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CANADIAN DRUGGIST.

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

Vol. 5.

STRATHROY, NOVEMBER, 1893.

No. 11.

CANADIAN DRUGGIST.

WILLIAM J. DYAS, - Editor and Publisher.

SUBSCRIPTION, \$1 PER YEAR IN ADVANCE.

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The Canadian Druggist is issued on the 15th of each month, and all matter for insertion should reach us by the 5th of the month.

All cheques or drafts to be made payable to the editor. New advertisements or changes to be addressed

CANADIAN DRUGGIST,

STRATHROY, ONTARIO.

ENGLISH OFFICE,

16 Trulock Road, Tottenham,

LONDON, N.

Study and Progress in Pharmacy.

An extract from an address delivered by T. LAUDER BRUNTON, M. D., before the Pharmaceutical Society's School of Pharmacy.

Your studies should not cease when you pass your examinations. They ought to continue throughout your whole life. And I think you are particularly fortunate in having such subjects of study as those which you have chosen, for drugs and their actions and uses are alike interesting to the savage who depends on them for obtaining his food or defending himself from wild beasts, to the romancer of the middle ages, in whose works charms, philtres, and potions played a prominent part, and to the modern novelist, as shown, for example, in 'The Count of Monte Christo.'

The method of preparing drugs for use is always rude at first, and becomes more and more refined as knowledge advances. Primitive man is content to get drunk on simple fermented liquors, but as he becomes civilized he tries to find out the essence or spirit of this liquor, and discovers alcohol. Who first made this grand discovery it is hard to say. According to Christopher North—

"No wonder that the Irish boys should be so free and frisky,

For St. Patrick was the very man who first invented whiskey."

If St. Patrick really did this, he has the priority in point of time, for he flourished in the 4th century, while Albucaeus, who was the first person quoted by Pereira as acquainted with distilling, in Europe at least, only lived in the 12th century.

The crude materials once employed must often have been very disagreeable both to sight and smell. The ingredients of the witches' cauldron mentioned by

Shakespeare are not unfair specimens of the kind of drugs formerly used.—

"Scale of dragon, tooth of wolf,
Witches' mummy, maw and gulf
Of the ravin'd salt sea shark;
Root of hemlock, digg'd i' the dark.
Liver of blaspheming Jew,
Gall of goat, and slips of yew,
Sliver'd in the moon's eclipse,
Nose of Turk, and Tartar's lips;
Finger of birth-strangled babe,
Ditch-delivered by a drab,
Make the gruel thick and slab,
Add thereto a tiger's chaudron,
For the ingredients of our cauldron.
Double, double toil and trouble,
Fire, burn, and cauldron bubble."

The plan here described of measuring the time for which the cauldron should boil is a primitive one, and yet I believe it is still used in the present day. Usually when one wants to boil an egg, one puts it in boiling water and allows it to remain three or four minutes by a watch. But when watches were not so plentiful the time used to be measured by an hour glass, in which the sand slowly ran through a narrow aperture. A still simpler way is to sing or chant a few verses of some song, and I believe this is yet sometimes sometimes done. If the boiling is to be long continued it will make the measure of time more accurate to dance as well as sing, because the rhythm of the song and dance together will tend to fall into the natural rhythm of respiration, which is about sixteen or eighteen a minute. In this way, both Shakespeare's witches and the primitive pharmacists could regulate the time of boiling their drugs pretty precisely without either an hour glass or a watch. For longer periods of preparation the moon was used, and we still have a remnant of this practice in the word "menstruum," so frequently used in place of "solvent," which obtained its name because many drugs were allowed to soak during a whole month in the liquid which was to dissolve out the active part.

In Shakespeare's lines we also find the idea of the month as the time for preparing active substances, although here the preparation consists in the secretion of poison by a "toad which, under the cold stone, days and nights hath thirty-one, sweated venom." There is an object also in catching it asleep, for it would thus have less opportunity of discharging any of the venom contained in the skin before it was popped into the pot. The history of toads and the ideas which have prevailed about them is very instructive, for it shows how the beliefs of one generation may be scouted by another and again re-

established on a firmer footing many years afterwards. I remember reading as a child a story of how King John was poisoned by a friar who dropped a toad into his wine, but sober books of natural history forty or fifty years ago scouted the idea of toads being poisonous at all. A little while ago, however, Dr. Leonard Guthrie sent me an interesting account of a wicked Italian woman whose husband was dying of dropsy. He took so long about it that his wife became tired of the process, and thought that she would help him on. She accordingly caught a toad and put it in his wine, so that he should drink the liquid and die, but instead of doing this, to her astonishment and disgust he completely recovered. Forty years ago this story would have been scouted as equally mythical with that of King John, but now we know that it is precisely what the woman would have expected if she had only been acquainted with the researches of modern pharmacology. For the skin of the toad secretes a poison, the active principle of which—phrynin—has an action very much resembling that of digitalis, which is the remedy, par excellence, for dropsy depending on heart disease. It is quite possible that some of these days we may get some enterprising firm advertising essence of toad as of superlative virtue for the cure of dropsy. In the same way as one formerly laughed at the idea of toads being poisonous at all, one may sneer at the exactitude with which rules were laid down for the collection of herbs, so that the witches were careful to collect the root of the hemlock at night. But the researches of Sachs, and more recently those of Horace Brown, have shown that starch is formed in the leaves of plants during the day and is consumed during the night. I do not know whether a similar process goes on in the root or not, but, if so, a given weight of a plant collected during the night would be more active than the same weight collected during the day. It is just possible, then, that Shakespeare's witches showed more wisdom in their mode of collecting plants than we moderns do, but even if this be so, we are far ahead of them in knowing the active principles to which the plants owe their physiological and remedial action.

It was just about the beginning of the present century that the first alkaloid, morphine, was discovered. And by whom was this discovery made? Not by a man who had all the appliances of a large in-

stitution at his disposal, but by an apothecary in a small German town. It was no doubt isolated previously by a French apothecary, but he did not understand its alkali-like nature, and ascribed its reaction to admixture with alkalis. This apothecary, Serturmer, in the small German town—one might almost say village—not only separated the alkaloid but described its basic properties, recognized its likeness to ammonia, and described the acid—meconic acid—with which it is combined in the poppy. Ever since this discovery the number of alkaloids isolated from plants has been steadily increasing. But of late years chemists have not been content with simply obtaining new alkaloids from plants. They have set to work to make them artificially. Perhaps they have not been quite so successful as had been anticipated, but in the effort to make them numerous bodies have been manufactured, which are becoming of very great use in medicine, so numerous, indeed, are they, and so fast are they increasing, that it is becoming very hard work to keep one's knowledge of them abreast with the times, and a list of new remedies not very many months old is already antiquated.

But great as this department of chemistry is, there is another equally important, which appears to be just coming to the front. I mean the formation of alkaloids in the bodies of animals and of men. We know already that plants frequently contain more than one alkaloid, and that these sometimes have an antagonistic physiological action. Jaborandi, for example contains two alkaloids, pilocarpine and jaborine, which in their action almost completely antagonise each other, so that one might possibly obtain a specimen of jaborandi having little or no physiological action, and yet containing abundance of alkaloid. Others again, such as nuxvomica, contain two alkaloids which, like brucine and strychnine, have a similar action and will assist each other. New alkaloids appear to be formed in the animal body, and these have not always the same physiological action. It would appear, for example, that during the day substances having a morphine-like action are formed more quickly than they are excreted, so that towards night the accumulation of these narcotic bodies tends to produce slumber, and so the individual goes to sleep for the night. But during sleep a different set of substances is produced which have a stimulant action, and as these go on accumulating while the narcotic substances are being excreted, the sleep becomes lighter and lighter, until at last the stimulant action gets the upper hand, and the person awakes. Now it is evident that just as the alkaloids derived from plants may antagonize each other, so the alkaloids formed in the body may more or less completely antagonize the action of alkaloids given as medicines, and indeed experience by the bedside has long ago shown that the best time to give a narcotic is in the evening, when sleep would naturally occur of itself. We have

been accustomed hitherto to look far too exclusively to the action of a drug, forgetting altogether that the result which it produces in a living body is the reaction between the drug itself and the organism. We have to deal not with one factor but with two, and just as the result may be varied by altering the remedy administered, so it may also be changed by altering the body of the recipient. In cases of uremia or of approaching diabetic coma one must always be careful how one gives opium or morphine, because a dose which would otherwise be harmless may tend to bring on profound coma. A great deal has been written lately in the medical papers about death from anaesthetics, and especially from chloroform, and the utmost care is now used to obtain anaesthetics free from impurity, because impurities have been looked upon, and probably rightly, as being responsible for some deaths. But it is quite possible that the impurity, if we may so term it, is not always to be found in the chloroform administered, but actually exists in the body itself in the form of alkaloidal substances which, in combination with chloroform, tend to produce death. Lately Professor Poehl, of St. Petersburg, was visiting this country, and he informed me that in Russia they are now beginning to pay much attention to this subject, and they are now able, by analysing the urine beforehand, to tell whether the administration of chloroform will be dangerous in any case or not. If the quantity of alkaloidal substances which they can precipitate from it is great, the administration of the anaesthetic will almost certainly be risky, whereas if the alkaloidal substances are scanty, the anaesthetic can be administered with perfect safety. In a tolerably large proportion of the deaths recently recorded, the anaesthetic had previously been taken by the same persons with perfect safety. Why death should occur in such persons after a second or third administration has hitherto been a mystery, but it can now be readily understood on the supposition that from indigestion, imperfect action of the liver, or some other cause, the alkaloids were more abundant at the time of the fatal administration than they were on the previous occasions. The idea which is now being worked out in Russia occurred to me several years ago, and therefore some of the experiments made by the Hyderabad Chloroform Commission, of which I was a member, were made with the object of ascertaining whether disease of the kidneys induced by cantharides, or the alteration in tissue change generally which is induced by phosphorus, would render the administration of chloroform more dangerous. The number of these experiments was too small to lead to any positive result, and at that time there was no good method of quickly determining the amount of alkaloidal substances in the urine, although this can now be done with considerable rapidity and approximate accuracy.

Rich fields of new investigation, rich harvests of practical usefulness in reliev-

ing disease and in prolonging life, are rapidly opening out, but how are these to be utilised? In Germany, pharmacological institutes connected with the different universities are fully equipped, and the salaries of the professors and assistants are paid by the State. These institutions contain departments for the chemical investigation of crude substances, of isolated alkaloids, or of manufactured products, and also for the experimental investigation of the physiological action of these substances. It has not unfrequently happened that all the results obtained in an experimental research have been discredited because the drug which the experimenter used was not pure, and a great deal of confusion in regard to the physiological action of the alkaloids of opium has probably been due to various experimenters having worked either with impure alkaloids or with substances which, although bearing the same name, were in reality perfectly different. All this is avoided in Germany by the conjoined action of the chemical and experimental departments in a pharmacological laboratory, but in this country there existed until recently almost no means by which a pharmacological experimenter could be sure that he was really dealing with a pure substance, or even with the substance at all which he supposed himself to be employing. Some years ago, when wishing to demonstrate upon myself the action of nitrite of amyl, I was amazed to find that I inhaled from the bottle which was labelled "Nitrite of Amyl" for several minutes without experiencing the least physiological effect, the reason being that although the drug had been bought as a specimen of nitrite of amyl, it did not contain a single particle of the nitrite. Now, thanks to the liberality of the Pharmaceutical Society, guided by the wisdom of the President and Council, a Research Laboratory has been established which has already done most excellent work, and gives promise of still more in the future. That complicated subject, the alkaloids of aconite, is being unravelled, and Professor Dunstan has prepared pure specimens of the different nitrites which have been tested physiologically by Professor Cash. One great disadvantage under which pharmacological workers in this country previously lay, as compared with those in Germany, is being removed by the formation of a Research Laboratory by the Pharmaceutical Society, and in it men will no doubt be trained who will not only greatly benefit pharmacy, but may supply the want which may ere long be felt of ascertaining the susceptibility of a patient to the action of a drug before its administration. This may no doubt be done, to a considerable extent, by medical men themselves, but medical men are often too busy to give the requisite time. Many of them have not got, and cannot during the intervals of a busy practice acquire, the requisite chemical knowledge, and even when they have the knowledge and the time they may not always have the apparatus or the reagents at their hand, and it will thus, in many instances

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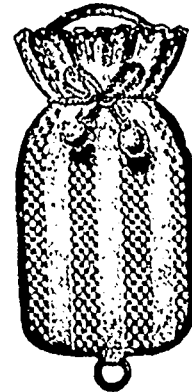
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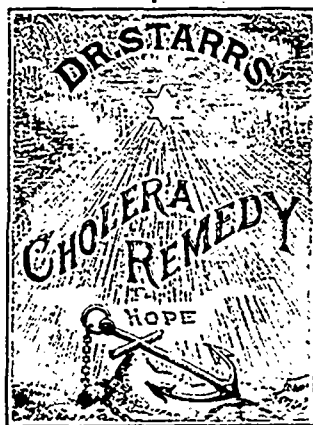
Acid, Carbolic.	Inks of all kinds
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" Hydrocy.	Lime Juice.
" Phos. Dil.	Ulycerine.
Hydrogen, Peroxide.	Lithia Hydrangea.
Iron, Dialized.	Liquor, Buller's.
Liquor, Arsenicalis.	Lotion, Bell's Freckle.
" Bismuth.	" Persian.
" Potas.	" Woolford's Sanitary.
" Plumbl.	" Vegetable.
Ale and Beef.	Magnesia, Fluid.
August Flower.	" Phillip's Milk.
Anti-Dandruff.	Malt Stout.
Balm, Hagen's Magnolia.	Molene.
Balm of Youth.	Mucilage.
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Bloom, Laird's.	Phosphates, Horsford's Acid.
" Peach.	Pond's Extract.
Bovine.	Remet, Carter's.
Bromo Chloralum.	" Eager's.
Carboline.	Sheep Dip, Jeyes'.
Comp., Campbell's Cath.	" Little's.
" L. E. Pinkham's.	Shoe Dressing.
Cream, Gouraud's.	Specifics, Humphrey's.
" Oriental.	Succus Alterans.
" Hind's H. & A.	Viburnum Comp.
Cure, Hall's Catarrh.	Water, Thompson's Eye.
" Sanford's Radical.	" Kellor's Eye.
Extract Malt, Hoff's.	" Mineral Apollinaris.
" Wyeth's.	" Bethel's.
Fluid, Condy's.	" Buffalo Lithia.
" Esset's.	" Friedrichshall.
" Jeyes' Sanitary.	" Hungary Janos.
Food, Murdoch's Liquid.	" Hungary Lazlo.
Hair Dyes and Restorers.	" St. Leon.
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Injection Bron.	" Orange Flower.
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at least, be easier to request the services of a thoroughly trained pharmaceutical chemist who has all the appliances at hand and is daily engaged in chemical operations.

But all this will increase the necessity for extended knowledge, and while extended knowledge will raise the status of the pharmaceutical chemist it will demand a more prolonged curriculum, as well as a steady study of the subjects long after he has passed all his examinations. Such study will be necessary in order to keep you up to the highest standard of your daily work, but I trust you will not be contented with this. Set before you as an example Sertarner, the apothecary of the little German town of Hameln. Utilise the opportunity of learning methods of work given to you during your curriculum of study, utilise the time for work you may have afterwards, and day by day do your utmost that this world may not only be the better but the wiser for having you in it. "Work while it is day," gentlemen, and constantly remember that "the night cometh when no man can work."—*Phar. Journal.*

Movements of Graduates.

H. N. Paekert, gold medallist of class of 1893, is manager of a pharmacy, cor. 18th and Baker sts., Detroit, Mich.

W. A. Simson, class '93, is manager of a pharmacy, Kentville, N. S.

Geo. R. McCuen, of Guelph, and V. Mundy, of Hamilton, both of class of '93, are employed as prescription clerks by Dorgan & Merritt, 61st st. and 9th ave., New York City.

C. E. Brennan, class '93, holds a very lucrative position as manager of a dispensing pharmacy in Brooklyn, N. Y.

Wm. B. Montgomery, late of Gerrard st., cor. Yonge st., Toronto, has accepted a position in New York City.

John M. Spencer, winner of the College silver medal and the Heebner gold medal, class of '93, is in the employ of the Canada Chemical Manufacturing Co. as assistant chemist.

Septimus Ryall, winner of the dispensing medal, class of '93, is now located in Winnipeg.

Geo. T. Maynard, class of '93, was obliged to give up an excellent position in New York City, owing to ill-health, and has returned to his home in Port Hope, Ont.

Chas. H. Allison, class of '93, is managing the retail pharmacy of C. D. Daniel, Chairman of the Education Committee of O. C. P., at the corner of Bleeker and Carlton sts., Toronto.

T. O. Wilkinson, class of '93, is now plying the mortar in the Wooden Nutmeg State, under the Stars and Stripes.

It is only the really busy man who can find time to attend to the demands of others for assistance.

TRADE NOTES.

Manley's drug store, Warton, Ont., is being thoroughly refitted.

Rosebrugh & Co., Yonge st., Toronto, have made an assignment.

Fire and water damaged the drug stock of W. B. Fullerton, Gananoque, last month.

John Hamilton has purchased the drug business of Dr. Standish, of Palmerston, Ont.

L. F. Cutten & Co., of Boissevain, Man., have dissolved partnership, John Bremner retiring.

Winslow Tilley, druggist, St. Marys, N. B., has been burned out. Insurance, \$2,000.

J. E. Defoy, druggist, of Montreal, has made an assignment. Liabilities about \$2500.

There are 97 students in attendance at the Ontario College of Pharmacy, Toronto.

F. W. Meek, Strathroy, Ont., has sold his drug business to L. F. Austin, of Brighton, Ont.

Grosvenor & Richards, manufacturers of plasters, etc., of Boston, Mass., have made an assignment.

Wm. Kirkland, of Hespeler, Ont., has purchased the drug business of H. B. Howell, Galt, Ont.

J. H. Nasmyth, of Stratford, Ont., has purchased the drug business of G. H. Golding, Brantford, Ont.

Young & Scharschmidt, druggists, of Courtney, B. C., have opened a branch drug store in Union, B. C.

A. H. Dunlop, druggist, of Madoc, Ont., has made an assignment. He has only been in business two years.

H. M. Thompson, of the firm of Maw, Son & Thompson, London, England, is visiting Toronto on business intent.

Charles Mole, who for some years had a drug business in Strathroy, Ont., died Oct. 18th, at Sarnia, Ont., where he has lived recently.

H. Rosser, late of Martin, Rosser & Co., wholesale druggists, Winnipeg, Man., has gone into the retail business in Bridgeport, Illinois.

F. Jordan, Goderich, Ont., has sold his drug business to his former clerk, J. E. Davis. Mr. Jordan intends retiring from business, but will still live in Goderich.

Prof. C. F. Heebner, Dean of the College of Pharmacy, has been appointed Lecturer in Materia Medica and Elementary Therapeutics at the University of Toronto.

H. Sherris and W. Murchison, of Toronto, have combined forces on Hallamore's Expectorant and Adams' Root Beer as both have a good sale and should be profitable.

Mr. David, of Kerry, Watson & Co., wholesale druggists, has consented to be a candidate for the presidency of the Dom-

inion Commercial Travellers' Association, of Montreal.

The death is announced of John Kennedy, father of James A. Kennedy, of the wholesale drug firm of James A. Kennedy & Co., London, Ont. Deceased was in his 66th year.

The Hearle Soap Manufacturing Co., of Montreal, have dissolved, R. Samuel retiring from the business, which will hereafter be carried on by W. E. Price, H. W. Powers, and John L. Woods.

W. B. McVey, formerly with R. W. McCarty, druggist, of St. John, N. B., and who is a graduate of the Ontario College of Pharmacy, has been appointed Professor of Chemistry at the College of Physicians and Surgeons, Boston, Mass.

Matsuzo Natsumoto, one of the partners in the Japanese Brush Co., Tokio, has been in Toronto. The quality of Japanese brushes is gradually improving, and on account of cheap labor, it will in the future be a strong competitor with France.

Pharmacy Students.

At a meeting of pharmacy students of Montreal, held on Oct. 21st, officers were elected as follows:—Wm. H. Johnson, president; J. Buntin, vice-president; J. C. Chretien Zaugg, treasurer; J. Laporte, secretary, committee, V. Bouteiller, R. Desilets, V. Giroux, E. Como, G. A. Deschenes. The annual dinner will be held early in January.

Pharmaceutical Examinations.

The semi-annual major and minor examinations of the Pharmaceutical Association of the Province of Quebec were held in Laval University, Quebec, on Tuesday and Wednesday, 24th and 25th Oct., when eight major and eight minor candidates presented themselves; of these four major and five minor candidates were accepted. Their names, in order of merit, are as follows:—As Licentiates of Pharmacy—James Douglas Webb, Montreal; Joseph Edmund Dube, Quebec; Triffle Delisle, Quebec, and Henry J. Pilon, Montreal. As Certified Clerks—William Arthur Hendrie, P. H. Gendron, J. B. Turcotte, J. A. Picotte and Phillippe Lupien, all of Montreal. The Board of Examiners were S. Luchance, Montreal, R. W. Williams, Three Rivers, A. E. DuBerger, Waterloo, W. H. Chapman and J. R. Parkin, Montreal, with E. Muir secretary of the Board. Mr. Edmund Giroux, jr., Montreal, represented the Association in his capacity of 2nd vice-president.

Prince Edward Island Notes.

Mr. Dorsey, lately assistant at Dr. Dodds', has entered the employ of Mr. Davies, his place at the Medical Hall being taken by Mr. Manson, formerly with Mr. Gourlie, of Summerside.

J. C. Milford has returned from the

west firmly convinced that "there's no place like home."

Mr. Crosby is now to be seen behind the counters of the *Apothecaries Hall*.

Mr. Rankin was one of the leading players at the opening performance at the new Masonic Opera House, receiving an ovation upon his first appearance, and many rounds of applause during the progress of the play.

Messrs. Johnson and Reddin and Darach have not yet returned from the World's Fair, but are nearing home as we go to press.

British Columbia Notes.

"Times are hard." October saw a slight upward turn in business and the druggist heartily appreciated the change. The rapidly approaching winter gives indications of being one of severe financial stringency, and very little credit is being given.

It is rather late to report the fact that the Council of the B. C. Pharmaceutical Association met in Vancouver Sept. 14th. There was lots of talk about enforcing the Act through the Province, as it had been reported that several druggists in each city were acting as though no law controlled them. The Council has talked this way before, but we believe that a bomb will burst among us shortly. If every druggist does the square thing there need be no trouble, but the trouble is that for the sake of making a few cents a man will often sacrifice his very self.

The semi-annual examinations were held in Vancouver on Oct. 3rd and 4th. S. A. Muir was the only candidate and he succeeded in thoroughly satisfying the examiners of his ability to practice pharmacy and was granted a certificate as Licentiate. Credit is due his preceptor, T. A. Muir, of New Westminster, who has shown more than usual interest in the progress of his brother.

There is some talk of furnishing each member and apprentice of the B. C. Pharmaceutical Association with a copy of some pharmaceutical publication as a kind of acknowledgment for the annual fee. This is a splendid idea and one which we hope will not be dropped. Druggists ought to have a paper in order to keep up with the times.

We would like to know if there is likely to be any more said about a National Pharmacopœia, and has that "Dominion Association died a natural death?"

We anticipate lively times here shortly. —Wait.

The following is a cutting from the Vancouver correspondent of the *Victoria Times*, Nov. 4th:—

Nearly all the druggists in the city have been summoned before Magistrates McLean, Mellon and Schofield, charged with employing unregistered clerks. The case of Dr. McAlpine was heard this morning and decision reserved. It is understood that similar charges will be brought against Victoria and New Westminster druggists.

This has appeared since our writing and confirms our prediction that something would result from the decision of the Council.

Montreal Notes.

The *Chemist and Druggist* states that Monsr. Forain, a well known French artist, was interviewed by the *Gaulois* on his return from Chicago. In speaking of American pharmacies he said, "They are very gay and many of them exhibit portraits of actresses in their windows by the side of cat's skins for rheumatism and bottles of medicines. You go to these pharmacies for refreshments on Sundays. The proprietors scarcely claim to be *pharmaciens de la premiere classe*." It is well to hear outside opinion occasionally.

The question of using soft solder for canning acid fruits and vegetables is a serious question and cannot slipantly be disposed of by quoting tables of Professor Atfield, which may or may not be relevant to the question. In France soft solder is interdicted in such cases. Some years ago the late Dr. Richard McDonnell had a succession of cases of lead poisoning in the Montreal General Hospital and succeeded in tracing some of them to the metallic stoppers in ginger ale bottles. If I remember rightly, Professor Ruttan, of McGill, analyzed the ginger ale sent him by Dr. McDonnell and found quite an appreciable quantity of lead salts in solution. The Provincial Board of Health, of which Dr. McDonnell was then a member, corresponded with the patentees and manufacturers, and the composition of these metallic stoppers was with great promptness changed by them and no further trouble has since been reported. A bill with the object of prohibiting soft solder in canning fruits was introduced into the House of Commons a couple of years since, but was withdrawn for *commercial reasons*. It is evident that if the acid in ginger ale can affect the lead stoppers in the one case, the acid of tomatoes for instance can do the same in cans soldered with soft solder in the other. Canned fruits, however, are not the only things which might in the interest of the public health be looked into by the adulteration officials.

The next annual convention of the American Public Health Association will be held in Montreal next October.

The drug business in Montreal was unusually dull during the month of October. Complaints are heard from all parts of the city.

J. E. Defoy, druggist of 1789 St. Catherine street, we regret to hear is in difficulties. The stock and fixtures, amounting to \$2,518.39 by inventory, are advertised for sale en bloc. Charles Desmar-teau is the assignee.

It is expected that the very heavy business license imposed by the Provincial Government last year on retail traders will be considerably reduced at the coming session of the Legislature. Druggists

in particular feel it very onerous. I can cite a case where a Montreal druggist paid last year \$67.50 business license to the corporation and \$60 for the same tax to the Provincial Government, besides water rates and assessments.

