, seventeen candidates presenting themselves in Montreal and four in Quebec. Of these the following passed upon all subjects, namely, Henri Masecotte, John J. Weinfeld, I.A. Choquette, and Sterling Whiteside. Two of the candidates failed on history, namely, J. Bte. Bisailon and Louis Mayer, and will be required to present themselves again for that subject only.

The case of one of the candidates has been referred to the council for consideration.

The examiners were Prof. A. Leblond de Brumath and Prof. Isaac Gammell.

The next examination will be held on the 2nd day of April. Candidates must file their applications to the secretary, Mr. E. Muir, at least ten days prior to that date.

Iodide, Proto, oz.....	\$ 35	\$ 40	Iodide, oz.....	\$ 40	\$ 43	Geranium, oz.....	\$1 75	\$1 80			
Bin., oz.....	45	30	Salicylate, lb.....	1 75	1 80	Rose, lb.....	3 20	3 50			
Oxide, Red, lb.....	1 15	1 20	Sulphate, lb.....	2 5	5	Juniper berries (English), lb... 4 50	5 00	Wood, lb.....	70	75	
Pill (Blue Mass), lb.....	70	75	Sulphite, lb.....	8	10	Lavender, Chris. Fleur, lb... 3 00	3 50	Garden, lb.....	1 50	1 75	
MILK SUGAR, powdered, lb.....	30	35	SOMNIF., oz.....	85	00	Lemon, lb.....	1 75	1 80			
MORPHINE, Acetate, oz.....	1 55	1 60	SPIRIT NITRE, lb.....	35	65	Lemongrass, lb.....	1 50	1 60			
Muriate, oz.....	1 55	1 60	STRONTIUM, Nitrate, lb.....	18	20	Mustard, Essential, oz.....	60	65			
Sulphate, oz.....	1 55	1 60	STRYCHNINE, crystals, oz.....	80	85	Neroli, oz.....	4 25	4 50			
PEPSIN, Saccharated, oz.....	35	40	SULFONAL, oz.....	40	42	Orange, lb.....	2 75	3 00			
PHENACETINE, oz.....	35	38	SULPHUR, Flowers of, lb.....	24	4	Sweet, lb.....	2 75	3 00			
PHLOCARPINE, Muriate, grain... 35	38		Pure precipitated, lb.....	13	20	Origanum, lb.....	65	70			
PIPERIN, oz.....	1 00	1 10	TARTAR EMEPIC, lb.....	50	55	Patchouli, oz.....	80	85			
PHOSPHORUS, lb.....	90	1 10	THYMOL. (Thymic acid), oz.....	55	60	Pennyroyal, lb.....	2 50	2 75			
POTASSA, Caustic, white, lb.....	60	65	VERATRINE, oz.....	2 00	2 10	Peppermint, lb.....	3 60	3 75			
POTASSIUM, Acetate, lb.....	35	40	ZINC, Acetate, lb.....	20	75	Pimento, lb.....	2 60	2 75			
Bicarbonate, lb.....	15	17	Carbonate lb.....	75	30	Rhodium, oz.....	80	85			
Bichromate, lb.....	14	15	Chloride, granular, oz.....	13	15	Rose, oz.....	7 50	11 00			
Birat (Cream Tart.), lb.....	29	30	Iodide, oz.....	60	65	Rosemary, lb.....	70	75			
Bromide, lb.....	65	70	Oxide, lb.....	13	60	Rue, oz.....	25	30			
Carbonate, lb.....	12	13	Sulphate, lb.....	9	11	Sandalwood, lb.....	5 50	7 50			
Chlorate, Eng., lb.....	18	20	Valerianate, oz.....	25	30	Sassafras, lb.....	75	80			
Powdered, lb.....	20	22	ESSENTIAL OILS.								
Citrate, lb.....	70	75	Oil, Almond, bitter, oz.....	75	80	Savin, lb.....	1 60	1 75			
Cyanide, lb.....	40	50	Sweet, lb.....	50	60	Spearmint, lb.....	3 75	4 00			
Hypophosphites, oz.....	10	12	Amber, crude, lb.....	40	45	Spruce, lb.....	65	70			
Iodide, lb.....	4 00	4 10	Rect., lb.....	60	65	Tansy, lb.....	4 25	4 50			
Nitrate, gran, lb.....	8	10	Anise, lb.....	3 00	3 25	Thyme, white, lb.....	1 80	1 90			
Permanganate, lb.....	40	45	Bay, oz.....	50	60	Wintergreen, lb.....	2 75	3 00			
Prussiate, Red, lb.....	50	55	Bergamot, lb.....	3 75	4 00	Wormseed, lb.....	3 50	3 75			
Yellow, lb.....	32	35	Cade, lb.....	90	1 00	Wormwood, lb.....	4 25	4 50			
And Sod. Tartrate, lb.....	25	30	Cajuput, lb.....	1 60	1 70	FIXED OILS.					
Sulphuret, lb.....	25	30	Capsicum, oz.....	60	65	CASTOR, lb.....	8	10			
PROPYLAMINE, oz.....	35	46	Caraway, lb.....	2 75	3 00	COD LIVER, N.F., gal.....	1 75	2 00			
QUININE, Sulph, bulk.....	32	35	Cassia, lb.....	1 75	1 80	Norwegian, gal.....	2 75	3 00			
Oz., oz.....	36	40	Cedar.....	55	85	COTTONSEED, gal.....	1 10	1 20			
QUINIDINE, Sulphate, ozs., oz.....	16	20	Cinnamon, Ceylon, oz.....	2 75	3 00	LARD, gal.....	90	1 00			
SALICIN, lb.....	75	4 00	Citronelle, lb.....	80	85	LINSEED, boiled, gal.....	62	65			
SANTONIN, oz.....	20	22	Clove, lb.....	1 10	1 20	Raw, gal.....	60	62			
SILVER, Nitrate, cryst, oz.....	90	1 00	Copaiba, lb.....	1 75	2 00	NEATSFOOT, gal.....	1 20	1 30			
Fused, oz.....	1 00	1 10	Croton, lb.....	1 50	1 75	OLIVE, gal.....	1 20	1 25			
SODIUM, Acetate, lb.....	30	35	Cubeb, lb.....	2 50	3 00	Salad, gal.....	7 50	2 60			
Bicarbonate, kgs., lb.....	2 75	3 00	Cumin, lb.....	5 50	6 00	PALM, lb.....	12	13			
Bromide, lb.....	65	70	Erigeron, oz.....	20	25	SPERM, gal.....	1 35	1 40			
Carbonate, lb.....	3	6	Eucalyptus, lb.....	1 50	1 75	TURPENTINE, gal.....	60	65			
Hypophosphite, oz.....	10	12	Fenne, lb.....	1 60	1 75						
Hyposulphite, lb.....	3	6									