Since the examination of Hooper before the police magistrate at Joliette, druggists in Montreal have been hard at work answering questions as to the properties of hydrocyanic acid. Strange to say, people have been seized with a desire to poison their dogs and they must do the deed with prussic acid. Fortunately, Montreal druggists are very conservative about selling poisons, and, in addition to enforcing the letter of the law, most of them have shop rules with regard to the sale of morphine, laudanum, prussic acid, strychnine, &c., requiring a doctor's prescription in every case.

Your correspondent, when an apprentice in England, refused to sell prussic acid to the Midland Railway Stationmaster of the town, who stated very plausibly that it was to poison rats. On being refused he went home and hung himself. As may be supposed this event made a lasting impression on your correspondent.

The classes at the College of Pharmacy are well filled this year, the larger number of students being in the French classes. Most of the lecturers have touched up their lectures to bring them up to date, a matter of much importance in *materia medica*.

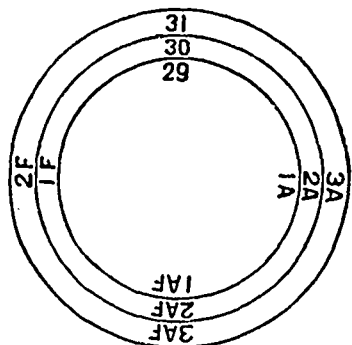
Notes from England.

(From our own Correspondent.)

It is rather a curious fact that more students are initiated into the mysteries of the art of pharmacy at our London hospitals than in all the chemists' shops throughout the country. Every year some 300 to 400 young medical students have to undergo a course of practical pharmacy as part of their medical curriculum, and it would certainly be a rash computation to assert that as many apprentices enter the ranks of pharmacy annually. It is true that the instruction is necessarily short and incomplete, partly from the distaste exhibited by the students and partly from the limited period at the disposal of the teachers. To attempt in one course to educate students as to the theory of prescribing and the art of dispensing, together with a smattering of the Pharmacopœia and an elementary acquaintance of *materia medica*, is obviously absurd. The result is to be seen in the gross ignorance of incompatibles which is daily displayed by prescribers, whilst the dispensing doctors seem chiefly to rely upon ready-made mixtures and liquors which only require dilution with water. A visit to one of the larger hospitals is always interesting, and one of the trade journals here has recently described the principal London ones. The head dispenser, who is also frequently the teacher of pharmacy to the Medical College attached to the hospital, has supreme command of

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	DOZEN.	SOLD AT.		DOZEN.	SOLD AT
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Dr. Slocum's Oxygenized Emulsion, large,	7	50	Dr. Clark's Catarrh Cure,	4	00
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Dr. Slocum's Coltsfoot Expectorant,	7	50	Dr. Clark's Regulative Pills,	4	00
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Dr. Slocum's Regulative Pills,	4	00	Peach Bloom Skin Food,	7	50
Dr. Slocum's Magnetic Plasters,	2	00	Dr. James' Horehound Expectorant,	2	00
Dr. Slocum's Iron Blood Pills,	2	00	Abrasive Corn Solvent,	2	00

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his department. He controls the supply of drugs by inviting tenders or discriminating between those submitted. He supervises no small amount of manufacturing which is done in his laboratory and checks all poisons. Many of these laboratories are fitted up with steam pans and large tincture presses, etc., whilst the preparation of peptonized foods is part of the duties of the department. It is notorious that hospitals are extravagant with drugs and new preparations. Hospitals, indeed, in this country are essentially the proving ground for new drugs, since vivisection or experiments upon animals (not human) is so restricted. A hospital drug account is interesting and amounts often in value to \$25,000 per annum. It is remarkable to notice how the consumption of opium and quinine has been affected by the new remedies such as sulphonal, antipyrin, acetanilids, etc. The rise and fall of many members of the modern materia medica are faithfully chronicled in these accounts. Thus, strophanthus and terebene reached their high-water mark at one of the largest hospitals two years ago, and exhibit now a rapidly diminishing record. Curiously enough the evil-smelling iodoform still holds its own in spite of the numerous substitutes that have been recommended, and in the face of repeated statements that it is not an antiseptic at all.

The illness of Sir Andrew Clark, one of our leading physicians, is generally deplored. He is a particularly genial and courteous doctor, who has often shown his sympathy with chemists and eloquently applauded their efforts to advance in scientific attainment. In his consulting-room at Cavendish Square is a large silver vase, under a glass case, with an inscription indicating that it was the gift of a grateful patient who was snatched from the jaws of death by the distinguished physician. His prescriptions are delightfully different to those of most doctors, being written with evident care and in a delicate but plain hand-writing. He always employs a purple ink, so that, apart from the characteristic penmanship and signature, his prescriptions are distinguished at a glance. As an orator there are few men in the profession who equal him, and he is at his best in post-prandial speech-making.*

The progress that is gradually being made in this country in devising methods to circumvent "cutting" in prices, is clearly marked by the reports which have been made lately in the *British and Colonial Druggist*. As the largest city in the world, London stands at the head of distributors of merchandise and the opinions of its leading patent-medicine houses must carry considerable weight. A few years ago any attempt to pin down the "scalper" would have been regarded as chimerical and wholesalers would have denounced all plans that were originated for the purpose. To day we see a growing tendency

to regard the idea of protecting prices as not only proper but feasible. Much of this conversion to a wholesome opinion on the subject is due to the intrepid manner in which Messrs. Elliman, of embrocation fame, have successfully carried out from the beginning their plan to meet this grievance. In spite of the number of large stores and other distributing agencies, Messrs. Elliman have managed to bind both wholesalers and retailers not to sell their goods below stipulated prices. The result has certainly been satisfactory, and, in spite of an occasional breaking-faith, the plan works harmoniously and with little friction. Before this plan was devised the wholesale trade repeatedly stated that nothing of the kind could ever succeed, and did their level best to pour cold water on the scheme, because it entailed extra clerical labor. But its success has clearly demonstrated the capacity of a manufacturer, who is determined about the matter, to protect the prices at which his goods shall be sold. All the nonsense, which even now is repeated by some out-of-date people, about free trade in a free country, sounds like bathos when we find a scheme carried out which hurts none and protects many. What is required now is the amalgamation of the firms and manufacturers who approve of this policy so that the best scheme may be adopted, instead of several plans being at work at the same time. The persuasion method is dead, and no amount of moral suasion will affect a "scalper." Some combined effort on the part of druggists to deal only with goods to which a living profit is attached would bring many a halting manufacturer to his senses. It is doubtless of very little use to murmur against what we regard as unjust trading, if we do not in some measure attempt to work with those who assist, and oppose those who retard a plan for mutual advantage. "Muslin druggists" have doubtless come to stay, but they are surely welcome to the portion without profit, if we can cut away the profitable ground from under their feet in return.

LONDON, Eng., Oct. 26th, 1893.

A Strong Endorsation.

The citizens of London, Ont., were startled last week on hearing of the sudden death of one of their prominent business men—Mr. T. A. Mars. It was not generally known that deceased had not been enjoying very good health for several weeks past, but he had just returned from a visit to Florida, where he had been trying to recuperate, in no better if not a worse condition than when he left. On Sunday last he decided to take a dose of rum and quinine, which mixture was prepared by a graduate of the College in Strong's drug store. During the night it became evident that the unfortunate man was growing gradually worse, and the family physician was immediately called in. On Monday morning he rallied for a short time, spoke to the physician in attendance, and then relapsed into uncon-

sciousness in which condition he remained until Tuesday morning about 4 o'clock, when he quietly passed away. Several of the leading physicians were in consultation the night before his death, and it was held by some that he had the symptoms of poisoning from morphine, while others maintained that he died from uremia, or poisoning from the kidneys. Mr. Strong naturally feels the position very keenly, as the medicine was procured in his store, but the kind expressions of regret and unabated confidence signed by forty-two of the physicians of the city will we hope, in a certain measure at least, satisfy him of their continued confidence.

The following physicians signed the document referred to:—

T. V. Hutchinson,	J. B. Campbell,
J. S. Niven,	H. A. McCallum,
Cl. T. Campbell,	H. Going,
W. H. Moorhouse,	A. R. Pingel,
E. T. Eede,	Geo. Hodge,
H. Arnott,	A. MacLaren,
W. J. Logie,	J. Wishart,
J. A. Macgregor,	Alex. Graham,
W. J. Waugh,	E. Macklin,
G. H. Wilson,	J. W. Fraser,
J. Piper,	Geo. Shoultz,
W. J. Mitchell,	Chas. S. Moore,
F. P. Drake,	O. Weld,
Hadley William,	Wm. Woodruff,
Alison Jamieson,	J. D. Wilson,
L. Bakus,	N. H. Beemer,
Geo. C. Davis, D.D.S.,	W. F. Roome,
W. P. Ross,	John R. Flock,
J. Macarthur,	J. H. Gardiner,
M. J. Hanavan,	B. F. Butler,
H. Meek,	G. P. Westland,
F. R. Eccles.	

The drug stores of Messrs. Pettingill & Dawson, at Regina, N. W. T., were totally destroyed by fire Nov. 14th.

Four of the most prominent druggists in Vancouver, B. C., have been fined \$85 for selling poisons without registering. The Pharmaceutical Society prosecuted. Westminster and Nanaimo were similarly served.

THE spontaneous ignition of lupulin is reported from Bremen. On one of the trans-Atlantic steamers just about ready to sail smoke was seen to issue from a box; upon opening, to see the cause, the material, lupulin, burst into flames. The lupulin had been sent from some part of Bavaria, and was to be shipped to this country. The unconsumed portion was found to be thoroughly caked, due to the presence of moisture and thus furnishes the cause of the ignition; a material, rich in oil; moisture; large quantity and considerable time of storage by which the heat generated by the slow oxidation of the oil, was so much increased that it reached the ignition temperature.—(*Stuhl Apothecker Ztg.*)—*Am. J. Pharmacy.*

Determination of Extract of Wine is rapidly effected by evaporating 5 c.c. of wine in a tared watch-glass and drying it for thirty minutes in a water drying stove. Sweet wines must first be diluted to ten times their volume.

*This letter, as will be observed by the date, was written before the decease of Sir Andrew Clark.—[Eu.]

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PARISIAN BRUSH COMPANY'S _____



Hair Brushes.

CLARKE, NICHOLLS & COOMBS' _____



Confectionery.

ARTAUD'S ❖ PERFUMES,

20 and 21 oz. Bottles.

These goods are grand values and will assist
you to increase your trade.

ARCHDALE WILSON & CO.
HAMILTON.

CORRESPONDENCE.

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

Profitable Extras.

To the Editor:

Sir,—When reading Mr. Muir's address, delivered before the Druggists' Association in September, on the suitability of the scientific fitting of spectacles as an adjunct to the drug business, it may have occurred to many of our fellow druggists there were also other lines which might be properly assumed without detracting from the respectability of the profession. We refer more particularly to photography.

On account of the simplification of the forms of the camera and the decreased expense with which the science may be pursued, any druggist in the average town of Canada could, after a short personal experience in the use of the instruments and chemicals necessary, be in a position to create and foster a demand for photographic goods among amateurs. There is already a large trade done in this line, but it is in the hands of a few houses in the cities, and it is just now that the druggists in the country are looking for remunerative side lines that this suggestion might be looked into with benefit.

Of course, there has always been a limited trade done with the professional photographers, and this trade would not be interfered with, professionals as a rule being willing to encourage amateurs in the pursuit of this pastime. A small outlay in the cheaper lines of amateur chemicals, cameras, dry plates, etc., would be sufficient to start with, and no doubt the large houses would be willing to supply samples of cameras on commission. The chemicals and dry plates would become in constant demand and could be bought in the best market, which for cameras and dry plates is perhaps in the U. S.

Though it is perhaps late in the season to broach this idea, it will be well worth while to look into the matter during the winter so as to be ready to try it in the spring.

It is in fields like the above where special knowledge is required that we must look for help in the future, and the druggist who is keen to discover and to enter into fresh channels of trade which will not injure his drug business is going to be the man who will succeed in the state to which the drug trade appears to be drifting.

We only need to look to the old country to find a precedent for commencing an amateur photo trade, the druggist over there having been in the business for years and they find it pays.

J. C.

Emol.

Emol is a provisional name given to a newly discovered product which in ordinary respects is allied to fuller's earth, but which is distinct from all market varieties of this substance. It is a product found in Perthshire, England, closely associated with serpentine marble, chalcidony, onyx, and copper. It contains stearite and minute traces of lime and oxide of iron. (*British Medical Journal*). When purified it is a soft, delicately pink, impalpable powder, which produces no gritty sensation when placed on the tongue. It has a powerful softening effect upon hard lime water, and can be used with warm water as a natural soap, leaving the hands soft and smooth. But constant use of emol as a cleansing agent results in so great a softening of the skin on the hands that they become unfit for use, and this fact has suggested its employment in removing callosities and horny excrescences upon the palms and soles. In this application it was found very successful, a paste being made with water and thickly applied, resulting in the peeling off in layers of the epidermic masses.—*Amer. Soap Journal*.

Gutta-Percha.

O. OESTERLE.

Gutta-percha (preferably getah-pertcha) is a collective name applying to the product obtained by the induration of the milk sap of several different trees, of which the one formerly best known, *Asouandra Gutta* (Hooker), or *Palaquium Gutta* has now almost disappeared, owing to the felling of the trees to obtain the juice, and their consequent destruction. According to Burek, several other species of *Palaquium* were employed in 1884 as sources of gutta-percha, notably *P. borneense*, *P. Trenbii* and *P. Lecrui*. A somewhat similar juice is also yielded by other members of the sapotaceous family, but the products thus obtained from *Sideroxylon*, *Chrysophyllum*, and *Mimosa* are of little or no industrial value. The author has examined gutta-percha obtained from *P. Lecrui*, and found it practically identical with the ordinary commercial article; it consisted of gutta ($C_{10}H_{16}O$)_n; alban, $C_{14}H_{24}O_2$; and shavil, ($C_{10}H_{16}O$)_n, the latter being present in larger quantity in some specimens than in others, and producing a corresponding deteriorating effect on the physical qualities of the mass; whereas an increased proportion of alban seems to be without this effect.—*Arch. Pharm.*

VASOGEN, OR OXYGENATED MINERAL OIL.—Though formerly considered as neutral and non-oxidizable, later research has shown that the mineral oils contain acids and may be oxidized. Vasogen forms a permanent emulsion with water, and is a solvent for many medicaments.—*Phar. Ztg.*

Mark Twain's Latest—Romance of an Esquimau Maiden.

A magazine is usually satisfied with one strong feature for the month. *The Cosmopolitan*, however, presents for November no less than five very unusual ones. William Dean Howells gives the first of the letters of the traveller, who has been visiting this country, from Altruria. We have read Mr. Howells' impression of the Altrurian; but in this first letter we have the Altrurian's impressions of New York, with some comments upon our government and society, calculated to awaken the most conservative minds. The second feature of *The Cosmopolitan* is the portion of the magazine given up to color work, no less than ten superb color illustrations being presented for the first time in magazine history, accompanying an article by Mrs. Roger A. Pryor on "Changes in Women's Costumes." The third feature is "American Notes," by Walter Besant, who was recently in America and is doing the United States for *The Cosmopolitan a la Dickens*. The fourth feature is an article by General Badeau on "The Forms of Invitation Used by the English Nobility." The article is illustrated by the facsimile of cards to the Queen's drawing-room, to dinner at the Princess of Wales, and to many leading houses of England. Finally, we have a new and very curious story by Mark Twain, called "The Esquimau Maiden's Romance." It is in his happiest vein and is illustrated by Dan Beard. The November number presents the work of many artists, among whom are: C. S. Reinhart, Otto Guillonnet, J. H. Harper, G. Hudson, Franz von Lenbach, George Wharton Edwards, F. Schuyler Matthews, Dan Beard, W. L. Sontag, Jr., F. G. Attwood, C. Hirschberg, J. Habert-Dys, August Franzen, Louis J. Read, J. N. Hutchins and Hamilton Gibson.

SITUATIONS WANTED.

BY HONOR GRADUATE O. C. P., four years' experience in city, good dispenser, stock keeper and salesman; best references; salary moderate; age 24. Address—W. R. BOUTER, Hagersville, Ont.

SITUATION WANTED as Improver, three years' experience. Apply—Box 135, Walkerton, Ont.

SITUATION WANTED by a youth, age 17, nearly two years' experience in the drug business. German and English spoken. Not afraid of work. Address—LOUIS HERRER, New Hamburg, Ont.

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FOR SALE, the oldest established Drug business in Edmonton. For full particulars address—P. O. Box 10, Edmonton, Alta., N. W. T.

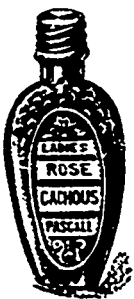
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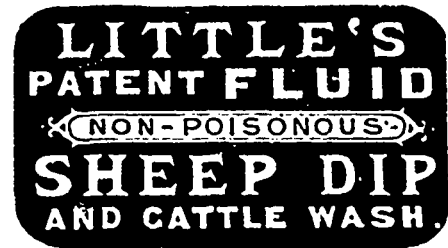
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Sold in large Tins at \$1.00. Is wanted by every Farmer and
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ROBERT WIGHTMAN, DRUGGIST, OWEN SOUND, ONT.
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CHEAP, HARMLESS AND EFFECTIVE.

A Highly Concentrated Fluid for Checking and Preventing
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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 Dis-
infectant, being successfully active at 2 per cent., whilst that which
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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
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Used in the London and Provincial Hospitals and approved of by the
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The Phenyle has been awarded Gold Medals and Diplomas in all
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Sold by all Druggists in 25c. and 50c. Bottles, and \$1.00 Tins.

A 25c. bottle will make four gals. strongest Disinfectant. Is wanted
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To be had from all Wholesale Druggists in Montreal, Toronto, Hamilton
and London, Ont., and Winnipeg, Man.

What Shall the Standard Be ?

WALKER EVANS.

Read before the Missouri Pharmaceutical Association.

The history of a community, State or nation, is the history of individual characters, the principle of whose lives, and the object and purposes to which the energies of these lives have been directed, leaving their impress upon the character of the people. The study of such characters becomes, therefore, a subject of deep interest, and the story of their success or failure a matter worthy of careful study to him who would profit by the examples thus pictured before him in the journey of life, which we all must travel.

Narrowing the subject down to the points of interest that affect most, those of us who occupy the humbler walks of life, as distinguished from the few whose characters adorn the annals of time, let us consider the question of what the standard shall be for us in our individual capacity of merchants and manufacturers, who have assembled here, as is well understood, to exchange thoughts and discuss methods and plans, which shall inure to our welfare and good, whether considered collectively or from the standpoint of self interest alone.

Having at one time in life been engaged for a brief period in the hardware business, some acquaintance was made with the history of a few men, whose characters left memorable impressions that can never be forgotten, and which have and will continue to be a standard which hope holds out as a promise of success, not to that eminent degree possibly attained by these noble examples, but nevertheless something to strive after and a star in the temple of that goal to which the eye of hope may direct its gaze in its aspirations for perfection.

Henry Disston, the founder of the Keystone Saw Works, of Philadelphia, began his business career at the early age of fourteen, as an apprentice with a saw making firm voluntarily assumed. In his twenty-second year he started in a cellar, what afterwards grew to be the largest and most complete works of their kind in the world, employing 1600 men, founding an Industrial University wherein a dozen useful trades are taught and creating a new American industry that surpassed the efforts of the skilled artisans of the old world. Upon what basis was the foundation of this mighty work begun, and what standard did he fix as the *ultima thule* of all his energies? There is a secret in every man's success, and Henry Disston did not patent that secret for selfish ends, but confided it to all who cared to emulate him in the upward struggle. When asked by a dealer, "Disston, what do you put in your saws?" he promptly replied, "Good steel and honest work." Going one day into a down town hardware store, he called for a carpenter's saw. Laying the saw flat on the tips of his outstretched hands, and bringing it up

to the level of his eye, he glanced down the blade, said it wasn't a good saw, and slamming it flat on the counter shivered it.

The dealer, astonished, demanded, "Who are you? any saw would break under such a blow!"

"My name is Henry Disston," he replied, "and here's a saw that I defy any man to break in that way." Disston's saws had a show in that house from that time on.

Although blind prejudice encountered him on every hand, he never slackened his endeavor. He believed in his saws but the public did not, and the young saw maker had many a hard knock before the public would believe that an American saw could be anything more than a base imitation of the English article.

He did not reduce the quality to meet the demands of the trade, but raised it to the standard of perfection, and forced the trade to come up to him. He sold many a saw at one per cent. advance on its cost, rather than reduce the standard, though he much needed the quicker and better profit such a course might have temporarily secured to him, but he lived to see the demand for his saws so great that price was not considered by the appreciative public. The name of Disston was the standard and guarantee of value returned for the price paid.

In the beginning he made saws to live. When wealth had come and he might have had ease, he lived to make saws. He struggled for eighteen years before he could command a recognition for his wares in any fair proportion to their merits, but success came at last, and with it, better than all else, an example of integrity and a determined purpose to elevate the standard of his products nearer to the quality of perfection, worthy to be followed by his fellow-men, in whatever calling their lot may fall, or the energies of purpose may point.

David Maydole, the celebrated hammer manufacturer of Norwich, N. Y., began his business career as a blacksmith apprentice, which to complete required a term of six years.

As a business man he did thorough, honest work, preparing himself for it by patiently and completely mastering his trade, always attending closely to business, and for weeks together stood at the anvil fifteen hours out of the twenty-four. He supplemented these qualities of a business man with a firm purpose to always make the best article. From the first, he manufactured hammers that consumers wanted at any price. He forced them to the head of the trade till they were acknowledged the best in the world.

To the reputation once acquired he was never untrue. He never traded on it. He forgot the achievements of the past in the deeds of the present. The last hammer he ever made was to him as much a matter of faithful work, as the first he forged. The stroke of the first blow he struck began his fortune and contributed to shape the hammer that dropped com-

plete from the anvil when his life ended. His career was thus a continual rise, with no side steps and no side wanderings. He was not a sand-hill climber. His feet every time touched the rock.

He lived to see his blacksmith shop the largest establishment of its kind in the world, and himself the king of hammer makers.

Like Disston, he made perfection his standard and never allowed an imperfect article under any circumstances to go upon the market, and as in the fading crimson of that October morning, the light of earth faded away, it might have been said that not one stroke could he wish unstruck in forging the hammer of his life's career.

What was the standard fixed by this great blacksmith, that carried him triumphantly forward to the position of king in his trade? In his business life, certain traits and characteristics stood out so prominently that even in this brief sketch, they are readily recognized as the elements which contributed to his wonderful success. His rule was to *excel* not to *undersell*, and the reverse of this rule has marked the failure of many a merchant and manufacturer to reach the confidence of the people regarding the purity and honesty of his purpose or the quality of his wares.

Another example worthy of mention and emulation, is found in the career of Clement Studebaker, the worthy head of the great Studebaker Wagon Works of South Bend, Indiana. He also marched to success, to the tune of the Anvil Chorus, working at the forge with his brother, pounding away no doubt with a Maydole Hammer and cutting with a Disston saw, his way through poverty to wealth, and from obscurity to prominence among the men of his day, occupying high positions of honor in his State and country, at home and abroad, all due to the standard he placed before him, as he bent his energies towards the object of his hopes.

That standard was in all things to do his best. He made two wagons the first year. Now he employs thousands of skilled workmen. It was not blind chance or fool luck that gave him success. Diligence, though commendable in all right purposes, does not always insure success. There are many qualities that combine to assist in the struggle for great ends, but there is one element necessary to complete and crown the whole, and that one is a firm and enduring determination to be satisfied with nothing short of the best. It is the Divine principle, and the Divine command: Be ye perfect; and we can safely infer that the Creator's demands on us in our relations to Him, includes the lesser obligation to strive after perfection in our relations to each other.

It is true the manufacturer will be met with the statement that the best goods will not sell in competition with cheaper grades, but if the dealer will only give time for the principle of quality to operate, it will not only pay better margins of

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Put up your own Condition Powder, Bird Seed, etc. We will supply Containers.

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SIMPLE, BUT SURE!

SOMERVILLE'S

M. F. COUGH

CHEWING GUM.

FIVE CENTS PER BAR,

TWENTY BARS ON A HANDSOME
STANDING CARD.

THE WHOLESALE TRADE HAVE IT.

PRICE 65c. PER CARD.

C. R. SOMERVILLE, - LONDON, ONT.

WM. RADAM VINDICATED.

The Radam's Microbe Killer Case Settled by a Verdict
for the Plaintiff.

[From the Mail and Express, New York, May 10, 1893.]

The case of William Radam, inventor of Radam's Microbe Killer, against Dr. Eccles and the "Druggists Circular and Chemical Gazette," was decided yesterday by a jury before Judge Andrews in the Supreme Court. Mr. Radam received a verdict and a complete vindication from the charges made by Dr. Eccles in an article published in the "Druggists Circular" in September, 1889, attacking the microbe killer. The article stated that the microbe killer was compounded of poisonous drugs, and that any patient using it would die of cumulative poisoning, but the testimony showed that it is an antiseptic gas impregnated in water and contained no drugs.

"From the day of the publication of this article," said Mr. Radam to-day, "the 'Druggists' Circular' has attacked not only myself and the microbe killer, but has assailed other members of my company and even my patients. But the attempt to injure me and my company has failed and I have won my suit."

"I had twenty witnesses in court, who testified, under oath, that they had been cured by the microbe killer of many diseases after long and unsuccessful treatment by prominent physicians. I had thirty other witnesses ready to bring forward, and also had special cars at Philadelphia, Chicago and Baltimore ready to bring on more witnesses, but they were not required. Those who did go on the stand testified that they had been cured by the microbe killer of cancer, catarrh, dyspepsia, inflammatory rheumatism, blood poisoning, asthma, consumption, pneumonia, diphtheria and many other complicated diseases.

"One of the charges made by Dr. Eccles in the 'Druggists' Circular' was that if the microbe killer were taken internally in large doses, it would be fatal, but I brought forward twenty witnesses who proved that it was not poison when taken internally even in the largest quantities. They swore that they had taken, some from 15 gallons to 160 gallons internally, in periods ranging from three months to three years. One patient, a lady, has taken 160 gallons of the microbe killer and was cured and left in perfect health. She had been bedridden nine months with inflammatory rheumatism, and had nearly lost her sight. Yet she was in court completely recovered. Her case was regarded as a miracle.

"I had among my witnesses many prominent people, including railroad officials, merchants and professional men.

Druggists who do not as yet carry our M. K. in stock will do well to order some from their Wholesaler or direct from us.

Many sales are lost by people not seeing it in stock, hence they will not ask as freely for it.

Prices upon application.

WM. RADAM MICROBE KILLER CO. (LIMITED) TORONTO, ONT.

profit but increase the amount of sales, and better still make for him a reputation that will sell his goods like Maydole's name does his hammers, or Disston's his saws.

It may be charged that the argument presented, bears mostly from the standpoint of personal experience, and is mainly applicable to the special class of goods made by the party presenting the facts, and a suspicion of egotism might be detected in any attempt to range the interests he represents as being operated upon the same high principles found to be the elements of success in the lives and characters of the noble examples described. Such a suspicion is easily removed, when the fact becomes known that these principles were already the rule and the same high purpose the law, before that party became identified with the concern, which he now has the honor to represent.

Suffice it to say, the principle of emulating the most successful men of the past is a policy commended to all by every consideration of good logic and sound judgment, and no man need hesitate to proclaim it to be the high purpose of his ambition to reach success by the same path, or if possible to plant his standard another step near the top.

One line of business may exemplify the argument presented in some respects better than others, and if an example for the discussion of this principle is sought, no objection can be offered to the selection of one so intimately connected with the business of the druggist, as mixed paints.

How many of the great number here assembled who deal in that class of goods, have any positive knowledge of the composition of the brands they sell? Is not the question, how cheap, always asked before the one, how good, and the shortsighted policy of present and immediate profit made to shut out any consideration of one which looks to the future for its compensation, though it may bring a percentage of remuneration greatly in excess of the other?

How many dealers in this article of doubtful quality, ask for a proof of the guarantee, often only verbal and that frequently second-hand? Who of you, if a call should come for a first class, high grade article of prepared paint, would be able to furnish the goods with any certainty of the fact in your own minds. If you cannot be assured of certainty on this point, reasoning from the principles set forth, is it not your duty to force the manufacturer to the standard of the best, by a comparison of the material composing the brands offered?

The dealer cannot claim immunity from responsibility by a pretension of ignorance on this point. If the ignorance is real, is it not too often a condition of choice, assumed because it pays best *not* to know, giving encouragement to those who would lower the standard and by this process degrading the quality until the demand is so far destroyed, that the consumer must resort for safety to the purchase of the recognized staples in the composition of

all good paint, out of which he can secure a profit scarcely above the cost of handling, but which he is compelled to carry because of his own folly.

If the consumer does not seek the best, it is because he is careless of his own interest, too often encouraged in this ignorance to be made the dupe that makes it possible for Jim Crow brands to find a market.

Under such circumstances, the standard must be forced. If the dealer will not, the manufacturer is reluctantly compelled for the time being to become his own distributor, though much preferring the dealer's aid, when mutually working upon the same principle and striving for the same end.

Supposing, however, the dealer to be seeking to elevate the standard and the manufacturer, ignorant of his own welfare and careless of reputation, seeks to place his dubious wares before the public. Shall the dealer agree upon a mere guarantee of satisfaction to become the agent for disseminating a brand of goods of uncertain composition, liable because of that uncertainty to damage his reputation beyond recovery for reliability on goods of any kind? The dealer, therefore, has a right to know the composition of the brand he is asked to be the agent in distributing, for the protection of his own reputation, and the manufacturer can be forced to the standard by a request to supply an analysis for comparison.

If he refuses, no better evidence is needed of his purpose to impose on the public through you as his agent, an article that will not bear the light of investigation or the test of comparison. In forcing the standard, the manufacturer or dealer will find himself in a somewhat lonely position, but this should not discourage him. It is in fact the guarantee of his safety, because competitors for the highest and best are not so numerous. The average man does not see very far beyond his own nose, and while he is catching minnows near the shore, let him who would profit by the lessons to be learned of the past, cast his line far out into the deep and verily he shall have his reward.

Plant your standard, not in the valleys, nor on the plateaus above the plains, not on the foot hills or on the mountain side nay, plant it not this side the loftiest peak of the mightiest monarch of the hills, but with an eye undimmed by the crown at the crest, or bewildered by the rugged steep behind, with your feet on the summit rock, plant it firmly and proudly upon the highest pinnacle point. The secret of success is at the top.

Solutions of pepsin, as is well known, are filtered only with considerable difficulty. Wearn proposes, says the *Bolletino di Farmacia e di Chimica*, to add sugar of milk to the solution. It does not dissolve, and is said by the author to greatly facilitate filtration, the liquid coming away perfectly limpid. In such cases the lactose acts purely mechanically, like silica, talc, etc.

Sensitive Iodine Preparations.

G. H. CHAS. KLIE.

Read before the Missouri Pharmaceutical Association.

The official preparations of iodine which may be styled sensitive are: syrup of hydriodic acid, iodide of iron, saccharated iodide of iron and syrup of iodide of iron. Formerly light and air were excluded from these preparations under the supposition that both contributed toward their decomposition. At the present time it is known that light has no such effect, and that decomposition is caused by the oxygen of the air. Anybody can convince himself of this fact by filling small bottles with syrup of hydriodic acid or iodide of iron. The bottles ought to be filled up near to the cork and well corked. They can now be placed in the light without any change becoming noticeable for a long time. The first change which becomes perceptible, especially in syrup of iodide of iron, will originate in the layer of syrup nearest the cork. At first, say after three or four months' keeping, a slight straw-colored tinge is noticed, which deepens with age.

SYRUP OF HYDRIODIC ACID.

Syrup of hydriodic acid may be called a sensitive iodine preparation, because, prepared according to the Pharmacopœia and kept in bottles from which air is not perfectly excluded, the syrup gradually darkens. Its preparation, according to the pharmacopœia offers no special difficulties. Hydrosulphuric acid gas is led into a mixture of iodine in a very fine state of subdivision in thin syrup. The iodine is soon changed into hydriodic acid. The surplus of the hydrosulphuric acid gas is expelled by heat, the precipitated sulphur is separated by filtration, sugar is dissolved in the filtrate, spirit of orange is added, and the syrup is ready for use.

I have made syrup according to this formula, and have observed that after a time it always turns dark.

Gardner's syrup of hydriodic acid is much prescribed and keeps tolerably well. I cannot see that it looks any better, keeps any better, or acts any better than the syrup I make myself. It does not claim permanency. The label says: If decomposition should set in at any time this syrup will be cheerfully exchanged.

I have here six samples of syrup of hydriodic acid.

No. 1, prepared Mar. 3, this year, according to the Pharmacopœia. 10. oz. were kept in a pint bottle, corked and exposed to the light. It has deepened in color more than the other two samples prepared about the same time. No. 2 was prepared on Mar. 7, after the same formula as No. 1, except that 1½ ozs. of glucose were substituted for sugar. This sample has not changed in color. No. 3 was prepared on Mar. 15, after the same formula as No. 1, except that glucose was substituted for sugar. No change in color has occurred in this sample up to date. All three samples were flavored with spirit.

DRUGGISTS' CONFECTIONERY.

ROBERT GIBSON & SONS,

Medicated Lozenge Manufacturers,

CARLTON WORKS,

ERSKINE STREET, HULME, MANCHESTER,

1, GLASSHOUSE YARD, ALDERSGATE ST., LONDON, ENGLAND.

SUPERIOR BOILED SUGARS

Have gained a High Reputation everywhere

FOR EXPORT TRADE.

They are put up in 1-lb., 2-lb., and 5-lb. Bottles. Packed in Casks or in 1 doz. Cases as required, and delivered F. O. B. at any Port in England. These Sweets are absolutely pure.

SARSAPARILLA AND SULPHUR TABLETS.

As it is extremely probable these Tablets will have a very large sale, we beg to advise Chemists that we guarantee every pound of Tablets to contain equal to 24 ozs. of Compound Decoction of Sarsaparilla, besides the usual quantity of Sulphur, thus securing a really valuable blood purifier.

HIGH-CLASS LOZENGES

OF EVERY DESCRIPTION.

CHLORODYNE COUGH LOZENGES,

CHLORODYNE JUJUBES,

PEPPERMINT LOZENGES,

In every variety of size and strength. Curiously Strong, and Multum in Parvo Mints give the utmost satisfaction. Medicated Lozenges of Pharmacopœia Strength.

DIGESTIVE TABLETS.

VOICE AND THROAT LOZENGES

FOR SINGERS AND PUBLIC SPEAKERS.

ORIGINAL SUGAR WORM CAKES

Have an immense sale, both at home and abroad ; will keep in any climate, and give entire satisfaction.

Put up in Tins containing 3 doz., 6 doz., and 12 doz. cakes.

THROAT HOSPITAL LOZENGES

(As per T. H. Pharmacopœia)

All Lozenges are sent out in 2-lb. and 4-lb. Bottles (bottles free) but allowed for if returned.

Proprietary Lozenges Carefully Prepared, Stamped and Cut to any Size or Shape.

PRICE LISTS SENT ON APPLICATION.

of orange, made from the fresh peel, not from the oil. This accounts for the yellow color. Syrup flavored with essence of orange made from the ethereal oil does not exhibit a yellow color when fresh. I have one sample of Gardner's syrup, about a year old, which is of a decidedly straw color. It is No. 4. I would not call it spoiled, by any means.

I will show after a little that a syrup may be much older and much darker and not show a trace of free iodine.

No. 5 is a sample of Gardner's syrup about eight months old. It is in good condition. No. 6 is a syrup made in January, 1884. It is over eight years old. It was prepared according to the Pharmacopœia. Originally 10 fl. ozs. were kept in a glass-stoppered bottle, protected from the light and in a cool place. About half was used, the balance was allowed to stand in the same bottle, and after it had acquired color the wrapper was removed and it was allowed to stand near a window in the cellar. I suppose, most anybody would pronounce the syrup spoiled and would not think of dispensing it. Still, incredible as it may seem, it does not contain a trace of free iodine, as I will show presently. This shows pretty plainly that even if the syrup is not very carefully kept, it takes a very long time before free iodine is evolved.

IODIDE OF IRON.

Iodide of iron is a preparation difficult to preserve intact. I have always dispensed saccharated iodide of iron instead. This can be kept in good condition, if carefully kept, about one year. I keep it in one or two ounce wide mouthed bottles, securely corked with nice, soft, smooth corks in the coolest and driest place in the store.

Here is a sample about four months old which is still in prime condition, as a test will show.

The test shows free iodine in the proportion of 1-8000. This is only a trace but it is free iodine nevertheless. We ought to have an iodide of iron which will not show a trace of free iodine. I have experimented a good deal with this point in view, and would propose the following formula as furnishing a preparation that is unexceptional in every respect.

FERRI IODIDUM SACCHARATUM.

Iron, in the form of fine wire and cut into small pieces	6 parts
Iodine	17 parts
Distilled water	20 parts
Pulverized iron	1 part
Sugar of milk	79 parts

The text should be changed to read as follows:

Transfer the mass quickly to a heated iron mortar containing pulverized iron and the remainder of sugar of milk and reduce the whole to powder.

The product will not exhibit the same color as heretofore. It can be dissolved in water, filtered, and the syrup of iodide of iron can be made extemporaneously if desired. Saccharated iodide of iron which exhibits free iodine much more freely than the four months old sample referred to

above, can be restored to pristine quality by the addition of one per cent. or q. s. of pulverized iron.

In spite of all care and precaution saccharated iodide of iron will show traces of free iodine in about a year if not made according to above formula.

Many years ago I thought I had solved the problem of a permanent iodide of iron. I prepared a solution of iodide of iron, added gum arabic to make a thick mucilage and spread this on glass to obtain the salt in scales. A beautiful clear and transparent scale salt was the result, but in due time the salt became as dark as ammoniacate of iron and free iodine became apparent. In a word, the salt had spoiled.

SYRUP OF IODIDE OF IRON.

Syrup of iodide of iron prepared according to the Pharmacopœia, filled into 1 oz. vials corked and kept in a light place in the cellar keeps excellently well. I have never experienced any trouble. I have here samples of syrups prepared according to the Pharmacopœia and samples prepared according to formula slightly modified, simply for experimentation. Some of them are not yet old enough, to judge whether their respective formulae are good or bad. One was prepared according to the Pharmacopœia on May 19, another in April, '92, and kept in the usual manner. One was made Mar. 18, 1892, with glucose instead of sugar. Another was made Mar. 23, 1892, with 50 per cent. glucose. The last two samples of 10 fl. ozs. each have been kept in pint bottles, corked and exposed to the light. All the change perceptible in these has been a flocculent precipitate. There is more precipitate in the all glucose sample than in that containing 50 per cent. Slight traces of yellow color can be noticed in the surface layer of the syrups, when they have stood undisturbed for a week, but this will disappear upon the least shaking. I have seen the statement in print that permanent syrup of iodide of iron could be made with glucose but have not tried it until I made these samples.

My mode of keeping it in one ounce bottles keeps the syrup in prime condition a long time and I found no occasion to experiment until recently. These samples of glucose syrup are only three months old, not sufficient time for a thorough test. The pharmacopœial syrup kept in the same manner and the same length of time would show a decidedly yellow tinge. As far as my experiment has gone, it shows that the syrup made with glucose does not color as fast as that made with sugar.

I have another sample of syrup of iodide of iron. It was prepared according to the Pharmacopœia and put into this bottle when finished. A coil of bright iron wire was placed in the syrup. The intention was to find out how long the syrup would keep without coloring. It kept intact more than ten years. It was placed aside after that time and no more attention was given it. No other care was given it but what has been mentioned. For instance, it was not kept in

the cellar, on the contrary, it was continually kept in the store and has experienced the heat of twenty summers. As I mentioned before, it was placed aside after having been observed more than ten years and almost forgotten. While writing this paper, it was remembered and hunted up. You will notice that the syrup is in a pretty good state of preservation in spite of its age, and what is more, it will not show the least trace of free iodine, as I will show.

The Pharmacy of Emulsions.

WILBUR L. SCOVILLE, PH. G., (Massachusetts College of Pharmacy.)

THE THEORY OF EMULSIFICATION.

The making of an emulsion, with a proper emulsifying agent, is almost as positive and certain an operation as the making of a 50 per cent. solution of a salt or any other simple mixture.

Let us first consider the theory of emulsification, then the practical operations involved in making emulsions of different kinds.

If we place half an ounce of a fixed oil as cod liver oil, in a two-ounce bottle, add to it half an ounce of water and shake vigorously the oil is broken up into globules and diffused through the water, and the mixture has an opaque appearance. On discontinuing the agitation, however, the oil and water quickly separate into layers again. This is due to two causes—the lack of adhesion between the globules of oil and water, and the difference in specific gravity.

If now we place in another two ounce bottle half an ounce of mucilage of acacia, turn the bottle so as to flow the mucilage around the inner sides, then add half an ounce of oil and shake vigorously, we obtain a whiter and more opaque mixture than before, which remains permanent for a period varying with the condition of the oil, the density of the mucilage and the vigor of the shaking which we have given to it.

Here we have broken up the globules of oil as before, but we have also coated each globule, while in a fine condition, with a film of mucilage, which forms a medium of adhesion between the oil and water in the mucilage, and an emulsion ensues, although the difference in specific gravity is greater than in the first case.

The foundation of an emulsion, then, consists in breaking up the cohesion of the oil as much as possible and getting it into fine globules, which are then coated with a gummy or albuminous substance, as a pill is coated, whereby adhesion is established between the globules of oil and water, and a homogeneous mixture results. If the globules of the oil are not small enough, the cohesion of the oil will gradually re-establish itself, particle will coalesce with particle, until at length a more or less complete separation of the oil has taken place.

The permanence of an emulsion, then,

World Wide Popularity.
THE DELICIOUS "CRAB APPLE BLOSSOM" PERFUME.

Put up in 1, 2, 3, 4 and 8 oz. Bottles.



And the Celebrated CROWN LAVENDER SALTS.

No articles of the Toilet have ever been produced which have been received with the enthusiasm which has greeted the *Crab Apple Blossom Perfume* and the *Crown Lavender Salts*. They are literally the delight of two continents, and are eagerly sought in New York and Paris as in London. Annual Sales, 500,000 Bottles.

THE CROWN PERFUMERY CO., 177 New Bond St., LONDON.

Wholesale of **MESSRS. LYMAN, KNOX & CO.**, Montreal and Toronto, and all leading druggists.



Raymond's
Pectoral
Plasters!

If you are a **Retail Druggist** and have never sold our Plasters, never had samples, if you will send us your card or label, we will send you two sample plasters free. Sell them for **50c.** Don't give them away.

RAYMOND & CO., 62 Carroll St., Brooklyn.

Wampole's Compound
Syrup of Hypophosphites.

CHARACTERISTICS - Heavy, pleasant, bitter taste, and deposits a flocculent precipitate when left standing for some little time. This precipitate, aside from its being the most assuring form of one of the important ingredients, will serve to render our preparation distinct from the many now offered for sale under the name of Syrup of Hypophosphites.

Each fluid drachm contains $\frac{1}{60}$ grain Strontia, associated with the Hypophosphites of Lime, Soda, Potassium, Iron, Manganese and QUININE.

This combination, so long and favorably known to Physicians and Pharmacists as one without equal in the treatment of Phthisis (Consumption) Bronchitis, Anemia and General Debility, as manufactured by us, and offered at our present list price, will be found to overcome an existing difficulty, as heretofore it has been impossible to procure it in quantities of more than one pint, and the price of the preparation being very high, has placed it beyond the reach of many who really require a medicine of this kind.

Put up in 16 ounce bottles, full measure.

\$8.50 Per Dozen, Net.

Put up in 5 pint bottles for convenience in dispensing, and as a regular stock bottle.

5-Pint Bottles, each \$3.17, Net.

HENRY K. WAMPOLE & CO.,

Manufacturing Pharmacists,

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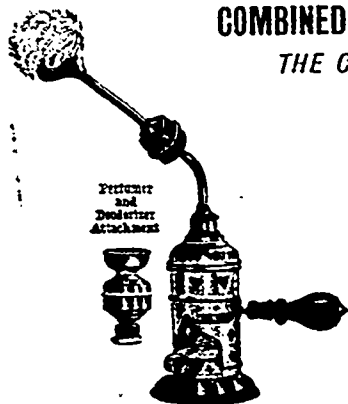
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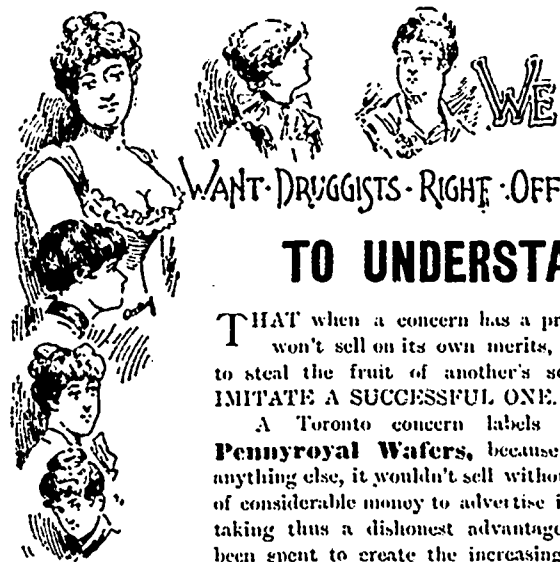
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WANT DRUGGISTS RIGHT OFF

TO UNDERSTAND

THAT when a concern has a preparation that won't sell on its own merits, or if desiring to steal the fruit of another's sowing THEY IMITATE A SUCCESSFUL ONE.

A Toronto concern labels their mixture **Pennyroyal Wafers**, because if calling it anything else, it wouldn't sell without expenditure of considerable money to advertise it as others do, taking thus a dishonest advantage of what has been spent to create the increasing demand now

had for the genuine and original **Pennyroyal Wafers**. They go still farther, and cut the price on their product to you, hoping thereby to secure your co-operation; failing to get results, they add as another inducement, "to give you a gold watch" too; a still further proof of its cheap worthlessness. Can you look your customers in the face and with honest conviction of doing right sell them a substitute for the genuine **Pennyroyal Wafers** made by us, and by whose advertising they have been brought to your store to buy? \$3.00 per dozen is the price for the genuine, and no bribes given, to encourage you to deceive the public. Your continued favors as in the past will greatly oblige,

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consists in obtaining the globules of oil in so fine a condition that even a very thin mucilage can prevent their coalescing. These globules are ordinarily too small to be seen with the naked eye, but in emulsions made with thick mucilage, as mucilage of tragacanth or mucilage of Irish moss, the globules of oil may be distinctly visible to the eye and yet the emulsion remain permanent, owing to the viscosity of the mucilage which envelops them. Such emulsions, however, will not bear very much dilution.

The best type of a natural emulsion is milk, in which the true emulsion portion separates as cream. When separation of this emulsion occurs, we obtain the fat as butter.

In triturating an emulsion, no pressure is needed, but a rapid motion is essential.

The pestle should be held loosely between the thumb and first two or three fingers, and the motion imparted to it by means of the fingers and wrist as well as those of the arm and shoulder. This will be found much less tiresome than when the pestle is grasped firmly with the whole hand and the motion imparted from the arm and shoulder alone.

EMULSIFYING AGENTS.

Emulsifying agents are chiefly albuminous, mucilaginous or alkaline in character.

In milk and yolk of egg we have good examples of emulsions with an albuminous agent; milk being an emulsion of butter fat with casein, and yolk of egg an emulsion of a peculiar fat with vitellin.

Casein has been recommended as an emulsifying agent. It is, however, not easily obtained, and when procured possesses no advantage over acacia. It is used in the same manner as dry acacia (which see.)

Both milk and yolk of eggs are used as emulsifying agents; and are unexcelled as such except as regards keeping qualities. The propensity of milk to "sour" and egg to become "stale" are well known, and these properties are not changed by combining them with fats or oils. But for emulsions which are to be taken immediately, nothing equals these agents for ease of manipulation or palatableness.

Both milk and yolk of egg being natural emulsions, we would naturally expect that they would be easy of manipulation when used as emulsifying agents. Not only is this true, but they also emulsify successfully a larger variety of fatty bodies than other agents.

Milk as ordinarily obtained, is seldom used except as a diluent. It is too weak of itself to be used to any extent as an emulsifying agent. The ordinary condensed milk of the market serves in this capacity admirably. This contains some sugar, which, however, does not interfere. In using it, the condensed milk is diluted with an equal bulk of water, then the oil is added in small portions, constantly triturating. Miss M. E. Bartlett, Ph. G., recently succeeded in emulsifying 6½ ounces of cod liver oil with 5 drachms of

condensed milk previously diluted with 5 drachms of water. This emulsion, containing about 84 per cent. of oil, was of the consistency of lard, and kept well for a month.

Glycerite of yolk of egg is an excellent form of the second to use. The oil should be added in portions to the glycerite in a capacious mortar, with constant trituration, and lastly the diluent may be added in the same manner. Both of these agents are used with excellent results for other bodies more difficult to emulsify than oils, such as creasote, chloroform, terebene, oleoresins, balsams, resinous tinctures, etc.

For ease of manipulation, for palatableness, and for general utility, yolk of egg and condensed milk stand first among emulsifying agents. Their tendency to spoil, however, condemns them for general use, since emulsions made with either seldom remain palatable for more than than three or four days, and they are but little used. They have a special value, however, in emulsions of chloroform, creasote, and other antiseptic bodies, the preservative properties of which will prevent any change for several weeks.

Either dry acacia or mucilage of acacia can be used for emulsions. Both have their advocates in point of preference, but in a wide experience with young men who were learning to make emulsions, dry acacia has proved itself a quicker and more certain agent to use, at least in the hands of novices. This is probably due to the fact that dry acacia must always be used in definite proportions, as must also the water added.

RULES FOR EMULSION MAKING.

Two rules are in common use for making emulsions with dry acacia:

RULE 1. For one part of gum, use three or four parts of fixed oil (two or three parts of volatile oil) and once and a half as much water as gum.

RULE 2 varies only in using twice as much water as gum. The proportions of oil to gum vary with different oils; most fixed oils being emulsified well in proportion of four of oil to one of gum, while most volatile oils require one of gum to two of oil.

Suppose we wish to make a pint of 50 per cent. (by volume) emulsion of cod liver oil.

This will require 8 fluid ounces of oil, and, by the rules, every 4 parts of oil will require 1 part of gum; then the 8 fluid ounces of oil require 2 ounces of gum. Carefully weigh, then, the 2 ounces of powdered acacia, place it in a *dry* mortar having a capacity of 3 or 4 pints, pour upon it the 8 fluid ounces of cod liver oil. Triturate lightly until the acacia is diffused evenly through the oil, which will be accomplished in about a minute if both acacia and mortar were dry.

Now lift the pestle, and having carefully measured 3 fluid ounces of water (rule 1), pour it all upon the oil in the centre of the mortar, then triturate rapidly until a perfectly white, creamy mixture

results showing no globules or color of oil. This is called a primary emulsion. Then add to this slowly, with constant trituration, water enough to make a pint of emulsion. This emulsion is of the color and consistence of thick cream, and is permanent.

In using mucilage of acacia, the mucilage is placed in a dry mortar, and the oil added in small portions, each portion being thoroughly triturated before adding the next. One ounce of mucilage will easily emulsify two ounces of cod liver oil, with the addition of a little water near the end of the emulsification.

Often a failure is made in this through the breaking of the emulsion while adding the last portions of oil. A little calculation will show the cause. One ounce of mucilage having a specific gravity of 1.25 will weigh an ounce and a quarter, and contain 34 per cent. of gum, or about 200 grains. This amount of gum will emulsify, according to the rule, about 13 drachms of the oil, then after adding thirteen drachms of oil to the mucilage, the remainder of the oil should be alternated with portions of water, as in making the 50 per cent emulsion.

The following prescription, a favorite one in some sections, may be prepared in two ways:

Acacia pulv	10
Sacchari pulv	30
Olei morrhuae	60
Aque, q. s. ad	120
M. Ft. emuls.	