Drug Reports.

Canada.

Business during the holiday season is reported as having been very good in staple lines of sundries. During the last months of 1895 many lines of drugs started upward in price, some making high figures, notably cream of tartar, tartaric acid, sal rochelle, glycerin, camphor, and advanced prices are still maintained. With the advent of 1896 others are jumping up. Phenacetine (owing to the advance in raw material, so it is reported) has advanced to 35c. and 38c. per ounce. Quinine, which for some time has been expected to advance, has at least verified the prediction; Howard's is quoted for the present at 42c. in ounces, 40c. in 4 ounces; German 35c. to 37c. Opium is higher also, and worth in the vicinity of \$4. Pot. iodide at present is an uncertain quantity. A new manufacturer has appeared on the scene, and it is intimated the older manufacturers will lower the price to crowd him out. Oil aniseed is higher. Oil lemon is firm. Cod liver oils maintain advanced figures, and are very firm, with signs of higher prices. Caster oil is easier. Balsam Peru much higher. French castille soap is lower, owing to new duty. This does not affect contis white or mottled, as they come from Italy.

Turpentine: On account of very low stocks, higher prices are almost certain. Williams' barbers' bar is on the rebate at \$2.50 per box.

Spermaceti is higher. Gum shellac easier.

England.

London, Dec. 28th, 1895.

At the close of the year the markets are always dull. There has been plenty of business right up to date, and prices have generally been on the up-grade. Iodine is attracting a good deal of attention, and no one knows when the bolt from the blue may be expected. It is certain that the decided reduction in price cannot long be delayed. Chrysophanic acid is much dearer. Balsams of copaiba, Peru and tolu, have increased in value. Carbolic acid has advanced, and santonine, quinine, and opium alkaloids have moved upward. Cream of tartar is sagging. Star anise oil and cassia oil are much dearer, but the market is not very firm.

Essential Oils.

The recent marked increase of price for the popular perfume citronella has been the subject of much comment among the trade, and large consumers especially are anxiously awaiting news regarding the outlook for the coming year. The ad-

vance has been caused mainly by short supply and by an increased demand for the oil among soap-makers. Indications are that 50 cents per pound will be the lowest average price during 1896. As a result other cheaper perfumes are awakening additional interest about this time. Artificial sassafras oil, the price of which is much below that of citronella, and the odor of which is healthful, pleasant, and a favorite with the people, has attracted attention in this connection, and the consumers may expect a change in the odor of many brands they have been buying.

Oil cassia has also increased in price from 75 cents to \$2.50 per pound, caused by the fact that the China market is practically bare of anything but adulterated and low grade oil, and the supply very limited. *American Soap Journal, Jan. 1st.*

Cedrat oil, strictly pure, cannot be had in commerce, but it is quoted as being worth \$65 per pound. Cedrat oil as found in the stores is nothing but a modified lemon oil. Cedrat oil has been shown to contain citral.

Ceylon cinnamon oil invariably contains at least thirty per cent. of the less valuable oil of the leaf, but, in the opinion of Schimmel Brothers, the latter is not added fraudulently, the bark and leaves being habitually distilled together.