The surest way of obtaining a good emulsion from this, in the hands of inexperienced operators, is to make a primary emulsion, according to rule, with the acacia, 40 cc. of oil and 15 cc. of water. To this primary emulsion is added the remainder of the oil in portions, alternating with portions of water, and lastly the sugar dissolved in the remainder of the water.

Another way is to make a mucilage with the acacia and about 20 cc. of water, in this dissolve the sugar, and then triturate the oil in portions, as in using mucilage of acacia.

TRAGACANTH EMULSIONS.

Tragacanth is not often used alone as an emulsifying agent. It forms dense emulsions, which are too thick to be agreeable. It is often used with acacia as a means of cheapening the emulsion and also to prevent separation of the emulsion into layers by stiffening it. Various proportions of acacia and tragacanth may be used, made into a mucilage into which the oil is stirred as in using mucilage of acacia. One part of tragacanth alone will emulsify 15 to 20 parts of fixed oil. The following combination is a good one:

Acacia	4.4
Tragacanthae	6.4
Olei morrhuae	240
Aque	120
Syrup, q. s. ad	480

Mix the acacia and tragacanth with 60 of oil, add 24 of water and triturate until primary emulsion is found. To this add

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MANUFACTURER,

MONTREAL.

the remainder of the oil and water, and lastly the syrup.

Tragacanth is especially useful for suspending bismuth subnitrate and other heavy bodies in mixtures. Condensed from *N. E. Druggist by Amer. Drug. and Pharm. Rec.*

Surgery's Debt to Antisepsis.

(CONTRIBUTED.)

These last twenty years surgery has been advancing at an almost vertiginous pace, and its progress and improvement are due to the universal practice of anti sepsis and to the adoption of proper dressings. The most glaring operations are now crowned with success, and different viscera which had previously been carefully avoided by surgeons, are treated safely and to the welfare of the patients. It is an every day occurrence to see the abdominal cavity opened either to remove a tumor or to make some operation on the intestine; the brain is laid bare to free it from some compression from which it is suffering, or to open an abscess and give free exit to the pus. Under all these circumstances the surgeon intervenes with perfect security when he has minutely taken the necessary precautions to protect the wounds he creates from infection by germs.

These dangerous germs are both within the patients and about them, and for this reason it is absolutely indispensable to disinfect the spot that the operation is to affect and also everything connected with the operator, his instruments or assistants. As for the germs floating in the atmosphere, some surgeons endeavor to counteract their effect by spraying antiseptic liquids about the room during the operation. The point to be guarded against above all others is infection of the seat of the intervention, and this can be accomplished by destroying the germs that may have already invaded it, or by closing up all access to it on the part of those that may be about it. The former can be affected by the use of antisepsis and the latter by asepsis.

WOUNDS IN WAR TIME.

Complications arising from firearm wounds seem to result from the action of germs which are not carried by the projectiles, as might be supposed at first thought, but by the patient's clothing. In one of the late meetings of the Societe Imperio-Royale des Medicines de Vienne, M. Habart reported the experiments he had undertaken in this connection with M. Paulhaber, concerning the infection of firearm wounds. These two investigators, using regulation rifles, fired at boxes of gelatine, of which some were sterilized or covered with sterilized blotting paper, others surrounded with pieces of old uniforms, and others with pieces of uniforms dipped in pure cultures of staphylococci. In the first case the track of the bullet remained aseptic, in the second were found, in addition to pieces of cloth, a variety of mi-

crobes, while in the third the boxes contained nothing but staphylococci.

In short, a bullet striking the body of a soldier, or a piece of shell entering his flesh, stands every chance of creating an infected wound. It is therefore imperative to treat all wounds in war time antiseptically, and we owe a great debt to the different authorities who in time of peace are preparing a sufficient stock of packages of dressing to supply each soldier or officer on the day war may break out. This small package of dressing with which each soldier is to be furnished is to be placed in the French army, in a pocket specially prepared for it, and is certain to render great services whether used by the wounded man himself or by the ambulance corps. However temporary this remedy may be, it will still have the advantage of supplying the regimental surgeon with almost enough dressings for the first demands on the battle fields without his having to make use of his stores, and it will rapidly place the wounds out of reach of the danger of infection arising from contact with clothing, hands or the ground.

THE DEATH RATE OF CONSUMPTIVES.

The frightful tribute that humanity is constantly paying to tuberculosis renders interesting any researches or statistics in the nature of those just published by M. Holsti, of Helsingfors, bearing on the manner in which this tribute is paid. The death rate due specially to pulmonary phthisis varies naturally according to age, sex, social status and occupation.

It is incomparably higher during the two first years of life; it then decreases gradually and reaches a minimum between the ages of five and fifteen years. From that time on it rises again to a maximum between thirty-one and forty years of age, when it once more falls off gradually with advancing years. What is the explanation of these fluctuations? With children during the first two years of life the rate is high because they pass their time shut up in rooms, and especially because by not being able to walk they crawl around the floor, infecting any slight wound they may have, soiling their hands with everything with which they come in contact—objects very frequently containing the bacilli of tuberculosis—and then carrying them every moment to their mouths. At the other ages the death rate is due to individual social conditions, due in turn to a certain degree to the difference in sex.

As a general thing men die more frequent from tuberculosis than women, except between the ages of fifteen and twenty. Why should there be an exception of this sort? Because at that period young girls live a confined, sedentary life, whereas young men are free to do as they please and take part in the open air in a quantity of sports and amusements. Soon afterward, however, the struggle for life, desire for position, the different professions, make the men lose this advantage. They then live more indoors, take

less exercise, and tuberculosis creates greater havoc among them than among women. These conditions become worse still as they advance in age, owing to the custom of many men working together in a restricted space or to the numerous sources of infection created thereby. So that with man the death rate does not begin to descend until near the age of sixty, whereas with women it turns between thirty-one and forty.

There is no disease that shows the influence of social conditions so much as tuberculosis. Every one knows that a rich man with tuberculosis will live far longer than a poor man. But the poorer classes furnish as well a far larger contingent to this terrible scourge. The general death rate from tuberculosis being 37.7 per cent. from the age of fifteen, it is with the poorer classes 41.6 per cent. while with the rich it is only 22.7 per cent.—just one half as much.

Employes furnish 11.6 per cent. of this mortality; workmen in the open air 35 per cent. in confined spaces 58 per cent. and in some places 75 per cent. of the total death rate.

Finally, in closing, M. Holsti asserts that the sort of clothes worn has also an influence on this question. Upper costal breathing, which favors the expansion of the tops of the lungs and their free irrigation by the blood, prevents their being invaded by the tuberculosis bacilli; now this sort of breathing is found in the women of the more civilized parts of the world and seems to be due mainly to the use of the corset. This unlooked for argument in favor of corsets appears to me to be open to contest.

CHLOROFORM IN SUNSTROKE.

A German army surgeon, M. Koerfer, has been testing the value of inhalations of chloroform in the cerebro-spinal form of sunstroke, and in the case of two soldiers very seriously affected with unconsciousness, convulsions, hyperaesthesia of the skin, livid skin and weakened pulse, the prolonged administration of chloroform succeeded in putting an end to all the symptoms. The favorable effect of the chloroform showed itself as soon as its use was commenced by marked improvement in the pulse, but the convulsions did not cease altogether until the narcosis had been kept up for an hour and a quarter in one case and for a quarter of an hour in the other.

The use of cold water and hypodermic injections of ether, to which recourse was had in the first case, where the symptoms were particularly serious and before the chloroform was tried, were found to be powerless and to have no other effect than to bring on or increase the convulsive attacks each time they were tried. With this patient M. Koerfer also made an injection of two centigrammes of morphine toward the end of the chloroform seance, and when the man began to come out from the effect of the chloroform he fell asleep again under the influence of the morphine, and on awakening finally the

convulsive attacks had entirely disappeared.

Chloroform acts in these cases by stopping the convulsions which help to raise the temperature of the body by lessening the production of heat and also by facilitating the radiation of the heat of the body. Hypodermic injections of ether are given to prevent asphyxia, and caffeine administered in the same way has a twofold purpose, to increase or re-establish the urinary secretion and to tonify the system in general. In the future it will be well to bear in mind the usefulness of chloroform in these very severe cases of sunstroke.

Chemical History of the Atmosphere.

In the *Chemical News* Dr. Phipson gives the chemical history of the atmosphere from its origin to the present day, in accordance with the results of his observations and experiments, particulars of which we have published from time to time. Premising that the matter composing the earth was originally in a gaseous condition at such a temperature that no compounds could exist, he assumes that, when a solid crust later covered an internal molten mass, water was condensed up on the surface and a primitive atmosphere of nitrogen surrounded the globe. Into this atmosphere large quantities of carbonic acid and water were evolved by volcanic action, but there was no free oxygen. Plants then made their appearance, and, in vegetating, evolved oxygen copiously, deriving this element from the carbonic acid supplied by volcanic action. When a certain proportion of oxygen was attained, animal life became possible, and duly appeared. At the same time the proportion of carbonic acid became less, the carbon being stored up as coal, peat, lignite, etc. As these processes proceeded animal life of higher order appeared, the development of the nervous system coinciding with the increase of oxygen in the air. As evidence that the composition of the atmosphere is still slowly changing, it is stated that the latest and most careful determination of carbonic acid in the air have shown a decided decrease (0.05 to 0.03) in the last fifty years.

The Production of Prussic Acid from Sugar.

The conversion of an absolutely innocuous substance into one of a powerfully toxic nature by means of a series of simple chemical operations, though not a rare phenomenon, is well illustrated in a reaction recently observed by three chemists—Messrs. Burls, Evans and Desch—in which prussic acid proved to be one of the products of the action of nitric acid upon sugar. It is well known that by acting upon sugar, sawdust or cellulose with nitric acid, oxalic acid in tolerable quantity is produced. In the course of such an experiment the chemists above named noticed the smell of prussic acid

just after the first violence of the reaction had ceased and the evolution of nitrous fumes had diminished. Subsequent examination proved beyond doubt that prussic acid in considerable quantity was present in the liquid, and on submitting the liquid to distillation, prussic acid was found in the condensed products. A larger yield of the acid was obtained when the nitric acid was allowed to drop slowly into the sugar solution from a tap funnel. Caramel was acted upon similarly, although the quantity of prussic acid produced was less than before. The production of hydrocyanic acid would appear to be due to the reduction of the nitric acid to nitrous acid and to the action of this acid upon the carbon ensuing on the decomposition of the sugar. Finely divided carbon itself was found to give prussic acid on distillation after treatment with nitric acid, and the same result was obtained when cane sugar was acted upon by nitrous acid by submitting the sugar first to the action of nitrite of potassium and then acidulating with sulphuric acid. On this hypothesis the reaction may be thus represented: $2\text{HNO}_3 + \text{C} = 2\text{HNO}_2 + \text{CO}_2$ and $\text{HNO}_2 + 2\text{C} = \text{HCN} + \text{CO}_2$. This action is evidently of interest from a theoretical point of view, and only shows how we may be led astray in being content with the simplest explanation of certain phenomena. The text books give oxalic acid as the product of the action of nitric acid upon sugar, but now must be added the observation that hydrocyanic acid is a compound simultaneously produced.—*The Lancet*.

A New Method of Quantitative Determination of Certain Metal and Alkaloids by Trituration.

In a recent number of *L'Orosi*, Professor Dioscoride Vitali publishes a very interesting and valuable memoir over a new process devised by himself for the volumetric determination of those metals whose salts are completely precipitated from solutions by hydrogen sulphide, and whose sulphides are insoluble in dilute acids. The process is based on the principle, that when hydrogen sulphide throws down the metal from the solution of its salts in the form of sulphur compound, the acids are set free, and by means of a titrated alkali solution the amount of metal present can be determined from the precipitate. The same process serves equally well for the determination of a neutral or an acid salt, but in the latter case only a larger proportion of the alkali solution is required for the saturation of the acids separated from the salts by the action of hydrogen sulphide.

In a similar manner the process serves for the determination of the alkaloids, it being necessary, however, that in these cases the alkaloids appear in the shape of compounds with hydrochloric or sulphuric acids.

In the first instance (hydrochloric compounds) a weighed quantity of the salt is treated with silver nitrate, and in the

second (sulphuric compounds) with lead nitrate. The precipitate, protected from the action of light, is carefully washed and finally suspended in water and exposed to the action of hydrogen sulphide, which sets free the sulphuric acid originally combined with the alkaloid. From the amount of the titrated alkali solution requisite for neutralization of the acid the amount of the latter can be determined, and on this result, of course, rests the determination of the amount of the base present (when the nature of the salt treated is known).

The author illustrates the principle of his process by a number of most instructive examples, from which, however, we will quote but one—the determination of quinine, since this is of universal interest.

One gram of quinine disulphate was dissolved and the quinine thrown to the bottom by means of the hydrogen sulphide. The amount of deci-normal soda lye required for the neutralization of the free sulphuric acid in the solution was 36.3 ccm. This answers to 17.883 cgm. of sulphuric acid, which amount in quinine disulphate, answers to 59 cgm. of quinine, a result which exactly answers the theoretical formula for quinine disulphate, as shown by the following equation, the molecular weight of sulphuric acid being 98, and that of quinine being 324. As 98 is to 324, so is 17.883 cgm. sulphuric acid to the amount to quinine. By multiplying 324 by 17.883, and dividing the result by 98, we have 59, which is the weight in centigrams of the alkaloidal quinine. *Nat. Druggist*.

Improvement in Thermometers.

Mr. Lapin, of Munich, has recently called attention to two thermometers that are free from certain inconveniences that are presented by those filled with alcohol. One of them is obtained with sulphuric acid diluted with water. According to the experiments of Solmecke, the quantity of water abstracted by distillation in the thermometric tube is trifling, even when the free extremity is surrounded with ice, and, what is still more important, this small quantity of water is reabsorbed in a short time. The expansion of the liquid column is nearly constant. Mr. Vogel made use of this apparatus in the course of an expedition in Brazil, and obtained very satisfactory results with it.

The other liquid is a solution of chloride of calcium in spirits of wine (10 to 15 per cent. of the anhydrous salt is the best proportion). This is especially recommended for medical uses on account of its pronounced color, which facilitates readings. It gives no rise to error, either, in consequence of distillation, and, besides, presents the advantage of taking the temperature of the body very rapidly, say in about three minutes. The regularity of expansion, although less perfect than with sulphuric acid, is satisfactory between 0° and 50° C.

These two solutions do not solidify, even at the temperature of evaporation of snowy carbonic acid, and, with the proportion of salt indicated, there is no deposit in the reservoir.—*Revue Scientifique*

CANADIAN DRUGGIST.

WM. J. DYAS, EDITOR AND PUBLISHER.

NOVEMBER 15TH, 1893.

A Medical Columbus.

THE year 1893 is not only the quadricentennial of the discovery of America, but also that of the birth of Paracelsus, the celebrated chemist and physician, although his methods were of such a character that in modern times we should call him a charlatan. It is said that Paracelsus was also one of the first discoverers of alcohol, which he called the "Elixir of life," but demonstrated the fallacy of his theory by himself dying a sot. One of the most noted exploits of Paracelsus was in experimentation with various drugs, one of which acquired its name from the peculiar qualities which it exhibited. Having found a peculiar substance, he tested its medicinal virtues upon the monks of a neighboring monastery with the effect that each one of the persons who took the medicine promptly died. From this fact, he named the newly-discovered drug "anti-monk," which in the Spanish language is "anti-monie," from which we have "antimony."

Proprietary Remedies.

A contribution entitled "Proprietary Remedies versus Patents" appears elsewhere in this issue, and although we agree with the writer in some points, there are others which we cannot view as he does.

The supposed distinction between "proprietary" and "patents" is one that exists really in imagination, for, as far as the public are concerned, they are entirely in ignorance of the component parts of either, and whether the preparation is made by the druggist or not, when presented to the public it is a specific for disease or complaint, in either case recommended by the manufacturer, be he a manufacturer of safes or a vendor of drugs. Then again, a large number of the remedies now advertised are the manufacture of druggists now in business or who have at one time carried on such a business. Take the bulk of those now sold in Canada, do they not bear the imprint of druggists whose names may be found on the registers of our Pharmaceutical Societies or Colleges of Pharmacy? Are they not, then, entitled to as much confidence as those which may be recommended by the local druggist as being of his "own make" and "therefore he can recommend them"?

No doubt there are many nostrums put before the public which are nearly if not wholly valueless, just as there are "quack doctors" whose sole avocation is to make money, but, that all "proprietary" or "patent" medicines should be condemned on this account is absurd. Our contributor speaks of the patent medicine manufacturer "cultivating the patronage of the country merchant," and there is little

wonder that he does so, when, in many instances, he finds druggists "substituting" some preparation of their own whenever possible, and in some cases with a label not very much unlike that of some maker who has spent time and money in introducing his remedies. Patent medicines are here to stay, and if the druggist does not desire to make a profit out of them, the "country merchant" the city dry goods house, the grocer, or, as we find it in some instances, the hardware dealer, will certainly make the money out of them to which the druggist is by virtue of his calling certainly entitled. A druggist is not in business merely for the sake of relieving suffering humanity, although we sincerely hope this primary object of the profession will never be lost sight of, but he is in business for the support of himself and those dependent on him, and in this age of close competition, small profits and restricted trade, he should use every legitimate effort to that end, selling those lines of goods which he can conscientiously keep and the public require.

Articles Adopted in the New U.S. Pharmacopœia.

The 1890 edition (seventh decennial revision) of the U. S. Pharmacopœia—which goes into effect on January 1, 1894—has just been published.

Only 90 articles have been dismissed, while 88 have been added. The newly-adopted articles are the following:—

Aectanilidum, acidum hypophosphorum dilutum, acidum stearicum, adips lanae hydrosus, alcohol absolutum, alcohol deodoratum, aloë barbadensis, aloinum, aqua aurantii florum (diluted), aqua chloroformi, aqua hydrogenii dioxidi, aqua rose (diluted), aspidosperma, barii dioxidum, caffeina citrata, caffeina citrata effervesces, calcii sulphas exsiccatus, cinnamomum sagonicum, cocaina hydrochloras, convallaria, elastica, elixir aromaticum, elixir phosphori, eriodictyon, eucalyptol, extractum apocyni fluidum, extractum asclepiadis fluidum, extractum aspidospermatis fluidum, extractum cimicifuge, extractum convallariæ fluidum, extractum eriodictyi fluidum, extractum jalapæ, extractum lappæ fluidum, extractum menispermii fluidum, extractum phytolacæ fluidum, extractum rhamni purshiana, extractum scoparii fluidum, extractum ure ursi, extractum viburni opuli fluidum, ferrii quiniæ citras solubilis, glyceritum acidi carbolici, glyceritum acidi tannici, glyceritum boroglycerini, glyceritum hydrastis, hydrastininæ hydrochloras, hyoscine hydrobromas, lithii citras effervesces, menthol, methyl salicylas, naphthalinum, naphthol, oleatum zinci, oleum betula volatile, oleum cadinum, oleum terebinthina rectificatum, pancreatinum, paraldehydum, pepsinum, petrolatum liquidum, petrolatum spissum, physostigminæ sulphas, pilule cathartice vegetables, pilule ferri carbonatis, potassii citras effervesces, pyrogallol, resorcinum, rhamnus purshiana, salol, sodii nitris, sparteinæ sulphas, spiritus amygdalæ amara, spiritus aurantii com-

positus, spiritus glonoini, spiritus phosphori, strontii bromidum, strontii iodidum, strontii lactas, strophantus, suppositoria glycerini, terobenum, terpini hydras, tinctura lactucarii, tinctura quillajæ, tinctura strophanthi, trochisci santonini, viburnum opulus, zea.

Women as Pharmacists.

OVER 500 ladies are engaged in the practice of pharmacy in the United States, and over 700 women drug clerks, so announced by Julia M. Crissey, Omaha, Neb., at the recent meeting of the Missouri Pharmaceutical Association.

Sir Andrew Clark, M. D.

THE death is announced of this famous English physician who has been perhaps the most prominent amongst practitioners in England for many years. His death occurred Nov. 6th, and was the result of paralysis. He was born Oct. 18th, 1826, and consequently was 67 years old at his death. He paid a visit to Canada at the time of the first arrival of the Marquis of Lorne and Princess Louise.

Another Substitution.

WE are informed that some unprincipled person is offering to the trade a formula purporting to be "similar to that used in the manufacture of antikamnia." We would caution the trade from having anything to do with such impostors. Substitution in any form is wrong, and in most cases dangerous, and it is to be deplored that anyone should be found who would willingly sacrifice his honor as well as the welfare of the suffering by lending a hand to such a practice.

MR. ROBERT GIBSON, of the firm of Robert Gibson & Sons, medicated lozenge manufacturers, has been elected an alderman of the city of Manchester by an unanimous vote of the Council.

A Swedish firm of glass-makers are producing a new kind of glass, presenting remarkable brilliancy and clearness. It is said to be composed of no fewer than 14 different substances, of which the most important are boron and phosphorus.

COURTLAND BRONSON, of Hamilton, Ont., recently received a patent for an invention by which he claims he can make 20-year-old whiskey from raw whiskey by removing all impurities. He cools the whiskey to 70 degrees below zero and then passes an electric current through it. He has been supplied with money to carry on his experiments.

IN our October issue an answer was given to a correspondent who asked for "a table used by druggists in the United States on the adoption of the metric system of weights and measures." The fact of the question having been omitted has led some of our readers to suppose that the table was applicable to this country, which it is not.

IMPORTANT**To the Trade**

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

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

For 1 doz. and less than 3 doz., \$7.25 per doz.

" 3 " " " " 6 " 7.00 " "

" 6 " " " " 12 " 6.75 " "

" 1 gross and upwards, - 78.00 " gross.

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

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

DAVIS & LAWRENCE CO., Limited.

Montreal, Oct. 20th, 1893.

General Agents for Canada.

YOUR OWN!

*Do you know that we prepare for
Druggists' Sale*

A Special Throat Troche

Put up with the Druggist's own name, thus

SMITH'S

Improved Bronchial Pastilles

For

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

TWO SIZES IN NEAT LID BOXES.

Large (containing 60 Troches) \$10.50 per gross.

Small (" 30 ") 6.50 " "

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

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

DAVIS & LAWRENCE CO., Limited,

MONTRÉAL.

ADAMS'

LIQUID ROOT BEER.

An Extract of Roots and Herbs for making a brilliant, sparkling and invigorating Summer Drink.

It can be prepared in five minutes, and is ready for drinking in twenty-four hours.

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

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

W. MURCHISON,

SUPPLY DEPOT,

1418 Queen Street West, TORONTO.

TREFOIL BRAND.



TRADE MARK.

Compressed Blocks of Pure Camphor

Refined and manufactured in Japan by

THE JAPAN CAMPHOR COMPANY.

Half Ounce and One Ounce Blocks in convenient packages.

SOLE AGENTS:—**GRIBBLE & NASH, 76 BROAD ST., NEW YORK.**

In a report on this Camphor, H. HELBIG, F. C. S., and DR. F. W. PASSMORE, of London, state: "It is perfectly pure; being, in fact, of such excellence that it is identical with the chemically pure compound, C₁₀ H₁₆ O."

Proprietary Remedies versus Patents.

BY MENTOR.

The attention directed to the introduction of proprietary remedies by the Hamilton and Toronto druggists during the past year has done much to make the scheme one of absorbing interest to the trade, especially as ever this course was adopted a general disruption of the trade methods ordinarily practised by the retail chemist was threatened.

The trade in patent medicines has been for a number of years a large factor in the volume of business done by the average druggist, and, although the accumulation of preparations which became dead stock through failing to answer the purpose for which they were designed, was every year becoming greater, the turnover of those still being pushed, was such as to secure them a place with the druggist's stock. The extensive advertising given them by their manufacturers created a demand which the druggist who was especially advertised as their vendor naturally sought to supply, and he thus became the most valuable advertising agent the manufacturer could secure.

Many druggists who felt that in supplying what they were in no position to recommend, they were doing themselves an injustice as well as the public, introduced tried preparations of their own, but as the local trade thus secured was too limited to warrant an expenditure of the amount necessary to make them externally as attractive as the article competed with, their general success did not militate against the patent more favorably presented.

Adapted, or said to be adapted for the cure of those diseases which give the physician the most trouble to overcome; supported by extensive advertising secured by a partial expenditure of the ample profits derived from the difference between the amount charged and the actual worth of the article, and, having the free use of the druggist's prestige as a vending recommendation, it is little wonder that patent medicines and patent medicine manufacturers have thrived under such fostering care and blessed opportunities. Still, dissatisfied with the advantages thus enjoyed, their introducer seeks new agencies and cultivates the patronage of the country merchant. In this effort his success is assured from the start, as the dealer in general farm merchandise is only too pleased to be considered worthy to take issue with the more aristocratic druggist in the supplying of popular remedies. Emboldened by his success thus far, and having his avaricious tendencies thoroughly whetted, he proceeds further, upon the assumption that passive permission means permanent privilege, and undertakes to supply the big city dry goods houses with the weapon of popular patented piracy at the lowest possible price consistent with personal profit and a humane consideration for the feelings and business interests of those upon whose foundation he has already built.

With this final stride, however, he oversteps himself, and arouses the druggist to a consideration of the household remedy question in all its bearings. Such a question resolves itself into demand and supply. The public want reliable home remedies at popular prices and the drug trade is the only channel through which they can with any degree of confidence obtain their supply. They care but little whose it is as long as the article supplied will justify the recommendation of the druggist who sells it. No doubt exists in the minds of the drug trade that they can, upon the whole, supply better preparations than those now offered, and no one who has thought out the question to his own satisfaction will challenge the method now being introduced. If the druggists of to day or of the future desire to avoid being made the catspaw of those who have only personal and selfish ends to serve, and who, as a rule, are as little competent to judge of the merit of medicine as they are to act consistently, they will promptly and cheerfully accord their co-operative support to make a success of a branch of their trade which cannot afterwards be subverted at the will of an individual. The commercial part of the druggists pursuit is too important to be allowed to become dependent upon the caprice of anyone. Under the most favorable circumstances it cannot be made to afford more than a reasonable recompense to its votaries, and as favorable circumstances are not at present a happy chance, but are rather, dependent upon the united and sympathetic effort of the trade to create them, it the more certainly becomes the duty of every druggist to support his confreres in order to support himself.

The Successful Man.

THE late Sir Andrew Clark, in addressing his students on one occasion, said he presumed those present would like to know from him what conditions he thought were essential to make a man a successful physician. Here are the opinions he expressed on this point:

"Firstly, I believe that every man's success is within himself, and must come out of himself. No true, abiding and just success can come to any man in any other way. Secondly, a man must be seriously in earnest. He must act with singleness of heart and purpose; he must do with all his might and with all his concentration of thought the one thing at the one time which he is called upon to do. And if some of my young friends should say here, "I cannot do that—I cannot love work," then I answer that there is a certain remedy, and it is work. Work in spite of yourself, and make the habit of work, and when the habit of work is formed it will be transfigured into the love of work; and at last you will not only abhor idleness, but you will have no happiness out of the work which then you are constrained from love to do. Thirdly, the man must be charitable, not censori-

ous—self-effacing, not self-seeking; and he must try at once to think and to do the best for his rivals and antagonists that can be done. Fourthly, the man must believe that labor is life, that successful labor is life and gladness, and that successful labor, with high aims and just objects, will bring to him the fullest, truest and happiest life that can be lived upon the earth."

An Extensive Advertiser.

G. T. FULFORD, of Brockville, Ont., proprietor of "William's Pink Pills," is again in England looking after his interests in that country. In an interview with a representative of the *British and Colonial Druggist* he says, "I now spend for advertising on an average £3,000 a month in Great Britain, and £6,000 a month in America. There was a time when I hesitated more over spending £100 in advertising than now I do over £10,000. I know now what advertising means. You must be prepared to pay out. Do not expect to see immediate results, but launch out and wait for them." It is almost needless to say Mr. Fulford is an extensive advertiser in drug journals and thereby cultivates the trade of druggists in preference to that of the general dealer.

Glycerine—The Relation of the Animal Product to that obtained from Vegetable Sources.

L. A. HARDING, B. SC., PH. D.

Extract from a paper in the *American Soap Journal*.

A great divergency of opinion seems to exist as to the fitness of glycerine obtained from the animal source, as compared to that from the vegetable kingdom. The prevalence of a general opinion (even among the medical and pharmaceutical profession) that the glycerine derived from the vegetable source is so much purer, and therefore better fitted for internal use, is without doubt true.

Manufacturers have heralded their pure vegetable glycerine as the only kind fit for the physician to use, when prescribing it for internal treatment. All this is very good as a story, and sounds very plausible, but let us for the purpose of loftier scientific inquiry, spend a little time in the examination of glycerine, physically and chemically, and let us carefully note in what respect one differs from the other.

Physically, glycerine, whether from the vegetable or animal source, represents a colorless, inodorous, syrupy liquid of a pure, sweet taste, the specific gravity of which is between 1.265 and 1.280. Glycerine, chemically speaking, is an alcohol, and is designated as Propoyl or Triatomic Alcohol, whether animal or vegetable in its origin, chemically they are alike, the processes by which they are manufactured are alike, the impurities, if any, come alike from the same source. Glycerine, as mentioned before, is classed as a triatomic alcohol, it is a derivative of propane,

BUTTERMILK TOILET SOAP.



Over 2,000,000 Cakes Sold in 1892
 The Best Selling Toilet Soap in the World.
 Excels any 25 cent Soap on the Market. Nets the Retailer a good profit.

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

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

COSMO BUTTERMILK SOAP CO.,
 185 Wabash Ave., CHICAGO.
F. W. HUDSON & CO., - Toronto,
 Sole Agents for Canada.

Johnston's FLUID - BEEF!

maintains its high standard as
 A perfect Beef Food.

Staminal

is a *FOOD* and *TONIC* combined.
 It contains the feeding qualities of *Beef and Wheat* and the tonic qualities of *Hypophosphites* in the form of a

Palatable Beef Tea.

Milk Granules

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

The perfect equivalent of **MOTHER'S MILK.**

Major's Cement.

ESTABLISHED 1876.

Universally acknowledged to be the Best and Strongest preparation ever offered to the public.

For repairing China, Glassware, Furniture, Meerschaum, Vases, Books, Leather Belting, Tipping Billiard Cues, etc.

Price, \$1.00 and \$1.50 per doz. 15 and 25 cents per bottle.

MAJOR'S LEATHER CEMENT for repairing all kinds of Leather Goods.

Price, 80c., \$1.00 and \$1.50 per doz. 10, 15 and 25 cents per bottle.

MAJOR'S RUBBER CEMENT for repairing Boots and Shoes and all kinds of Rubber Goods.

Price, \$1.00 per doz. : 15c. per bottle

The Leather and Rubber Cements are superior to any in the market, and can be used by any one, as the directions are given so explicitly. It is put up in two ounce bottles, one quart and one gallon cans.

MAJOR'S BEST LIQUID GLUE for repairing Wood, Tipping Billiard Cues, etc., always ready for use.

Price, 80c. and \$1.00 per doz. 10 and 15 cents per bottle.

A. MAJOR CEMENT COMPANY,
 232 William St. - New York City.

A. J. LANGLEY. T. M. HENDERSON.
 J. N. HENDERSON.

LANGLEY & Co.

ESTABLISHED 1858.

Wholesale Druggists

21 and 23 Yates Street,

VICTORIA, - B. C.

JOS. E. SEAGRAM

WATERLOO, - ONTARIO.

MANUFACTURER OF

ALCOHOL

PURE SPIRITS,

Rye and Malt Whiskies.

"OLD TIMES" & "WHITE WHEAT."

A Druggist's Specialty.

CURTIS & SON'S

Yankee Brand PURE Spruce Gum

Is meeting with the success its high qualities merit

£ A TRIAL ORDER SOLICITED.

CURTIS & SON,

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



Is a certain and speedy cure for **INTEMPERANCE**, and destroy all appetite for alcoholic liquors
 Price: \$1.00

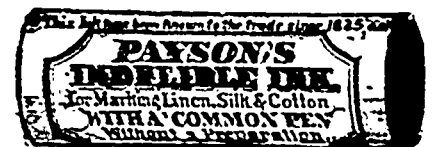
PROPRIETOR.

S. LACHANGE, Montreal.



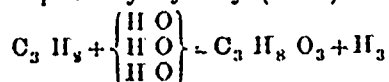
For sale at Manufacturers' Prices by the leading wholesale druggists and druggists' suppliers throughout Canada.

THE OLDEST. - THE BEST.



Canadian trade supplied by The Davis & Lawrence Co., Montreal, The Northrop & Lyman Co., Toronto.

$C_3 H_8$. In which three atoms of Hydrogen are replaced by Hydroxyl (H. O.).



It is not found in the free state, but always combined with fatty acids or oleic acid, and is separated from the fat by means of strong basic hydrates, sulphuric acid or steam. These methods are now almost universally employed in its manufacture on a large scale. Glycerine is also formed, in a very small quantity of course, as a product of the fermentation of sugar, and it is therefore always present in fermented beverages, more especially in wine and beer. Dilute glycerine moderately oxidized by means of nitric acid, at ordinary temperature, forms glyceric acid, $C_3 H_6 O_4$, by stronger oxidation oxalic acid is produced, $C_2 H_2 O_4$. For a thorough understanding of the question under discussion it is quite necessary to go into the detail of the various processes by which glycerine is manufactured.

Glycerine is manufactured in a variety of ways, all yielding the same product with a greater or lesser degree of purity. A very large portion is obtained as a by-product in the manufacture of soap and candles. One of the best and purest brands is manufactured by the Price Candle Co., at Battersen, England. This firm has for a long time employed what is known as the Wilson & Geoywne process in which the decomposition of fats is effected by means of distilling by superheated steam. By a careful application of this method, the glycerine and the fatty acids distill over without any further decomposition.

Disinfectants and Disease Germs.

C. Chamberlain and E. Fernbach, in a lengthy paper on the disinfection of rooms, describe the results of a great number of experiments with different disinfectants on bacteria in various conditions. They find that the eau de javelle of commerce, chlorinated lime (a 1 in 12 solution diluted to ten times its volume with water), and commercial hydrogen peroxide, are more active than a 1 in 1,000 acid solution of corrosive sublimate. When employed at the ordinary temperature, however, they do not act, or only after several hours, upon moist germs, but, if they be heated to 40° - 50° , or even higher, these germs are destroyed rapidly, a few minutes sufficing. It would seem desirable, therefore, to use disinfectants at as high a temperature as possible. Dry germs were found to be much more resistant than moist ones, for where a few minutes sufficed to kill the latter, the dry forms were able to resist a temperature of 40° to 50° for several hours. Before the disinfectants could act properly also it was necessary to soak the dry germs in water, preferably lukewarm, for about an hour, after which they were as readily acted upon as moist germs. It follows, therefore, that it should be regarded as

absolutely necessary that the walls of rooms should be sprayed with water before a disinfectant is employed. A noteworthy fact to which attention is called is that concentrated solutions of chlorinated lime are much less active than the same diluted with ten or twenty times their volume of water. This holds good whether moist or dry germs are to be destroyed, and at either the ordinary temperature or at 50° C. The *Bacillus subtilis* was the organism chiefly experimented with, being selected on account of its great resisting power. When the germs were in the moist condition liquid cultures were mixed with disinfectants, in definite proportions, and the whole well shaken together. Cultivations were made from the mixtures from time to time, and the results checked by some of the original culture that had not been acted upon by disinfectants. The dry germs were treated upon glass slips, and not upon silk threads, as is usually the case. With regard to the action upon other organisms of the disinfectants employed, they were found to destroy in a few minutes, and at the ordinary temperature, the spores of *Bacillus anthracis*, *Aspergillus niger*, *Saccharomyces cerevisiae* and *B. typhosus*. Thymol, lysol, and oil of turpentine were found to yield relatively bad results as disinfectants, and preference was given to chlorinated lime solution, diluted as above (*Ann. de l'Inst. Pasteur.*)—*Phar. Journal.*

Nitro-Metals.

P. Sabatier and J. B. Senderens describe a new series of compounds, which they distinguish by the term *metaux nitres*. These are formed by the direct union of nitrogen peroxide with certain metals, the vapor being passed at a temperature of 25° to 30° over the metals in a finely divided state, as obtained by the recent reduction of their oxides by hydrogen or carbonic oxide. Copper, cobalt, nickel and iron are the metals so far experimented with. Nitro-copper, Cu_2NO_2 , is a brown substance which reacts with great energy with water, nitric oxide being evolved. It was found to contain about 74 per cent. of copper. Though unaffected by dry air at the ordinary temperature it is dissociated when heated in pure nitrogen. By heating some of the compound in a Faraday V-tube, nitrogen peroxide is liberated and collects in the cold limb in the liquid form, being re-absorbed by the copper when the tube is allowed to cool. Hydrogen only affects the nitro-copper when heated to about 180° , ammonium nitrite and free ammonia being then produced. Carbonic oxide reduces the copper to the metallic state on heating; dry ammonia gas reacts in the cold, metallic copper and ammoniated oxide of copper resulting; and sulphuretted hydrogen also reacts without the aid of heat, water and sulphur being liberated, whilst finally a blue sulphide of copper remains. Nitro-cobalt occurs as a black powder. It reacts violently with water and, when mixed with a combustible substance,

forms a dangerous explosive. Nitro-nickel is also black, and resembles the cobalt compound in its properties, whilst nitro-iron is more difficult than the others to isolate, and has not yet been obtained in sufficient quantity for detailed examination.—*Phar. Journal.*

AUSTRALASIAN PHARMACISTS seem to be very much in the same position as we are in Canada. The fact of holding a certificate in one of the group of colonies does not qualify the holder in the others. In New South Wales a meagre Poisons Act is in force, and, although they have no regular Pharmacy Act, yet a qualified man from Victoria or elsewhere is not permitted to do business there. New South Wales is the only British colony without a Pharmacy Act.

THE office of permanent secretary of the American Pharmaceutical Association having become vacant through the death of Prof. Maisch, with the advice of the majority of the council President E. I. Patch has announced Prof. Joseph P. Remington, of Philadelphia, as permanent secretary during the interim between now and the next meeting. All communications should be addressed to Prof. Joseph P. Remington, 1832 Pine street, Philadelphia, Pa.

SESAME OIL IN OLIVE OIL.—To detect the adulteration of olive oil by means of sesame oil, prepare a solution as follows:

Pyrogallic acid..... 2 grms.
Hydrochloric acid 28 grms.

Introduce 14 grains of this solution into a test tube. Pour in about the same quantity of the oil to be examined. Shake the tube vigorously and allow it to stand until the oil and acid have separated into two layers. Take off the supernatant liquid with a pipette, and boil the acid for five minutes. If there is any sesame oil in the sample, the acid becomes purple on boiling, whilst olive oil only gives a yellow color. It is easy to detect the addition of 1 per cent. of sesame oil by this method.—*Journal de Pharmacie.*

A NEW CAPSULE MASS.—A patent has been taken out which has for its object the improvement of the mass used for enveloping medicinal liquids, known as perles, or capsules. 2,500 grammes of tapioca and 4,000 cc. of water are allowed to stand for four or five hours; the whole is then transferred to an open basin and stirred for some time until the grains have all disappeared. 1,000 grammes of sugar and 500 grammes of glycerine and 4,000 cc of water are mixed and the solution added to the tapioca jelly, still warm. The whole mass is now heated for some time. It is then pressed upon linen after cooling. The thick liquid is then dried in a stove on plates of suitable thickness, and is then ready for using in the "pressure" process of making capsules or perles.—*Journal de Pharmacie.*

Rubber Goods

—AT—
RIGHT PRICES.

Our line of ENEMAS, TUBING, FOUNTAINS, ATOMIZERS, is very complete and prices right. Buyers can effect great saving by placing orders with us.

Sure Selling Specialties :

Carson's Bitters

Pectoria

Silver Cream

Allan's Cough Candies

4 gross Boxes at \$1.00 per Box.

Soap Bark

In 5c. Packages, 4 gross Box, \$1.00 per Box.

Full lines of Sundries.

Mail orders promptly executed.

ALLAN & CO.,

53 Front St. East, TORONTO.

ATTENTION !

\$2.00 buys a Sample of our No. 1, RAPID WRITER FOUNTAIN PEN. The best pen on the market.

CIRCULARS FREE. AGENTS WANTED.

Address—**FOUNTAIN PEN CO.,**
Manufacturers, Newton, Ont., Canada.

THE J. R. H. BRAND

IS THE FINEST

**NORWEGIAN
COD LIVER OIL.**

Sold in 25 imperial gallon tin-lined Barrels, and in 2 and 4 gallon Tins.

WHOLESALE ONLY.

Direct correspondence to


JOH. RYE HOLMBOE,
TRONSO, NORWAY.

Sole Maker and Exporter.
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INKS, EXTRACTS &c.
SAMPLES & PRICES FURNISHED

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SOLE MANUFACTURERS
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Drug Store Fittings

A SPECIALTY.

DRUGGISTS about to remodel their stores or fit up new buildings, will find it to their advantage to write us for designs and estimates. We have something new and original for each customer.

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DR. WILSON'S HERBINE BITTERS.

SOLE PROPRIETORS OF THE FOLLOWING :

Daw's Sturgeon Oil Liniment.
Gray's Anodyne Liniment.
Dr. Wilson's Antibilious Pills.
Dr. Wilson's Persian Salve.
Dr. Wilson's Itch Ointment.
Dr. Wilson's Sarsaparillian Elixir.
French Magnetic Oil.
Dr. Wilson's Worm Lozenges.
Dr. Wilson's Pulmonary Cherry Balsam.
Dr. Wilson's Cramp and Pain Reliever.
Dr. Wilson's Dead Shot Worm Sticks.
Nurse Wilson's Soothing Syrup.
Clark's Derby Condition Powders.
Wright's Vermifuge.
Robert's Eye Water.
Hurd's Hair Vitalizer.
Dr. Howard's Quinine Wine.
Dr. Howard's Beef, Wine and Iron.
Strong's Summer Cure.
Dr. Howard's Cod Liver Oil Emulsion.

Druggists.

TEXAS BALSAM

Is the only Rapid and Certain Healer for
Scratches, Cuts, Galls, Sore Shoulders
and all Wounds on

HORSES and CATTLE.

Texas Balsam is now extensively advertised in Local Newspapers and Periodicals, and has an assured future as a Staple Remedy.

It will pay you to keep it in stock.

PRICE :- Sample by mail, 25 cents.
TO TRADE :- \$1.50 per doz., express prepaid
TERMS :- Cash with order.

Orders from the Trade solicited and receive prompt attention.

C. F. SEGSWORTH,

6 Wellington-St. East, - TORONTO, ONT.

THIRD EDITION.

MANUAL OF PHARMACY

AND

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Dean of the Ontario College of Pharmacy and formerly
Instructor in Theory and Practice of Pharmacy
in the N. Y. College of Pharmacy

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*A Synopsis of the
British Pharmacopœia
Preparations.*

BY THE SAME AUTHOR.

The object of this work is to furnish, in a most convenient manner, a method for the study of the official preparations as to their Latin and English titles and synonyms, their composition, methods of preparation, strengths, doses, etc., arranged in classes.

With this end in view the B. P. preparations have been tabulated and, in most cases, the individual members of each class divided into groups, each group presenting some general features in common, in mode of preparation, ingredients, similarity of active constituents, strength, dose, base, etc. This book will be found an invaluable aid to apprentices and students in pharmacy or medicine.

Price \$1.00, Interleaved

Either of these books will be mailed free of postage on receipt of price.

CANADIAN DRUGGIST

STRATHROY, CANADA

How and Why Druggists Should Advertise?

G. W. DAVY, PH. C.

There is only one answer to the question as to why druggists should advertise, and the answer is known to all, viz., to increase their business and their cash account. That is patent to every business man, but the other question—how to advertise? that is the problem. It is easy to spend money for advertising and hard to see where the profit comes in. It is very easy to overdo the matter.

In giving advice to druggists as to how to advertise, I will divide them into two classes—city druggists and country druggists.

As far as advertising goes, the country druggist has the advantage as he can use his local newspapers, but the city druggist is debarred from newspaper advertising, as a rule, because it is too expensive to advertise in large daily papers and because they would only partially reach his trade.

The city druggist then must confine himself to physician's influence, circulars, window displays and signs. These four ways are about his limit; the first is the most important. He should use every exertion to gain the good will and influence of his neighboring physicians. He should call on them personally and tell them about his facilities. If he has hired a new clerk who passed his examination with honors, he should tell the physician about it. If he has made up some of the National Formulary preparations, as for instance, compound syrup of hypophosphites, let him take a sample along with him and show what a superior preparation it is to certain loudly recommended proprietary articles that will ferment at the least provocation.

The city druggist should be kind to the physician. A nice thing to do is to send him a complimentary soda water season ticket with a polite note stating that you trust he will make good use of it.

Circulars are good. The city druggist will find that a few taking words on a neatly-printed circular will be read, and when relating to seasonable topics will make new trade.

Window displays are, if properly done, a great help; they should, however, be seasonable and suggestive. It is a good plan, and has often been recommended, to display a windowful of some specialty, but this is often not feasible as the druggist's stock in many cases will not permit it, but he can, by using his judgment, make taking combinations. For instance, one week he can show all his brushes, including tooth, nail, hair, and combs of all kinds. Another week he can fill his window with rubber goods including all his stock of syringes, nipples, rattles, rings, etc., or he can leave out the syringes and add baby things, such as condensed milk and the various baby foods. And so on through the entire stock, having one section of it in the window all the time. He

should also put his prices on the goods in plain figures so that all can see. A comb marked 50c. will attract as much attention as one marked 10c.; he will not sell as many of them but it will be known where a good article can be had and that is the trade he is after.

The last method for the city druggist is signs. We would suggest for this purpose, say four or six good talking signs printed with letters from four to six inches in length so that they can be read at a glance from the opposite side. These signs should be changed with the seasons.

As for the country druggist he has all the chances of the city druggist and can use all the opportunities we have stated, in addition to which he has his local newspapers in which he should advertise judiciously. A standing advertisement of three or four inches should be kept lively with seasonable news about the advertiser's business and local items in the local columns should refer to special articles.

He should also cultivate the physicians and use the signs, and at times, if he has anything very special, use a circular.

There is another system of advertising in vogue among some druggists that has advantages. It is the publishing of a paper in which the druggist tells his patrons in good readable style what he sells and how he sells it. The advantage of this system of advertising is that it suits either the city or the country druggist. The city druggist can get the same results that the country druggist does from his local papers and the country druggist has a local paper of his own.

Some druggists have by a little extra work issued a paper of their own and in so doing have procured enough advertisements from their neighbors to pay for the whole paper. The expense of issuing such a paper is very little more than issuing a circular.

The points to bear in mind, however, are—do not advertise too strong for your stock. Never advertise what you cannot do. Do not expect advertising to make business unless you have qualifications and the energy and capacity to hold your customers when they are brought to you.—*Druggists' Circular.*

Electro-Chemistry.

W. N. SHERMAN, PH. D., MERCED, CAL.

To those watching the progress of electrical science in its various branches, the recent practical application of the electrical current for purifying water would seem to indicate that in the near future it may be more closely allied to chemistry and pharmacy, and in many ways used in the manufacture of drugs and chemicals. To the writer there seems to be a wide field in this direction, and its development only awaits scientific investigation. The discovery and development of electricity is largely indebted to chemistry, and the two are closely linked in many ways. Through chemicals we produce a current, and then use the current in the

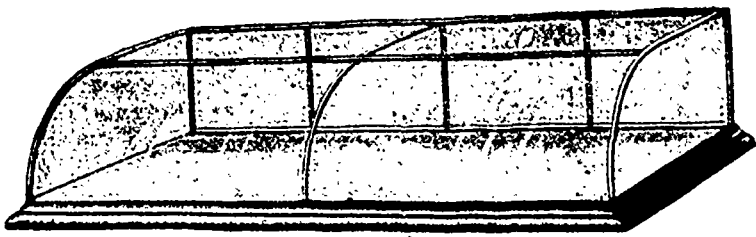
deposition of metals (electro-plating), etc. The forming of storage plates is purely an electro-chemical action, and is one of the practical examples that show its action in separating and uniting chemical elements. This action of the current is termed Electrolysis, and presents many strange and interesting features. It is used on the human body to decompose fluids and induce changes in morbid growths. Another strange phenomenon may be observed as follows: Moisten the positive electrode of a galvanic battery with a solution of potass iodine and the negative electrode with a solution of starch. Now place them on opposite and distant portions of the body and close the circuit and you may observe the blue color in the starch of the negative pole. The iodine has passed from the opposite pole and attacked the starch forming the blue iodine of starch. This illustrates what we call cataphoresis, or the introduction of medicines into the body by means of electricity, and is frequently practiced by physicians using electricity.

The electro-chemical action of the current on substances outside the human body led to its uses for similar purposes to the human body, and with success. Thus we observe the relation of discoveries along certain lines and their gradual development and progress. It is a species of perpetual action. We first produce the electrical current by a combination of chemicals and then use the current to produce chemical changes in other substances. In relation to power the same thing may be accomplished by using the rapids of a river to run a water-wheel and dynamo, then using the current of electricity so produced to develop power on a boat passing up the stream. Thus we see a very remarkable phenomenon, the river furnishing the motive power to overcome its own resistance; first a power to develop energy, then energy to develop power.

A new field has been opened by the eminent scientist, Nicola Tesla, but as yet it is in an experimental stage. This is the production of a current of enormous high frequency (alternating) similar to that from the electro-static machines, and from this we may expect great results. His brilliant experiments have startled the whole scientific world. Among the many strange things, he passes over three hundred thousand volts of this current into his own body without harm.

Some beautiful and profitable experiments may be observed under the microscope. One of these is the deposition of fern leaf crystals of gold, copper, silver, etc., from solutions of the same. The crystals are made by passing a current through a solution of these metals, and they are suitable for permanent mounts, and are greatly admired by everyone who sees them.—*Pacific Druggist.*

HYDRASTINE IN GONORRHEA. — After the acute stage of gonorrhoea has passed, muriate of hydrastine is most valuable as a mild astringent injection.



H. G. Laurence & Son
 MANUFACTURERS OF
SHOW CASES.

Store, Office and Bank Fittings.

Interior Hardwood Finishing of all Descriptions.

Estimates and Sketches Supplied.

196 KING ST. WEST, TORONTO.

Send for Catalogue and Price List.

Dominion Show Case Works, WAGNER, ZEIDLER & CO.
 (Formerly DOMINION SHOW CASE CO.)

HIGHEST AWARDS RECEIVED WHEREVER EXHIBITED.



MANUFACTURERS OF

Show Cases of every description in Nickel, Silver, Walnut, Ebonized, etc.

Hardwood Store Fittings, Metal Sash Bars, etc.

Send for Catalogue and Price List.

Show Rooms, Head Office and Factory : West Toronto Junction, Ont.

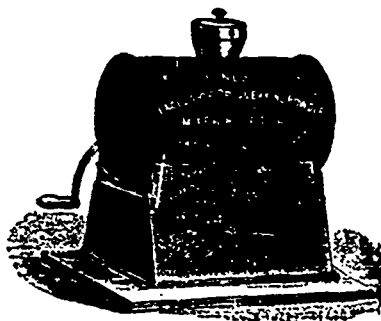
JONES'
Drug and Baking Powder
MIXER AND SIFTER,

For Druggists, Manufacturing Chemists and Perfumers.

THESE ARE MADE IN THREE SIZES :

Suitable to mix—5 lbs., 10 lbs. and 25 lbs—at \$6, \$12 & \$18 each.

Easily
 Cleaned
 and
 no Wood
 to Scent.



Dust
 Proof
 and
 Changeable
 Sieves.

Rubber brush rubs all lumps out of powder before it is sifted.

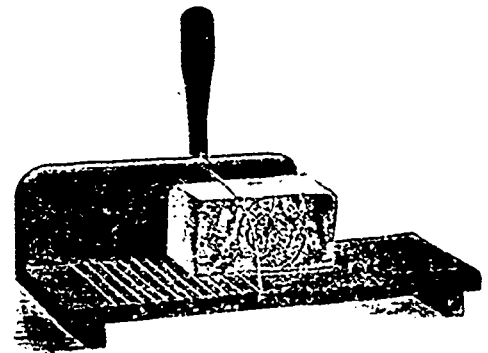
A simple, durable, practical and cheap machine for the mixing, compounding and triturating of all powders intended for manufacturing and compounding Baking Powders, Tooth Powders, Face Powders, Condition Powders, and all Compound Druggists' Powders. This machine may be termed the thorough Mixer and Sifter, and will do more mixing in less time than all other high priced mixers combined. This machine mixes powders thoroughly, then forces same through sieves of the proper fineness for the intended powders.

Two Sieves, 40 and 60 mesh, with each Mixer, and valuable formulas for Baking Powder, Tooth Powder, Dyspepsia Powder, &c.

.80 Mesh and 120 Mesh Wire Sieves, and 160 Mesh Bolting Cloth, 75c. each. Send for circular.

WM. J. DYAS, Strathroy, Ont., Sole Agent for Canada.

"EXCELSIOR"
Soap Cutter & Trimmer.



SIMPLE IN OPERATION.

UNIFORM IN ACTION.

PREVENTING WASTE.

Will cut hard as well as green soap, and has a Trimmer which finishes the edges smooth and even, adding greatly to the appearance.

PRICE, \$1.00.

Manuf'd by the **ELCELSIOR MANUFACTURING CO.,**

(Patentees.)

Include one in your next order to your Jobber.

WM. J. DYAS,

STRATHROY, ONTARIO,

Sole Agent for Canada.

PHARMACY ABROAD.

PHARMACEUTICAL SOCIETIES IN RUSSIA.—The Pharmaceutical Society of St. Petersburg last week celebrated the seventy-fifth year of its existence. This is the oldest society of the kind in Russia, with the exception of the Pharmaceutico-Chemical Society of Riga, which was founded in 1802. The St. Petersburg Society consists of 75 honorary, 160 ordinary, and 50 corresponding members. It publishes a journal of its own, which is printed in both the Russian and German languages. Eight other towns in Russia possess pharmaceutical societies—namely, Moscow, Warsaw, Dorpat, Kazan, Kief, Odessa, Kharkof, and Mittau.—*Brit. and Col. Druggist.*

†††

DISPENSING IN BAGDAD.—Dr. J. C. Sundberg, U. S. Consul to Bagdad, writes thus in a communication made recently to the San Francisco County Medical Society. The practice of medicine is in a degraded state, and patients are constantly bargaining with the physicians for a cure and refuse to pay for advice pure and simple, or for an examination, no matter how much skill or time it may involve. When a wealthy person gets sick all the doctors and magicians in the city are sent for an hour or two apart, and without each other's knowledge, and their advice is followed or not, as it suits the fancy of the women neighbors, who always try to pump the doctor by fair means and foul. If a prescription is sent to a drug store it will probably be put up in an old unwashed cod-liver oil bottle that has lain perhaps for months in some dirty corner and then an old rag and some paper is made to do service as a cork. This is not overdrawn. Sometimes the prescription may be put up in a cup without any cover. The percentage on prescription system has here been developed and refined as nowhere else. There are benevolent societies whose secretary receives a salary a certain amount on every prescription he has to settle for, and then he and the doctor agree that a new prescription shall be written for every dose.

†††

PROFESSIONAL LIBERTY IN RUSSIA.—The practitioner of medicine in Russia has, in marked contrast to his American brother, very little liberty in the pursuit of his profession, and none at all save as it is doled out by the police. According to George Kennan, than whom no better authority on Russian laws and customs exists, the physician must get permission from the police before he can practice his profession, and then, if he does not wish to respond to night calls, he must have permission to refuse to go; furthermore, if he wishes to prescribe what are known in Russia as "powerfully acting" medicines, he must have special permission or the druggists will not dare to fill the prescriptions. "Chemists and apothecaries, both in the cities and in the provinces, are furnished by the police with a complete

list of names of all physicians who have the right to prescribe 'powerful acting' medicines, such as anesthetics, narcotics, and poisons. If a doctor's name is not on this list the chemists dare not fill his prescription, for any drug that might be used by a 'terrorist' for the attainment of illegal ends."—*Medical Progress.*

Ginseng Culture.

The Ginseng is a plant about which we hear very many inquiries, but unfortunately there are very few reports from those who have attempted its cultivation. Nearly all the roots exported from this country are gathered from wild plants by the Indians, therefore there is great danger that, unless care is taken and the natural beds reserved or the cultivation of the plant encouraged, it will soon become extinct, and through this neglect we will lose an industry which annually brings a large amount of money into the country. Realizing the importance of this matter, the Ontario Government, two or three years ago, published a bulletin which contains a large amount of useful information regarding the nature and value of this plant. For the benefit of those who are interested, we give the experience of Mr. George Stanton, Summit Station, N. Y., who commenced experimenting with the Ginseng as early as 1886. His first attempts were unsuccessful, but in 1888 he obtained results which, even under the unfavorable circumstances, convinced him that the cultivation of the Ginseng could be made a success. He then commenced a careful study of the habits and requirements of the plant, while the experience which he had already gained enabled him to improve upon his methods of culture, so that he now considers that success is assured.

He says that the best way to get started is to transplant the wild roots, and by this means a person soon gets in the way of raising his own seed. Fresh, reliable seed is expensive, and cannot be obtained in any considerable quantity; in fact, cannot be handled in bulk like other seeds as it must be sown the autumn of the season in which it is grown, and must not be allowed to get dry. It may be sown in any secluded spot in the forest, and left for nature to produce a crop of roots, but this process is slow. The best plan is to prepare the ground, make it very rich, and sow in drills two or three inches apart; seeds one inch apart and one inch deep. Mr. Stanton considers that his crop of seed, which was produced upon a piece of ground 300 feet in length, and no more than three feet wide, was worth over one hundred dollars. The indications are, that the cultivation of ginseng can be made very profitable to those who have time and patience to devote to it. The exportation of the root is an old established industry, dating back to the year 1818, when it was first exported from Canada. From 1882 to 1891, the exportations from the United States were valued at the enormous sum of \$7,700,000. The

supply of the wild root is rapidly becoming exhausted, and it is certainly worth while to make an effort to establish the cultivation of so valuable a root while there is something left to start with. Those beginning should guard against purchasing seed out of season, and avail themselves of all the information that they may be able to obtain.—*Advocate.*

A New Remedy.

Old Joe Case didn't have much respect for either doctors or medicine until a short time ago.

Joe had just pulled through a pretty severe attack of grippe, and was persuaded, much against his will, to take quinine as a tonic. The country doctor, to whom Joe went for the quinine, happened to be very busy that day, and did not have time to put up any capsules for him. However, he provided him with the materials, and ample directions as to how he must fill the capsules with the quinine.

A week after this Joe presented himself at the doctor's office. His face was beaming.

"Doc," he said, "I ain't never a-gwine to say agin that you can't help a feller. You've done me a power o' good."

The doctor was slightly surprised. He asked him how much quinine he had taken.

"Well," said Joe, "I ain't took none o' it yet. I've just been a takin' the capsules. Quinine may be pretty good, but them thar capsules does the business. Lemme have all you kin spare. The old woman will be oneasy 'till she gits 'em, for she 'lows they mought help her, too."—*Detroit Free Press.*

A PERMANENT concentrated Cinchona decoction is prepared as follows: One kilogramme of crushed cinchona bark is extracted with the necessary quantity of boiling water, and filtered while at a temperature of 70° C. The filtrate is quickly evaporated to about 400 c.c. and allowed to become lukewarm. The thick precipitate thus obtained is now almost completely dissolved by adding 100 c.c. of alcohol. The measure of the fluid is then brought up to 500 c.c. and kept in well stoppered bottles. Ten c.c. of the decoction will correspond to 20 grammes of the bark.—*Apoth. Zeit.*

PROOF of the sterilization of surgical dressings is obtained, according to Mauthner (*Deutsche Med. Zeitung*), by applying to the dressing a harmless color which will change when heated to 100° C. Such a color is furnished by the following preparation: Solution of ammonium acetate, 150 parts; water, 150 parts; 20 per cent. alizarin paste, 5 parts. This mixture should be well shaken before being applied to the dressing. It is brown in color, but will turn to a bright red on being heated to 100° C.

Acetanilid, in five grain doses, is now much praised for its virtues in epilepsy.

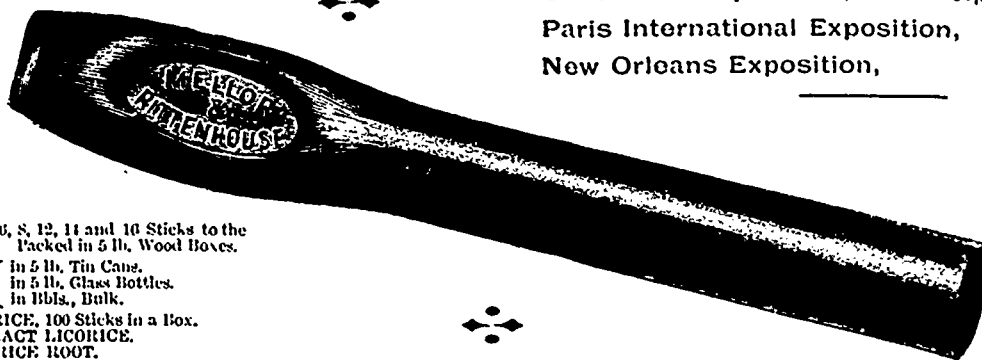


Trade supplied by all Jobbers in Canada, United States, and Mexico.

LICORICE

HIGHEST AWARDS :

Centennial Exposition, Philadelphia,	1876
Paris International Exposition,	1878
New Orleans Exposition,	1885



TICK LICORICE, (4, 6, 8, 12, 14 and 16 Sticks to the lb. Packed in 5 lb. Wood Boxes.
LICORICE LOZENGES, (in 5 lb. Tin Cans.
in 5 lb. Glass Bottles.
in 10 lbs., Bulk.
CATALUNA LICORICE, 100 Sticks in a Box.
POWDERED EXTRACT LICORICE.
POWDERED LICORICE ROOT.
AMMONIACAL GLYCYRRHIZIN, in Scales.

THE MELLOR & RITTENHOUSE CO.,

218 North 22nd Street, **PHILADELPHIA, PA.**

Radlauer's Somnal.

AETHYL-CHLORALURETHAN.
(REGISTERED)

THE NEWEST & MOST EFFICIENT SOPORIFIC REMEDY.

Taken in doses of 32 grains, or half a teaspoonful, in milk, or cognac, produces in half-an-hour a quiet refreshing sleep, lasting from six to eight hours, with no unpleasant after effects. The effects of SOMNAL are more pleasant than those of Chloral Hydrate and Morphia. Experiments made in the Town Hospitals, Moabit and Friedrichshain, Konigliche Charite and Konigliche Universitats Poliklinik, Berlin, have shown that SOMNAL does not accelerate the pulse and does not upset the stomach. SOMNAL is especially recommended for Nervous Insomnia, Neurasthenia, Spinal Complaints, Infectious Diseases, Paralysis, Melancholia, Hysteria, Morphinism, and Diabetes. The low price of SOMNAL enables its use in the poor and workmen's practice and in hospitals.

Radlauer's Antinervin.

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

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

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

MANY GOLD MEDALS HAVE BEEN AWARDED.

S. RADLAUER, Kronen Apotheke, FRIEDRICHSTRASSE, 160, BERLIN, W.

For sale by **THE LYMAN BROS. & CO.,** Toronto, and all Jobbers.

AN IDEAL FAMILY MEDICINE
For Indigestion, Bilio-sness, Headache, Constipation, Bad Complexion, Offensive Breath, and all disorders of the stomach, Liver and Bowels.
RIPANS TABLETS
act gently yet promptly. Perfect digestion follows their use. Sent by druggists or sent by mail. Box (6 vials), 75c. Package (4 boxes), \$2.
For free samples address
RIPANS CHEMICAL CO., New York.

GEO. F. BOSTWICK
MANUFACTURER
TORONTO, ONT.
MANTLES, GRATES and TILES,

Fiso's Remedy for Catarrh is the Best, Easiest to Use, and Cheapest.
CATARRH
Sold by druggists or sent by mail.
60c. E. T. Hazelton, Warren, Pa.

FORMULARY.

SWISS BABY POWDER.

According to *L'Union Pharmaceutique*, the "Poudre Suisse a poudrer less Bebes" has the following formula:

Calcined alum	15 parts
Boric acid	15 parts
Carbonate of lime	150 parts
Starch	250 parts
Carbolic acid	3 parts
Oil of lemon, or other perfume, q. s.	

Powder the solid ingredients as finely as possible and mix thoroughly.

DUSTING POWDER FOR CHILDREN.

Powdered burnt alum	15 parts
Porphyzied boric acid	35 parts
Precip'd calcium carbonate	150 parts
Rice Starch (or Lycopodium)	300 parts
Carbolic acid (crystallized)	3 parts
Powdered camphor	2 parts
Menthol	2 parts
Eucalyptol	2 parts
Powdered zinc oleate	2 parts

—DR. P. VERNON.

GLYCERIN CREAM.

Spermaceti	3 ozs
White wax	1 oz
Oil of sweet almonds	8 fl. ozs
Borax	1/2 oz
Glycerin	3 fl. ozs
Orange flower water	1 fl. oz
Oil of neroli	5 drops
Oil of rose	3 drops

Melt the wax, spermaceti, and oil of almonds together; dissolve the borax in the orange flower water and glycerin, previously mixed; pour the solution a little at a time, into the melted mixture, stirring the preparation without ceasing until all the solution has been fully incorporated, and a homogeneous product results; finally add the essential oils.—*Phar. Record*.

BOROGLYCERIN LANOLIN.

Acid, boric	2 parts
Distilled water	15 parts
Glycerin	15 parts
Lanolin	30 parts

Dissolve the boric acid in the water with the aid of the water-bath, add the glycerin and lanolin, and stir until cold. This formula furnishes a nice, white, soft ointment, and has the advantage that it can be washed off with water. It furnishes a splendid application for chapped hands and other toilet purposes, and of course, may be perfumed to suit the taste.—*Nat. Druggist*.

TREATMENT OF EXCORIATIONS OF THE SKIN IN INFANTS.

Cronball, in the *Centralblatt für die Gesamte Therapie*, gives the following ointment for use on infants, especially where there are excoriations of the skin:

Salicylic acid	5 parts
Subnitrate of bismuth	80 parts
Starch	60 parts
Cold cream	300 parts

Mix, and make an ointment.

NEW COLD CREAM.

Oil of sweet almonds	100 parts
White wax	100 parts
Spermaceti	20 parts
Glycerin	300 parts
Boric acid	12 parts
Warm filtered water	100 parts
Perfume to suit.	

Melt the wax and spermaceti, add the oil, separately dissolve the boric acid in the glycerin, heat and while warm add to the warm fatty solution, then add the warm filtered water at once and stir constantly until a smooth ointment is complete. Before it is too firmly set add a suitable perfume.—*Amer. Druggist*.

CHLORAL, A NEW DISINFECTING FLUID.

Chloral is a new French disinfecting fluid, said to have the following composition (*Arch. Med. Belge*):

Corrosive sublimate	} aa	1 part
Sodium chloride		
Hydrochloric acid		
Copper sulphate	3 parts	
Distilled water	1000 parts	

The sodium chloride is added to render the solution more stable: the hydrochloric acid, to prevent the decomposition of the corrosive sublimate in presence of albuminoid matter; and the copper sulphate, for its vomitive effects—in case the chloral should be taken internally by mistake.

NAPHTHALINE OINTMENT.

The following formula for this ointment is given:

Naphthaline	5.0
Acid boric	2.5
Acid benzoic	2.5
Vaseline e cera flav. (3 to 1)	40.0
Bals. Peru.	2.5
Tinct. benzoin	5.0

—*Pharm. Post*.

COMPOSITION OF BRILLIANTINES.

Brilliantines, says the *Monde Pharmaceutique*, are preparations for softening the hair and giving it a gloss. Formerly they were simple mixtures, in various proportions, of castor oil and alcohol, more or less perfumed and colored. Now perfumed glycerin, or mixture of glycerine and castor oil, with or without alcohol, are used. The following formulae are given:

1. Alcohol	100 gm
Castor oil	30 gm
Oil of rose	1 gm
2. Alcohol	100 gm
Castor oil	25 gm
Extract of cinchona	5 gm
Perfume	1 gm
3. Alcohol	100 gm
Castor oil	20 gm
Glycerine	100 gm
Perfume	2 gm
4. Alcohol	100 gm
Glycerine	200 gm
Perfume	2 gm
5. Glycerin	100 gm
Rose-water	20 gm
Attar of rose	1 gm
6. Glycerin	200 gm
Paraffin	10 gm
Perfume	2 gm

CONCENTRATED SOLUTION OF SALICYLIC ACID.

It is sometimes convenient to have a strong solution of salicylic acid at hand, and Jaudon suggests in the *Repertoire de Pharmacie*, the following formula therefor:

Salicylic acid	8 parts
Alcohol, 94°	24 parts
Borax	4 parts
Glycerin, neutral	8 parts
Water, sufficient to make	100 parts

Dissolve the acid in the alcohol and the borax in the glycerin, mix the solutions, and add water to make the desired quantity.—*Nat. Druggist*.

A STABLE SOLUTION OF ERGOTIN.

Ergotin	gr. xv.
Acid carbolic	gr. iiss.
Aq. dest	℥ lxxv.
Solve et filtra.	

—*Nouv. Rem.*

CATTLE SPICE.

Take of

Aniseed, in coarse powder	1 part
Fennel	1 part
Fenugreek	1 part
Caraway	2 parts
Gentian root	2 parts
Locust bean meal	2 parts

CALF SPICE.

Take of

Locust bean meal	4 parts
Barley meal	4 parts
Brown sugar	1 part
Gentian root, in fine powder	2 parts
Aniseed, fine powder	2 parts
Fenugreek, fine powder	1 part
Fennel, fine powder	2 parts
Dried phosphate of soda	1/2 part

—*Br. and Col. Druggist*.

Camphor, Alcohol and Essential Oil in Pills?

S. A. M'DONNELL, PH. G.

The following prescription, which was presented at my store yesterday, is a good one to try the patience of a tyro as well as the skill of the adept man of experience:

R Quin. bi sulph.	℥ i.
Camphor	℥ i.
Spt. vini. rect.	q. s.
Ol. menth. pip.	gtts. xx.
M. ft. pil., xxx.	"Send in bottle."

It has always been my custom on compounding a recipe containing an essential oil, to mix it and some powdered soap together first, then add the balance of the ingredients, and generally no other excipient is required, a good mass resulting, holding the oil within its body to perfection. But in this case, when the camphor gets its work in, the alcohol is out of the question, and like the caudal appendage attached to the *sus scrofa*—more for ornament than use. None of the excipients at all appropriate, tried, give good results, the compact mass forcing the oily liquid to the surface, and in size out of all proportion, which would never do to so dispense. Somewhat disgusted with the result, I had the oil dropped into a mortar, the camphor and bisulphate added, and rubbed together *a la* camphor and chloral; I then melted some yellow wax and poured about half a dram of it on to the liquid ingredients and worked it up into a mass—no other excipient—and result, good. Divided it off, rounded them up and dispensed them looking like the good pills it was intended they should be. Now, I don't want to be understood as advocating that wax is the excipient. I only cut the coat according to the cloth.—*Pacific Druggist*.

Economy is not to be determined by the cost, but by the results.

MINARD'S "KING OF PAIN." LINIMENT

SOLD TO THE TRADE BY

TORONTO { Lyman Bros & Co. Evans Sons & Co.
Northrop & Lyman
Elliot & Co. T. Milburn & Co.

MONTREAL { Kerry, Watson & Co.
Lyman Sons & Co. Evans Sons & Co.
Lyman, Knox & Co.

KINGSTON—Henry Skinner & Co.

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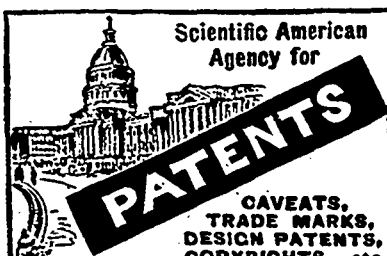


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KENNEDY'S Magic Catarrh Snuff

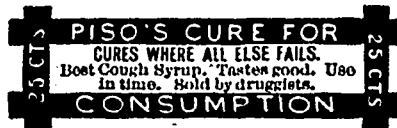
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*This preparation has been proved
to be a POSITIVE CURE for*

Catarrh,
Cold in the Head,
Catarrhal Deafness, 
Infuenza, Etc.

PROPRIETOR—T. Kennedy, Montreal.

Wholesale of Kerry, Watson & Co., Montreal.
Lyman, Knox & Co., Montreal
and Toronto.
And all leading Druggists.



GRAY'S CASTOR-FLUID for the hair.
GRAY'S SAPONACEOUS DENTIFRICE, an
excellent antiseptic dentifrice.
GRAY'S DENTAL PEARLINE, an excellent
antiseptic tooth wash.
GRAY'S SULPHUR PASTILLES, for burn-
ing in diphtheritic cases.

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 1869.
Pharmaceutical Chemist

22 St. Lawrence Main Street,
(Corner of LaGauchetiere)
MONTREAL.



ONLY FOR
Dyspepsia and dis-
eases of the Liver;
a Special Stomach
Medicine advertis-
ed only for the dis-
orders which it will
undoubtedly cure.

REMEDYNE is Purely Vegetable in
compound, a gentle Laxative Tonic bit-
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speedy CURE for **DYSPEPSIA**
and its kindred
diseases, disorders from which over sev-
enty-five per cent. of the people are
suffering in some form, and enumerate
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REMEDYNE **AND** com-
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is a highly concentrated course of medicine within itself. From
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THE DOSE is so small that each bottle
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dred doses, varying according to the age,
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Take no substitute; every druggist keeps
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\$1.00 per bottle.
Three bottles, \$2.75
Six bottles, \$5.00

REMEDYNE MFG. CO., BRANTFORD,
CANADA.

Every Druggist should handle

—OUT—

Druggist Favorite, 5c.

—AND—

Patti, 10c.

OTIGARRS.

Send for sample order.

FRASER & STIRTON, London, Ont.

Pharmacological Notes.

HYDROCHLOROSULPHATE OF QUININE.

Since the introduction of this peculiar double salt of quinine fully a year ago, we have heard little about it from therapeutists. Dr. J. K. Crook, of New York, however, communicates a paper on it to the *American Medico-Surgical Bulletin*, in which he says he has tried it in a variety of conditions, including pneumonia, influenza, bronchitis, muscular rheumatism, chronic malarial poisoning, acute intermittent fevers, and in simple debility, and anorexia. Dr. Crook has found the drug to possess all the common well-known physiological properties of the sulphate of quinine, but it has two important advantages—(1) its ready solubility admits of its employment hypodermically; and (2) this property also renders the preparation more digestible and more readily assimilable by the stomach. We still require something more than this report. It has been stated that the quinine molecule is rearranged in the synthesis of the salt, and if that be so, the physiological action is sure to differ, though slightly.—*Chemist and Druggist*.

CREASOTE-EMULSION BY MEANS OF SACCHARATE OF CASEIN.—(Dr. Leger.)

The author proposes to administer creasote in the form of an emulsion prepared by means of saccharate of casein. This emulsion can be made in an instant, the author declares, as follows: Pour into a suitable bottle 10 grammes ($2\frac{1}{2}$ fl. drs.) of of creasote and 10 grammes (2 fl. drs.) of alcohol, and add a solution of 10 grammes ($2\frac{1}{2}$ drs.) of saccharate of casein in 10 grammes ($2\frac{3}{4}$ fl. drs.) of water. Emulsion is perfect after a few seconds' agitation; enough water is then added to make 1 litre (33.8 fl. oz.).

This creasote emulsion may be employed per os in tablespoonful doses (added to water, or, better still, to milk), or per rectum in the form of small enemata (100-125 grammes [$3\frac{3}{8}$ - $4\frac{1}{4}$ fl. oz.]). It is said to keep for a long time, owing to the antiseptic property of the creasote. A sample was kept by the author for over a fortnight without undergoing any alteration, although it had been exposed, in a partly-filled phial, to temperatures of 25-30° C. (77-86° F.).—*Bulletin Pharm.*

A NEW REACTION FOR COCAINE.

About .02 gram. of cocaine hydrochlorate is dissolved in a drop of water, and 1 cc. of concentrated sulphuric acid is added. The resulting colorless solution gives on the addition of potassium chromate solution, a quickly dissolving precipitate. The color becomes golden red, of course, and on warming becomes green owing to the reduction of the chromate. Further warming causes fumes of benzoic acid to be given off. This is given in the *Pharmaceutische Zeitung* as a reaction for cocaine, but we should think its value is very small as the reduction of a chromate to a salt of chromium is of little or no value, and the menzoic acid might

easily escape detection unless an appreciable quantity of cocaine were present.

ACETONE AS A TANNIN SOLVENT.

Trimble and Peacock, in a paper read at a recent meeting of the American Pharmaceutical Association, devoted special attention to the use and value of acetone as a solvent of oak tannins. By its aid they extracted from powdered nut-galls 62.24 per cent. of solids, whereas commercial ether removed 59.77 per cent. only. It is a better solvent of tannin than either alcohol or ether, and extracts it with less admixture of sugar and other carbohydrates. Its low boiling point, also renders its recovery easy and rapid, without risk of decomposing the tannin. The process recommended as satisfactory is as follows:—The powdered oak bark is moistened with acetone, packed in a closed percolator, allowed to macerate with acetone for forty-eight hours, and then percolated until exhausted. A dark red or brown semi-solid extract is left on distilling off the solvent. On treatment of this with water and filtering, dilution of the filtrate with more water results in the precipitation of anhydrides, and, after successive agitations of the filtrate with acetic ether, the tannin thus separated is further treated with ethylic ether, and finally obtained in a nearly pure form in which it is readily and completely soluble in water.—*Phar. Journal*.

OXYGEN MANUFACTURE.

G. Kassner describes a method of obtaining oxygen from the air by agency of calcium plumbate, Ca_2PbO_4 . This compound, in a spongy, porous condition, is exposed to the action of well-washed furnace gases and rapidly absorbs the carbon dioxide present, calcium carbonate and lead peroxide being formed. These products are then heated to redness and oxygen is rapidly disengaged. When most of the oxygen has been liberated, carbon dioxide begins to come over, at first mixed with oxygen, but subsequently in a pure state. The mixed gases are passed over calcium plumbate, which absorbs the carbon dioxide and allows only the pure oxygen to escape. When the carbon dioxide ceases to be evolved from the retort, a current of air is driven through and re-converts the residue into calcium plumbate, which may then be used for a subsequent operation (*Chem. Zeit.*)

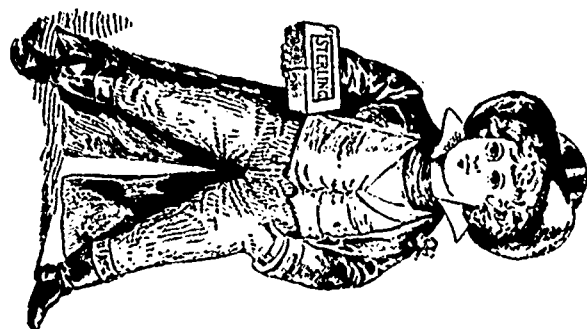
AN ISOMER OF SANTONIN.

If santonin be dissolved in strong hydrochloric acid it can be precipitated unadulterated by means of water. If, however, it be allowed to stand for a day in a cool place, there separates out a slightly rose-colored crystalline deposit. This is filtered off, washed with strong hydrochloric acid and then with water, and finally crystallized from boiling alcohol. White needles are thus obtained, insoluble in water or hydrochloric acid, and but slightly soluble in cold alcohol, benzene or ether. Analyses assign to this body the formula, $\text{C}_{15}\text{H}_{13}\text{O}_3$. This is isomeric with santonin, but differs markedly from

it in physical properties. Its rotatory power is + 112°, whilst that of santonin is - 173°. Through reduction with nascent hydrogen it forms an isomer of santononic acid $\text{C}_{15}\text{H}_{20}\text{O}_3$. The isomer is laevorotary, $[\alpha]_D = -53.3$, whilst santononic acid is dextrorotary $[\alpha]_D = +74.9$.—*Berichte*.

NEW DRUGS.

There is a long list of new remedies this month, and several new patents have been taken out for them. Amongst the more important are two by Riedel, of Berlin. The first is for the preparation of p-ethoxy-hydracetin and p-ethoxy-phenyl-hydracin. The latter is obtained by precipitating the salts of its sulphonic acid by means of common salt, and afterwards heating the precipitate with hydrochloric acid. After suitable treatment the ethoxy-hydracetin is obtained in colorless crystals melting at 140°, possessing antipyretic action. The other is a patent for a compound related to antipyrin, p-methoxy-phenyldimethylpyrazolon. The corresponding mono-methyl derivative is digested with an equivalent of acetic ester. This reaction gives fine colorless needles, melting at 138°, easily soluble in benzol and alcohol, less so in ether or water. These, when heated with methyl iodide and methyl alcohol to 120° C., yield the desired compound, a crystalline body, easily soluble in water, alcohol and chloroform, less so in ether or benzene. It melts at 82° C, and is a good antipyretic. b-Cymidin forms the subject of a patent by Haarman and Reimer. It is prepared by the action of a dehydrating agent (such as a mineral acid) on the oximes of the camphors. It is a yellowish oil boiling at 118° to 121° under a pressure of 15 mm. It does not solidify in the cold. Merck, of Darmstadt, brings forward acetyl and propionyl derivatives of oxyphenyl urethane. They are both well characterized crystalline compounds and possess anti-pyretic properties. Some interesting eugenol derivatives, too, are brought forward. Of these the chief are the iodine derivatives. Eugenol is treated with iodine in alcoholic solution and sodium hydroxide in molecular proportions. An odorless yellow crystalline compound is produced melting at 150°. More iodine and alkali produce a compound containing the (OI) group, melting at 85°. The other compound is polyisoeugenol. When isoeugenol is treated with a small quantity of a condensing agent such as a mineral acid, or an acid chloride, at a high temperature, a crystalline cake is produced which is the polymeric compound and can be purified by recrystallisation from alcohol. It forms colorless, tasteless needles, melting at 98°, and it will be used in medicine to some extent. The lactyl derivatives of methyl-aniline, ethylaniline and phonetidin are also brought forward as new antipyretics. They are prepared by treating the respective bases with esters of lactic acid, or with lactic anhydride at 130° C.—*British and Colonial Druggist*.



STERLING SOAP
Best
and
goes
farthest.
 Manufactured By
WM. LOGAN,
 ST. JOHN, N. B.

Wanzer Soaps. 

WANZER BATH SOAP

—IS—
ABSOLUTELY PURE.

Contains large percentage of Glycerine.

Will cure Chapped Hands.

Is very beneficial for the Skin---healing irritations rapidly.

"IT FLOATS."

WANZER PURE SOAP CO.

HAMILTON, ONT.

- THE -

Canadian Drug Trade

Do not confine themselves to the sale of Drugs and Medicines, but are amongst the largest dealers in

Fancy Goods and Toilet Articles,
Smokers' Sundries and Cigars,
Stationery and Stationers' Supplies.

Paints and Oils,
Spectacles & Optical Goods,
Seeds and Bulbs.

Surgical Instruments,
Photographers' Supplies,
Medicinal Wines & Liquors,

And numerous other lines which form a profitable part of the stock-in-trade.

Manufacturers and Dealers in these Lines

Can reach the entire drug trade of the Dominion of Canada, by inserting an advertisement in this Journal.

RATES ON APPLICATION.

Canadian Druggist,

Box 559.

STRATHROY, CANADA,

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.

Archdale Wilson & Co.

See Archdale Wilson & Co.'s advertisement on page eight.

Optical Goods.

One of the largest dealers in this line of goods in Canada is the Montreal Optical Co., whose travellers traverse the whole Dominion. They have a stock capable of meeting all requirements of the trade and prices will compare with any.

Fountain Pens.

Read the advt. of the Fountain Pen Co., of Newton, Ont., (head office, Toledo, Ohio.) A good Fountain Pen is a luxury that few would do without after having used them. See advt. on page 27 and mention this paper when writing.

Look Out For Frost.

The London Drug Co. in this issue present a list of many goods which are liable to freeze in transit during cold weather. Such goods should be ordered in advance and in sufficient quantities to last through the season. Read the advt. on page 4.

Somerville's Cough Chewing Gum.

C. R. Somerville, of London, Ont., has put a new article before the trade in his M. F. Cough Chewing Gum. This is sure to prove a good seller, being attractively put up and a reliable article. Read the advertisement on page 13 and order some from your jobber.

Fine Perfumery.

John Taylor & Co., of Toronto, Ont., have proved to the satisfaction of the most fastidious of the drug trade that perfumes can be and are made in Canada, just as good as imported lines. They claim that their goods are uniform and true to flower, and use only the best of raw material in their production. This firm also control the products of the Morse Soap Co. whose goods are so highly esteemed.

Adams' Tutti Frutti.

Adams & Sons Co. have received the highest award from the Worlds' Columbian Exposition for the quality of their Tutti Frutti and their other brands of chewing gum, also for the excellency of the flavors contained in their gums and the artistic manner in which they are packed. Their gums are made of the choicest materials available and are well deserving of the popularity to which they have attained.

Minard's Liniment.

Amongst the most popular and best-selling of Canadian patent medicines is Minard's Liniment, manufactured by C. C. Richards & Co., of Yarmouth, N. S. This firm now keeps three double teams constantly on the road advertising and

looking after the interests of their preparation, which, from at one time having only a local demand in the Province of Nova Scotia, has now a larger sale than perhaps any other medicine of its kind throughout the whole Dominion. The proprietors are well known druggists and have a large retail as well as jobbing trade in Yarmouth.

Books.

"The Diseases of Dogs and Cats and their Treatment."—This work, which has been written by a Veterinary Surgeon of large experience with the smaller domesticated animals, contains much that is valuable to chemists who may be called upon to supply medicines for these animals. The methods of treatment are not as were practised many years ago, and much may be learned from a treatise of this kind which will prove instructive as well as helpful in a business way. Published by the British and Colonial Druggist, 42 Bishop's Gate, without London, E. C., England.

Magazines.

The Literary Digest.

Multum in parvo is certainly applicable to that popular weekly, *The Literary Digest*. Articles on the most interesting and timely subjects by the best writers, are here condensed into space more suitable to the busy man's reading and only the "pith" of the matter presented. Funk & Wagnalls Company publishers, 18 and 20 Astor Place, New York.

The National Druggist.

The National Druggist, of St. Louis, Mo., comes to hand this month in greatly improved form and general appearance. It has always been one of our most valued exchanges and the readers of this journal are indebted to the *National Druggist* for many valuable selections which appear from time to time in our columns. We wish our confreres abundant success under its new management.

An Old Friend.

In a series of interviews with members of the last Congress, 31 out of 43 remarked that they were readers of the *Youth's Companion*. For definite and trustworthy information on the questions of the day it is really unique, while the high character of its stories, the wide fields covered by its special articles, and its contributions from the most famous writers in Europe and America, are well known.

Its programme for next year seems brighter than ever. Some of the important stories are: "The Deserter," by Harold Frederic; a Tale of the Great Mutiny in India, by Sarah Jeanette Duncan; several Romances of the Sea, by W. Clark Russell; Tales of the War, and of the Frontier in Early Days. Henry M. Stanley contributes two thrilling narratives from Darkest Africa, and Archibald Forbes writes of his "Closest Call."

Naval Battles are described by Admirals, and Military Life by Generals. Then there are other articles on Choosing an Occupation, Boys Who Should Not Go to College, Physical Training, Recreations of all kinds, and many other practical subjects.

Another pleasant feature is the charming picture of a young lady of colonial times, "Sweet Charity," reproduced in colors from a painting by Ferris, which is presented to all subscribers who send their \$1.75 for a new subscription or a renewal.

Review of Reviews.

The leading feature of the *Review of Reviews* for November is its presentation of the "Possibilities of the Great Northwest," in an article by Mr. S. A. Thompson, and in a supplementary article by Dr. Emory R. Johnson, upon "Inland Waterways for the Northwest." Mr. Thompson, as secretary of the Duluth Chamber of Commerce, has for several years been actively engaged in searching out and applying effective means for bringing the great states northwest of the Upper Mississippi, and the great Canadian provinces belonging geographically to the same region, into closer communication with the rest of the North American continent. He is therefore able to write with an enthusiasm born of intimate knowledge of the subject and supported by very important and surprising statistics. Dr. Johnson is lecturer on Transportation in the Wharton School of Finance and Economics, University of Pennsylvania, and has recently published a monograph upon "Inland Waterways." Dr. Johnson particularly emphasizes the importance of canal and river transportation as a means of lowering railway rates, and he finds a very large social as well as economic influence resulting from this extension of facilities for shipping and for personal travel. These two articles suggest a future of almost unimaginable growth for the great Northwest. Each article is fittingly illustrated.

The "Canadian Magazine."

"The Canadian Magazine" for November contains a rich variety of contributions, some of them of remarkable and world-wide interest. Wm. Ogilvie, F.R.G.S., furnishes the third instalment of the account of his remarkable three thousand two hundred mile journey, "Down the Yukon and Up the Mackenzie," and it exceeds in interest his previous articles. Allan Eric, of the Institute of Jamaica, contributes a well-illustrated and entertaining article on "Banana-growing in Jamaica." W. D. LeSueur writes forcibly and gracefully on "State Education and 'Isms,'" in reply to Mr. Ewart, Q. C. Edward Meek condemns "Plebiscite" as a principle dangerous to the nation, and holds that in consequence of the declining influence of Congress, and the increase in the power of the President and of the people, Caesarism is likely to prevail in the United States. The article is a remarkably thoughtful and striking

Drop in a Cent and get a Scent!

~~~~~THE~~~~~  
**“BELLS PERFUMER”**

Sprays Perfume on the Handkerchief.

BEAUTIFUL IN DESIGN.

ARTISTIC FINISH.

SIMPLE AND PERFECT IN OPERATION.

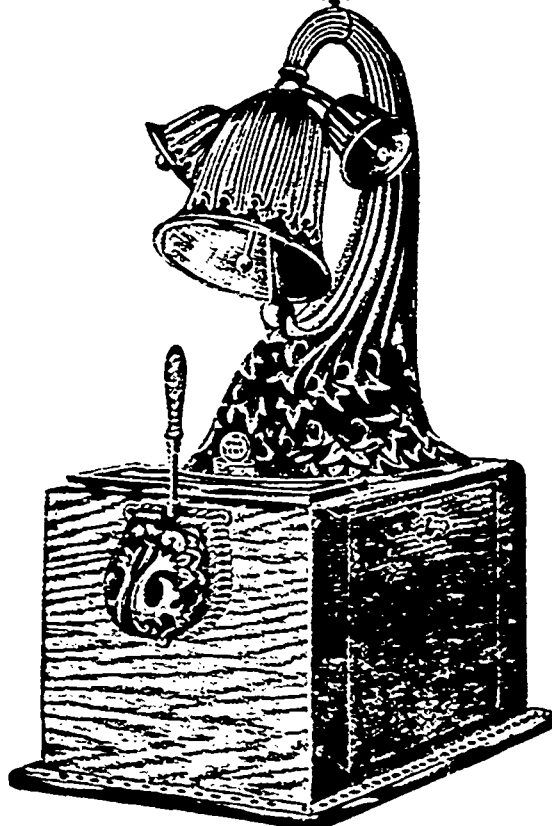
AN ORNAMENT TO ANY STORE.

*EVERY CENT TAKEN IN BELONGS TO YOU!*



Has lock and key, which  
open into the  
mechanism and money  
apartment.

Special 4 oz. Bottle  
furnished to  
hold Perfumery.



Full Instructions with  
every Machine.

Any child can understand  
and operate it.

Every Machine tested  
and guaranteed.



12 inches long by 7½ inches wide by 18 inches high.

A few of these machines  
left and will be sold

**AT A REDUCTION**

to close out the con-  
signment.

W. J. DYAS, Strathroy, Ontario.

one. J. L. Payne tells us how a young couple may win a home of their own. "The Battle of the Eclipse," an illustrated article by E. B. Biggar, "The Old Bastille of Paris," by H. S. Howell, are both vigorous, and even thrilling, articles. Other articles are "The Canadian Club Movement," by W. Sanford Evans, "Beowulf, the English Homer," by Prof. Horning, of Victoria University, "Mirage in Western Canada," by Mrs. John Fletcher, and "Peculiarities and Illustrations of Wit," by Dr. T. V. Hutchinson. Agnes Maule Machar (Fidelis) contributes a patriotic poem, "Thermopyle," which is likely to be one of the poems that will live. The fiction in this number is bright. "The Canadian Magazine" begins its second volume with a reputation both in America and Europe, which must be pleasing to Canadians. Published by the Ontario Publishing Co., Ltd., Toronto. \$2.50 per annum.

#### "Sweet Charity."

In the Artists' Exhibition of 1893 at the New York Academy of Design, there was exhibited an oil-painting by J. L. G. Ferris, entitled "Sweet Charity." Its richness of coloring commanded instant attention, while the lesson it taught was so impressive that one naturally returned to it for a second view.

Its subject is a young lady of colonial times who is on an errand to one of the poorer families of the town. She has a sensible, charming face, which expresses with remarkable fidelity the sentiment of her errand. There is not a home that this charming picture will not ornament. It must be seen to be appreciated.

"Sweet Charity" was purchased by the Publishers of *The Youth's Companion* and has been reproduced in colors in large size, 14½x21.

It will be sent to all new subscribers to *The Companion* who send \$1.75 for a year's subscription, and the paper will also be sent free from the time the subscription is received, to January, 1894, and for a full year from that date, to January, 1895. This offer includes the Double Souvenir Numbers published at Thanksgiving, Christmas and New Year's. Address, *The Youth's Companion*, Boston, Mass.

#### The Delineator.

The December issue of *The Delineator* is called the "Christmas Number," and is rich in material pertaining to the holiday season. The styles for the month are exceptionally handsome and appropriate, and the younger members of the family receive special attention in an illustrated article entitled Party Dresses for Misses and Girls. There is also an appropriate article on Fashions in Fur Garments. A paper that is invaluable to all ladies is called Some Suggestions for Home Made Christmas Gifts, and the housewife is especially considered in Dainty Deserts for the Holiday Season. Christmas Legend and Folk Lore is most interestingly treated, and as an antidote, there is a description of a very modern Kris Kringle

Party. The children will be delighted with the entertainment provided for them, and the parents will appreciate the ideas contained in *The Children's Christmas*. In addition to this special matter there are articles on many popular subjects. Lawn Tennis, in the Sports and Pastimes series, is brought to a close this month, Household Renovation tells about Floor Coverings, Furniture and Moths; Child Life deals with Recreation for Boys and Girls; Physical Culture continues instruction in Expression, and Around the Tea Table makes us acquainted with the fashionable fancies of the season. Novelties are illustrated in the papers on Knitting, Crocheting, Tatting, etc., with full instructions for making. This number is an excellent one with which to begin a subscription, which costs One Dollar a year; Single Copies, 15 cents. Address orders to *The Delineator Publishing Co.* of Toronto, (Ltd.) 33 Richmond St. West, Toronto, Ont.

#### The Witness.

The *Montreal Witness* is now offering the remainder of the present year free to new subscribers for next year as an encouragement to give that valuable paper a trial. The *Witness*, both Daily and Weekly, has, during the year, adopted what it declares to be the model form, with neat, small, convenient pages, being enabled, by the possession of one of the most complete printing presses ever built by the Hoes, of New York, to vary the number of pages at will. The paper enters the press at two places, on rolls broad or narrow as required, and the newspapers come out at lightning speed folded, pasted and cut. Besides this improvement in form, there is a remarkable improvement in typography, the type being set by the wonderful Linotype machine, which attains the speed of five men, and casts a new type face every time. The proprietors invite visitors to Montreal to see these machines. The picture element has so greatly developed in the *Witness*, that it may now be fairly called an illustrated paper. The *Witness* has moved to the busiest corner in Montreal, the junction of Bleury and St. Peter Streets with Craig Street, and has a spacious building there which is in some respects as fine a newspaper office as is anywhere to be seen. The price of the *Daily Witness* is three dollars, and of the *Weekly Witness* one dollar, while the little pioneer paper, *The Messenger*, costs only thirty cents.

#### What Canadians Can Do.

WHERE THEY EXCEL IN ADVENTURE, STORY-TELLING, POETRY AND PICTURE-MAKING.

We take pleasure in directing the attention of our readers to TORONTO SATURDAY NIGHT'S CHRISTMAS NUMBER, which is just appearing on the market. Every year that enterprising paper issues a Christmas Number, and every year the production is superior to all previous ones and to anything similar attempted in Canada. Con-

stant progress is made towards an ideal. The premium picture this year is a large oleograph 20 x 28 inches, entitled A Moment of Suspense, purchased from its owner in Germany at a very large sum. In reproducing this picture twenty colors are called into use by the lithographers. This information is technical and only those who know something of the picture-making art will grasp its full import. The picture represents a group of ladies and one gentleman of the period of Louis XV. of France, dressed in the superb attire of that time, in a splendidly furnished room. Everything calls into play the subtle art of the colorist. The gentleman, with a stick, is opening a trap in which is a mouse; a cat crouches near by to spring upon the captive, while the ladies have flown for safety to the top of chairs, tables and couches. This picture frames with singular effect.

The leading feature of the Christmas Number is *The Random Reminiscences of a Nile Voyageur* by Charles Lewis Shaw, being a humorous and thrilling account of the expedition of 1884 to the relief of General Gordon, who was besieged by the False Prophet behind the walls of Khartoum. Four hundred Canadian voyageurs shared the perils of that expedition, of whom Mr. Shaw was one. This is one of the best things yet written by a Canadian. Illustrated by Heming, Ethel Palin and English artists.

Two Old Hunters, by Octave Thanet, one of the best short story writers of to day. Illustrated by Ferand.

Old Dickson's Young Lady, by Evelyn Durand, one of the very cleverest of Canadian short story writers. Illustrated by Ferand and Ethel Palin.

The Exodus to Centreville by Marjory McMurchy. Illustrated by the same capital artists.

The Ronin's League by Helen Gregory-Fletcher. This is a quaint story of Japan, illustrated with reproductions from the paintings of Hokusai, Japan's first artist.

With Murder in His Heart, by Edmund E. Sheppard. This is a story of cowboy life in Texas, illustrated by Ethel Palin.

In poetry the number is the richest yet. Among those contributing are: E. Pauline Johnson, Charles Gordon Rogers, Ernest Hawthorne, K. Wheeler, Gus M. Beers, George Moffat, Reuben Butchart and G. E. D. Five full page engravings adorn the number, one of which is by M. Hearn and another by the talented Louis Wain.

The price of the number remains as in previous years, 50 cents per copy. Buy it of your bookseller, or on receipt of that sum at the SATURDAY NIGHT office, 9 Adelaide street, west, Toronto, a copy (along with premium picture) will be sent, postage paid, to any address in the world. Buy it and also send it to your friends as a sample of Canadian art.

ACTION OF LIGHT ON SILVER CHLORIDE.—This salt is decomposed by light with evolution of chlorine, whose place is taken by oxygen, the new compound appearing to possess the formula Ag<sub>2</sub>O.

### Preparation of Hydrogen.

J. Ball, of the Royal College of Science, notes that he has recently observed that, by the addition of a few drops of cobalt nitrate solution to the acid and zinc in a hydrogen apparatus, the rate of evolution of the gas is enormously accelerated, especially at the beginning of the reaction. The cobalt nitrate appears to be almost unaltered. A very thin film of cobalt was deposited on the zinc, but the amount deposited was much too small to weigh. A similar action is exerted by a solution of a nickel salt. Another correspondent confirms the statement made by Ball, remarking that he has been accustomed to make use of this property of the cobalt salt for some time past.—*Chem. News.*

### An Improved Test for Arseniates

JOHN LOTHIAN.

This will be found an expeditious method for demonstrating the presence of arsenic, when existing in the arsenic condition, and has been used by the author for upwards of five years. It is especially applicable to insoluble arseniates, *eg.*,  $\text{Fe}_2\text{AsO}_4$ , in which case the pharmacopoeial test is tedious and unreliable, *viz.*, boiling with excess of caustic alkali, neutralising, and testing with  $\text{AgNO}_3$ . The substance is dissolved in dilute  $\text{HCl}$ , or if soluble acidulated with dilute  $\text{HCl}$ ,  $\text{Na}_2\text{S}_2\text{O}_3$  added, the solution warmed, and  $\text{H}_2\text{S}$  gas passed in. Yellow arsenious sulphide is at once precipitated. The sulphur thrown out from the  $\text{Na}_2\text{S}_2\text{O}_3$  does not interfere with the reaction, and may, if necessary, be removed by agitation with carbon bisulphide.—*Pharm. Journal.*

### Liquorice in the Caucasus.

The inhabitants of Elizabethpol and Baku derive considerable benefit from liquorice (*glycyrrhiza glabra*), which grows wild, needs no cultivation, and multiplies spontaneously. In 1878 two Greeks turned their attention to the large quantities of liquorice in Caucasia: in 1886 they erected a large factory for dyeing and pressing the liquorice, which they annually export to America. The remunerative trade soon attracted others, and to-day there exist four prominent commercial houses which carry on a wholesale trade in liquorice, and two of which have erected extract factories in this country. Annually there are produced about 108,339,000 pounds of raw liquorice, which, after drying, yields 36,113,000 pounds of marketable merchandise. For raw liquorice the factories pay on the average 11 cents per 100 pounds.—Extract from U. S. Report in *New Bulletin.*

Atropia gives the quickest relief for aphonia, due to fatigue of vocal cords.

It is a common fallacy for everyone to consider his neighbor's business more congenial and profitable than his own.

# WILLIAM J. DYAS,

## Manufacturers' Agent.

= DRUGS, =

### PROPRIETARY MEDICINES.

### DRUGGISTS' APPLIANCES, Etc.

### Agencies Solicited.

11 Richmond St. W.,  
TORONTO, ONTARIO.

P. O. Box 559,  
STRATHROY, ONTARIO.

## Ripans Tabules.

Disease commonly comes on with slight symptoms, which when neglected increase in extent and gradually grow dangerous.

|                                                                       |      |                |
|-----------------------------------------------------------------------|------|----------------|
| IF YOU SUFFER FROM HEADACHE, DYSPEPSIA<br>OR INDIGESTION,             | TAKE | RIPANS TABULES |
| IF YOU ARE BILIOUS, CONSTIPATED, OR HAVE<br>A DISORDERED LIVER,       | TAKE | RIPANS TABULES |
| IF YOUR COMPLEXION IS SALLOW, OR YOU<br>SUFFER DISTRESS AFTER EATING, | TAKE | RIPANS TABULES |
| FOR OFFENSIVE BREATH AND ALL DISORDERS<br>OF THE STOMACH,             | TAKE | RIPANS TABULES |

Ripans Tabules act gently but promptly upon the liver, stomach and intestines; cleanse the system effectually, cure dyspepsia, habitual constipation, offensive breath and headache. One TABLE taken at the first indication of indigestion, biliousness, dizziness, distress after eating or depression of spirits, will surely and quickly remove the whole difficulty.

Ripans Tabules are prepared from a prescription widely used by the best physicians, and are presented in the form most approved by modern science.

If given a fair trial Ripans Tabules are an infallible cure, they contain nothing injurious and are an economical remedy.

## One gives relief.

A quarter gross box will be sent, postage paid, on receipt of 75 cents by the wholesale and retail Canadian agents,

LYMAN, KNOX & CO.,

374 St. Paul Street, Montreal, P. Q., and 43 Colborne Street,  
Toronto, Ontario.

W. T. STRONG, 184 Dundas Street, London, Ontario.

BOLE, WYNNE & CO., Winnipeg, Manitoba.

Local druggists everywhere will supply the Tabules if requested to do so.

They are Easy to Take, Quick to Act, and Save many a Doctor's Bill.  
SAMPLES FREE ON APPLICATION TO THE RIPANS CHEMICAL CO.,  
NEW YORK CITY.



### Senkintan or Thousand Gold Medicine.

One of the most popular nostrums of Japan, and one which has made its proprietor a wealthy man, is Senkintan or "thousand gold medicine," which is made at Tokio by a quack named Nobuyamin, of Osaka, who is a thorough believer in advertising, which he does in a rather unique manner. He has in his employ hundreds of young men each of whom wears a uniform consisting of a handsome coat, an oiled paper cloak, leggins, high clogs and an umbrella bearing the trade mark of the manufacturer, two circles interlaced. The supplies of each of these peddlers are carried in a small portmanteau also decorated with the interlaced circles. Each peddler carries with him several dozen packages of the *Senkintan*. or "thousand gold medicine" as its name, literally translated, would read.

The medicine itself is said to contain starch, catechu, thupa, (arbor vitae), liquorice, elecampane, camphor, peppermint, cloves. It is made into little cakes, covered with tin-foil and each cake is divided into 20 portions, each portion being a dose. Minute directions accompany each dose, the medicine being used both externally and internally.

The label on each package translated is as follows:

|                             |                             |                                          |
|-----------------------------|-----------------------------|------------------------------------------|
| Sumi Naga<br>(Maker's Name) | Sen<br>(Thousand)           | Guwan So<br>(Founder)<br>(Made in Tokio) |
| Quai<br>(Made at)           | Kim<br>(Gold)               |                                          |
| Shun<br>(Factory)           | Do<br>(of returning spring) | Tan<br>(Medicine)                        |
| Do<br>(Manufactured)        |                             |                                          |

These peddlers travel on foot all over the Empire of Japan in couples, chanting as they walk the virtues of their medicine as follows: "Ah! Patent thousand gold medicine, the secret of which Nobuyamin of Adzuchi street, Osaka, has inherited. Ah! these are the properties of this medicine! Ah! it makes the stomach and the spleen strong! Ah! it is excellent for hoarseness and colds, pyrosis and the result of eating decayed food! Ah! it cures headache, giddiness and dizziness on awakening and is valuable for children's diseases!"—*Amer. Druggist*.

Henceforth the Canadian Australian steamers will call at the Fiji Islands. This change in the route, the proprietors of the steamers confidently hope, will influence the Imperial Government to grant a subsidy to the line. The *Arawa*, which has been chartered for eighteen months to replace the disabled steamship *Miowera*, which stranded on the evening of October 2nd while entering Honolulu harbor, is a much larger vessel.

—: OUR:—

## Latest Importations.

ALUM, in bbls.  
ALUM POWDERED, in bbls.  
FINEST EPSOM SALTS, in bbls.  
FINEST SUBLIMED SULPHUR, in bbls.  
ROLL SULPHUR, in bbls.  
CHLORIDE LIME, in casks.  
SALTPETRE XTALS, in kegs.  
SALTPETRE POWDERED, in casks.  
POWDERED HELLEBORE, in bbls.  
GLYCERINE, in tins.  
WHITE CASTILE SOAP, bars.  
WHITE CASTILE SOAP, cakes.  
PARIS GREEN, in casks and drums.  
GIBSON'S CANDIES, full assortment.

Your Orders Solicited.

# Jas. A. Kennedy & Co.

IMPORTERS,

London, - Ontario.

## Holiday Goods for Druggists Only.



OUR 8 OZ. PACKAGE.

*We have given our Holiday Line special attention this season and we are now ready to fill orders.*

*The Line includes Cut and Decorated Bottles in Crystal, Venetian and Japanese Ware, attractively put up in*

**FANCY PAPER BOXES,  
SATIN-LINED BOXES,  
HAND PAINTED BOXES.**

*The Largest and Handsomest Assortment ever shown in Canada.*

**PLEASE RESERVE YOUR ORDER.**

*It being our desire to have the Leading Druggists throughout the Dominion handle our goods, should our representative not call on you regularly, please notify us that we may arrange to do so.*

*Mail business solicited and given the best of attention.*

**Seely Manufacturing Co.,**

DETROIT, MICH.

THE AMERICAN PERFUMERS.

WINDSOR, ONT.

Dealers in - -

DRUGGISTS' SUNDRIES,  
FANCY GOODS,  
SMOKERS' ARTICLES,  
FANCY STATIONERY,  
OPTICAL GOODS,  
CHEMICAL APPARATUS, &c.,



Are reminded that it is unnecessary to use half a dozen mediums to reach the trade.

# The Canadian Druggist

Reaches the Drug Trade in all Provinces of the Dominion—guaranteeing a circulation unattained by any other.

REFERENCES:—OUR ADVERTISERS.

## Canadian Druggist Prices Current:

CORRECTED TO NOVEMBER 10th, 1893.

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 those named will command an advance.

|                                 |        |        |                                  |        |       |                                  |      |      |
|---------------------------------|--------|--------|----------------------------------|--------|-------|----------------------------------|------|------|
| ALCOHOL, gal.....               | \$4 05 | \$4 25 | CASTOR, Fibre, lb.....           | 16 06  | 17 00 | Bleached, lb.....                | 45   | 50   |
| Methyl, gal.....                | 1 90   | 2 00   | CHALK, French, powdered, lb..    | 10     | 12    | Spruce, true, lb.....            | 30   | 35   |
| ALLSPICE, lb.....               | 13     | 15     | Precip., see Calcium, lb.....    | 10     | 12    | Tragacanth, flake, 1st, lb....   | 1 00 | 1 10 |
| Powdered, lb.....               | 15     | 17     | Prepared, lb.....                | 5      | 6     | Powdered, lb.....                | 1 10 | 1 15 |
| ALOIN, oz.....                  | 40     | 45     | CHARCOAL, Animal, powd., lb... 4 | 5      |       | Sorts, lb.....                   | 40   | 75   |
| ANODYNE, Hoffman's bot., lbs... | 50     | 55     | Willow, powdered, lb.....        | 20     | 25    | Thus, lb.....                    | 8    | 10   |
| ARROWROOT, Bermuda, lb.....     | 45     | 50     | CLOVE, lb.....                   | 25     | 30    | Hemp, Althea, lb.....            | 27   | 30   |
| St. Vincent, lb.....            | 15     | 14     | Powdered, lb.....                | 30     | 35    | Bitterwort, lb.....              | 27   | 30   |
| ALSAM, Fir, lb.....             | 45     | 50     | COCHINEAL, Honduras, lb.....     | 40     | 45    | Burdock, lb.....                 | 16   | 18   |
| Copaiba, lb.....                | 65     | 75     | COLLONIOS, lb.....               | 75     | 80    | Boneset, ozs, lb.....            | 15   | 17   |
| Peru, lb.....                   | 2 50   | 2 75   | Cantharidal, lb.....             | 2 50   | 2 75  | Catnip, ozs, lb.....             | 17   | 20   |
| Tolu, can or less, lb.....      | 75     | 80     | CONFECTIO, Senna, lb.....        | 25     | 30    | Chiretta, lb.....                | 25   | 30   |
| BARK, Barberrry, lb.....        | 22     | 25     | CROSCOTE, Wood, lb.....          | 2 00   | 2 50  | Coltsfoot, lb.....               | 20   | 38   |
| Bayberry, lb.....               | 15     | 18     | CUTTLEFISH BONE, lb.....         | 35     | 40    | Feverfew, ozs, lb.....           | 53   | 55   |
| Buckthorn, lb.....              | 15     | 17     | DENTRINE, lb.....                | 10     | 12    | Grindelia robusta, lb.....       | 45   | 50   |
| Canella, lb.....                | 15     | 17     | DOVER'S POWDER, lb.....          | 1 50   | 1 60  | Hourhound, ozs., lb.....         | 17   | 20   |
| Cascara Sagrada.....            | 25     | 30     | ERCOT, Spanish, lb.....          | 1 00   | 1 10  | Jaborandi, lb.....               | 45   | 50   |
| Cascarilla, select, lb.....     | 18     | 20     | Powdered, lb.....                | 1 15   | 1 30  | Lemon Balm, lb.....              | 38   | 40   |
| Cassia, in mats, lb.....        | 18     | 20     | ERCOTIS, Keith's, oz.....        | 2 00   | 2 10  | Liverwort, German, lb.....       | 38   | 40   |
| Cinchona, red, lb.....          | 60     | 65     | EXTRACT, Logwood, bulk, lb....   | 13     | 14    | Lobelia, ozs., lb.....           | 15   | 20   |
| Powdered, lb.....               | 65     | 70     | Pounds, lb.....                  | 14     | 17    | Motherwort, ozs., lb.....        | 20   | 22   |
| Yellow, lb.....                 | 35     | 40     | FLOWERS, Arnica, lb.....         | 15     | 20    | Mullein, German, lb.....         | 17   | 20   |
| Pale, lb.....                   | 40     | 45     | Calendula, lb.....               | 55     | 60    | Pennyroyal, ozs., lb.....        | 18   | 20   |
| Elm, selected, lb.....          | 16     | 18     | Chamomile, Roman, lb.....        | 30     | 35    | Peppermint, ozs., lb.....        | 21   | 25   |
| Ground, lb.....                 | 17     | 20     | German, lb.....                  | 40     | 45    | Rue, ozs., lb.....               | 30   | 35   |
| Powdered, lb.....               | 20     | 28     | Elder, lb.....                   | 20     | 22    | Sage, Ozs., lb.....              | 18   | 20   |
| Hemlock, crushed, lb.....       | 18     | 20     | Lavender, lb.....                | 12     | 15    | Spearmin, lb.....                | 21   | 25   |
| Oak, white, crushed, lb.....    | 15     | 17     | Rose, red, French, lb.....       | 1 60   | 2 00  | Thyme, ozs., lb.....             | 18   | 20   |
| Orange peel, bitter, lb.....    | 15     | 16     | Rosemary, lb.....                | 25     | 30    | Tansy, ozs., lb.....             | 15   | 18   |
| Prickly ash, lb.....            | 35     | 40     | Saffron, American, lb.....       | 75     | 80    | Wormwood, lb.....                | 20   | 22   |
| Sassafras, lb.....              | 15     | 16     | Spanish, Val'a, oz.....          | 1 00   | 1 25  | Yerba Santa, lb.....             | 38   | 44   |
| Soap (quillaya), lb.....        | 13     | 15     | GELATINE, Cooper's lb.....       | 1 20   | 1 25  | HOSEY, lb.....                   | 13   | 15   |
| Wild cherry, lb.....            | 13     | 15     | French, white, lb.....           | 40     | 50    | Hors, fresh, lb.....             | 20   | 25   |
| BEANS, Calabar, lb.....         | 45     | 50     | GLYCERINE, lb.....               | 16 1/2 | 18    | INDIGO, Madras, lb.....          | 75   | 80   |
| Tonka, lb.....                  | 1 50   | 2 75   | GEARANA.....                     | 3 00   | 3 25  | INSECT POWDER, lb.....           | 25   | 28   |
| Vanilla, lb.....                | 7 00   | 8 00   | Powdered, lb.....                | 3 25   | 3 50  | ISUGLASS, Brazil, lb.....        | 2 00 | 2 10 |
| BERRIES, Cubeb, sifted, lb..... | 75     | 80     | GUM ALGEE, Cape, lb.....         | 18     | 20    | Russian, true, lb.....           | 6 00 | 6 50 |
| powdered, lb.....               | 85     | 90     | Barbadoes, lb.....               | 30     | 50    | LEAF, Aconite, lb.....           | 25   | 30   |
| Juniper, lb.....                | 10     | 12     | Socotrinc, lb.....               | 65     | 70    | Bay, lb.....                     | 18   | 20   |
| Ground, lb.....                 | 12     | 14     | Assafetida, lb.....              | 25     | 28    | Belladonna, lb.....              | 25   | 30   |
| Prickly ash, lb.....            | 40     | 45     | Arabic, 1st, lb.....             | 65     | 70    | Buchu, long, lb.....             | 50   | 55   |
| BOBS, Balm of Gilead, lb.....   | 55     | 60     | Powdered, lb.....                | 75     | 85    | Short, lb.....                   | 22   | 25   |
| Cassia, lb.....                 | 25     | 30     | Sifted sorts, lb.....            | 40     | 45    | Coca, lb.....                    | 55   | 60   |
| BUTTER, Cacac, lb.....          | 75     | 80     | Sorts, lb.....                   | 25     | 30    | Digitalis, lb.....               | 25   | 30   |
| CAMPION, lb.....                | 65     | 70     | Benzoin, lb.....                 | 50     | 1 00  | Eucalyptus, lb.....              | 18   | 20   |
| CANTHARIDES, Russian, lb.....   | 2 00   | 2 10   | Catechu, Black, lb.....          | 9      | 20    | Hyoseyamus.....                  | 25   | 30   |
| Powdered, lb.....               | 2 10   | 2 20   | Gamboge, powdered, lb.....       | 1 30   | 1 35  | Matico, lb.....                  | 70   | 75   |
| CAPSICUM, lb.....               | 25     | 30     | Guaiaac, lb.....                 | 75     | 1 00  | Senna, Alexandria, lb.....       | 25   | 30   |
| Powdered, lb.....               | 30     | 35     | Powdered, lb.....                | 95     | 1 20  | Tinnevely, lb.....               | 15   | 25   |
| CARBON, Bisulphide, lb.....     | 16     | 18     | Kino, true, lb.....              | 45     | 48    | Stramonium, lb.....              | 20   | 25   |
| CARMINE, No. 40, oz.....        | 40     | 50     | Myrrh, lb.....                   | 45     | 48    | Uva Ursi, lb.....                | 15   | 18   |
|                                 |        |        | Powdered, lb.....                | 55     | 60    | LECITHS, Swedish, doz.....       | 1 00 | 1 10 |
|                                 |        |        | Opium, lb.....                   | 4 50   | 4 75  | LICORICE, Solazzi.....           | 45   | 50   |
|                                 |        |        | Powdered, lb.....                | 6 50   | 6 75  | Pignatelli.....                  | 35   | 40   |
|                                 |        |        | Scammony, pure Resin, lb....     | 12 80  | 13 00 | Grasso.....                      | 30   | 35   |
|                                 |        |        | Shellac, lb.....                 | 40     | 45    | Y & S—Sticks, 6 to 1 lb., per lb | 27   | 30   |

# BRAMWELL'S

## Extra Purified

# EPSOM SALTS

Specially Prepared for Druggists.

FREE FROM MOISTURE.

FREE FROM DIRT.

**The Finest Quality Made.**

THESE SALTS CAN BE OBTAINED FROM

JAMES A. KENNEDY & CO., London.

--

LYMAN BROS. & CO., Toronto.

J. WINER & CO., - - - Hamilton.

--

H. SKINNER & CO., - Kingston.

AND OTHER LEADING HOUSES.

E. BRAMWELL & Co., St. Helens, Lane, Eng.

### DRUG REPORTS.

#### Ontario.

Business has been fairly active, with no startling changes in value.

Gum Arabics are easier.

Opium, unchanged.

Damiana Leaves are scarce.

Quinine, no change to note.

Menthol, firm, will likely be higher.

Vanilla Beans, higher.

#### England.

London, October 26th, 1893.

Chemicals have been rather flat this month owing to very small demands. The coal strike has had some effect in raising prices of Soda Compounds, especially that of Caustic Soda.

In drugs there has been more activity, although the enquiries are not so great as usual at this time of the year.

The principal advances have been in Menthol, Senega, Cape Aloes and Kino.

The market is practically clear of Gum Kino, and for some time at all events, it will remain very scarce and dear.

Gum Acacia is now coming into the market from the Soudan region again.

Aloes of only moderate quality have been offering and for Cape there has been a good demand.

Ipecacuanha, in spite of large supplies, maintains a high figure, but Cubebs are going lower.

There has been a marked increase in prices for English Oils of Peppermint and Lavender, owing to the poor yield.

Otto of Rose has also advanced for a similar reason.

Opium is dull, with a slightly falling tendency, which may, however, soon recover.

Siam Benzoin is offering at prices which

must be ruinous to importers who have old stocks.

Rhubarb is in fair demand, and there is a marked absence of finest qualities, owing to an excessively wet season in China.

#### Adulterated Borax.

Our attention has been called to a practice which has lately grown to be quite common—the adulteration of borax with bicarbonate of soda, and in some rare cases with other substances. It is only the powdered borax, and particularly that which is sold in packages for household use, that has been found sophisticated. In some cases as high as sixty per cent. of the contents of a package has been found to be soda, and from that down to ten per cent. Of course the packers find it profitable to cheapen the article, but in the case of borax it will prove even a more short-sighted policy than in the case of many other articles used in the household. The use of borax for household purposes is of comparatively recent introduction, and is by no means universal, hence when the household wife uses the adulterated stuff and does not secure the result she expects, borax will be condemned as not answering the purpose for which it has been recommended, and its sale will decrease. It is urged that other considerations than honest dealing should lead to an abandonment of this practice, as those resorting to it will not be influenced by appeals to their sense of justice. The financial injury should be plainly apparent to those who continue the practice, especially to the extent it has of late been carried. The profit to the packer is very tempting, it must be admitted, as powdered borax costs about eight cents per lb., while bicarbonate of soda may be purchased for less than three cents per lb.; but the practice is sure, if continued, to ruin the trade in powdered borax for household use. This may prove another verification of the fable of the goose and the

golden egg unless a halt is made.—*Oil and Colourman's Journal.*

#### Trade Papers vs. Salesmen.

The great wholesale grocery firm of B. S. Janney, jr., & Co., Philadelphia, have discontinued the services of travelling salesmen, and now rely on the trade papers to do their outside work. They say:

"We discontinue the services of our salesmen, knowing that it will be to the interest of buyers as well as ourselves. We also believe that the relations between buyer and seller should be personal, mutual and close.

"There certainly will be no objection to this plan from those who already buy of us for cash. We believe very many shrewd, prompt paying merchants who are now buying from us, and who pay their bills in 30 to 40 days, will at once embrace the opportunity to buy at the lowest prices, when they consider the many advantages of this mode of buying and selling goods.

"With the decrease in the cost of doing business, we will be able to give you prices which cannot be met by any house employing salesmen and who give a line of credit. The advantages of this system are manifold:

"1. The buyer saves his proportion of the commission or salary paid to salesmen.

"2. The buyer buys his goods at the lowest possible prices, and receives in addition the cash discounts.

"3. The buyer is relieved from a proportion of the heavy percentage of loss attending all credit systems."—*N. E. Grocer.*

The importation of condensed milk into Great Britain has increased considerably of late. Official records show a total of 634,091 cases for the nine months ending September 30, against 527,588 cases in the corresponding period last year.

|                                                      |       |       |                                             |      |      |                                  |      |      |
|------------------------------------------------------|-------|-------|---------------------------------------------|------|------|----------------------------------|------|------|
| Y & S—Purity, 100 sticks in box                      | 75    | 75    | Unicorn, lb.                                | 38   | 40   | BISMUTH, Ammonia-citrato, oz.    | 40   | 45   |
| " Purity, 200 sticks in box                          | 1 50  | 1 50  | Valerian, English, lb. true.                | 20   | 25   | Salicylate, oz.                  | 30   | 35   |
| " Acme Pellets, 5 lb. tins                           | 2 00  | 2 00  | Virginia Snake, lb.                         | 40   | 45   | Subcarbonate, lb.                | 2 75 | 3 00 |
| " Lozenges, 5 lb. tins.                              | 1 50  | 1 75  | Yellow Dock, lb.                            | 15   | 18   | Subnitrate, lb.                  | 2 40 | 2 60 |
| " Tar, Licorice & Tolu, 5 lb. tins.                  | 2 00  | 2 00  | Rum, Bay, gal.                              | 2 25 | 2 50 | BORAX, lb.                       | 9    | 10   |
| LUPULIN, oz.                                         | 30    | 35    | Essence, lb.                                | 3 00 | 3 25 | Powdered, lb.                    | 10   | 11   |
| LYCOPODIUM, lb.                                      | 70    | 80    | SACCHARIN, oz.                              | 1 25 | 1 50 | BROMINE, oz.                     | 8    | 13   |
| MACE, lb.                                            | 1 20  | 1 25  | SEED, Anise, Italian, sifted, lb.           | 13   | 15   | CADMIUM, Bromide, oz.            | 20   | 25   |
| MANNA, lb.                                           | 1 60  | 1 75  | Star, lb.                                   | 35   | 40   | Iodide, oz.                      | 45   | 50   |
| Moss, Iceland, lb.                                   | 9     | 10    | Burdock, lb.                                | 30   | 35   | CALCIUM, Hypophosphite, lb.      | 1 50 | 1 60 |
| Irish, lb.                                           | 9     | 10    | Canary, bag or less, lb.                    | 6    | 7    | Iodide, oz.                      | 95   | 1 00 |
| MUSK, Tonquin, oz.                                   | 46 00 | 50 00 | Caraway, lb.                                | 10   | 13   | Phosphate, precip., lb.          | 35   | 38   |
| NUTGALLS, lb.                                        | 21    | 25    | Cardamom, lb.                               | 1 25 | 1 50 | Sulphide, oz.                    | 5    | 0    |
| Powdered, lb.                                        | 25    | 30    | Celery                                      | 30   | 35   | CERIUM, Oxalate, oz.             | 10   | 12   |
| NUTMEGS, lb.                                         | 1 00  | 1 10  | Colchicum                                   | 75   | 80   | CHROSODINE, oz.                  | 15   | 18   |
| NUX VOMICA, lb.                                      | 10    | 12    | Coriander, lb.                              | 10   | 12   | CHLORAL, Hydrate, lb.            | 1 00 | 1 10 |
| Powdered, lb.                                        | 25    | 27    | Cumin, lb.                                  | 15   | 20   | Croton, oz.                      | 75   | 80   |
| OAKUM, lb.                                           | 12    | 15    | Fennel, lb.                                 | 15   | 17   | CHLOROFORM, lb.                  | 65   | 2 00 |
| OINTMENT, Merc., lb. $\frac{1}{2}$ and $\frac{1}{4}$ | 70    | 75    | Fenugreek, powdered, lb.                    | 7    | 9    | CINCHONINE, sulphate, oz.        | 25   | 30   |
| Citrino, lb.                                         | 45    | 50    | Flax, cleaned, lb.                          | 3 1  | 4    | CINCHONINE, Sulph., oz.          | 15   | 20   |
| PALMSTREE, oz.                                       | 15    | 18    | Ground, lb.                                 | 4    | 5    | COCAINE, Mur., oz.               | 8 50 | 9 00 |
| PEPPER, black, lb.                                   | 22    | 25    | Hemp, lb.                                   | 6    | 6 1  | COPPER, Sulph. (Blue Vitrol) lb. | 7    | 8    |
| Powdered, lb.                                        | 25    | 30    | Mustard, white, lb.                         | 11   | 12   | Iodide, oz.                      | 65   | 70   |
| PITCH, black, lb.                                    | 3     | 4     | Powdered, lb.                               | 15   | 20   | COPPERAS, lb.                    | 1    | 3    |
| Burgundy, true, lb.                                  | 10    | 12    | Pumpkin                                     | 25   | 30   | ETHER, Acetic, lb.               | 75   | 80   |
| PLASTER, Calcined, lbl cash.                         | 2 25  | 3 25  | Quince, lb.                                 | 65   | 70   | Sulphuric, lb.                   | 40   | 50   |
| Adhesive, yd.                                        | 12    | 13    | Rape, lb.                                   | 8    | 9    | EXALGINE, oz.                    | 1 00 | 1 10 |
| Belladonna, lb.                                      | 65    | 70    | Strophanthus, oz.                           | 50   | 55   | HYOSCAMINE, Sulp., crystals, gr. | 25   | 30   |
| Galbanum Comp., lb.                                  | 80    | 85    | Worm, lb.                                   | 22   | 25   | IODINE, lb.                      | 5 00 | 5 50 |
| Lead, lb.                                            | 25    | 30    | SEIDLITZ Mixture, lb.                       | 25   | 30   | IODIFORM, lb.                    | 6 00 | 7 00 |
| POPPY HEADS, per 100                                 | 1 00  | 1 10  | SOAP, Castile, Mottled, pure, lb.           | 10   | 12   | Iodob., oz.                      | 1 30 | 1 40 |
| ROSIN, Common, lb.                                   | 24    | 3     | White, Conti's, lb.                         | 15   | 16   | IROS, by Hydrogen                | 1 00 | 1 10 |
| White, lb.                                           | 3 1   | 4     | Powdered, lb.                               | 25   | 35   | Carbonate, Precip., lb.          | 15   | 16   |
| RESORCIN, White, oz.                                 | 25    | 30    | Green (Sapo Viridis), lb.                   | 12   | 25   | Sacch., lb.                      | 35   | 40   |
| ROCHELLE SALT, lb.                                   | 25    | 28    | SERVALACE, lb.                              | 50   | 55   | Chloride, lb.                    | 45   | 55   |
| ROOT, Aconite, lb.                                   | 22    | 25    | TURPENTINE, Chian, oz.                      | 75   | 80   | Sol., lb.                        | 13   | 16   |
| Althea, cut, lb.                                     | 30    | 35    | Venice, lb.                                 | 10   | 12   | Citrate, U. S. P., lb.           | 90   | 1 00 |
| Belladonna, lb.                                      | 25    | 30    | WAX, White, lb.                             | 50   | 75   | And Ammon., lb.                  | 75   | 80   |
| Blood, lb.                                           | 15    | 16    | Yellow                                      | 40   | 45   | And Quinine, lb.                 | 1 50 | 3 00 |
| Bitter, lb.                                          | 27    | 30    | WOOD, Guaiac, rasped.                       | 5    | 6    | Quin. and Stry., oz.             | 18   | 30   |
| Blackberry, lb.                                      | 15    | 18    | Quassia chips, lb.                          | 10   | 12   | And Strychnine, oz.              | 13   | 15   |
| Burdock, crushed, lb.                                | 18    | 20    | Red Saunders, ground, lb.                   | 5    | 6    | Dialyzed, Solution, lb.          | 50   | 55   |
| Calamus, sliced, white, lb.                          | 20    | 25    | Santal, ground, lb.                         | 5    | 6    | Ferrocyanide, lb.                | 55   | 60   |
| Canada Snake, lb.                                    | 30    | 35    | <b>CHEMICALS.</b>                           |      |      | Hypophosphites, oz.              | 20   | 25   |
| Cohosh, Black, lb.                                   | 15    | 20    | Acid, Acetic, lb.                           | 12   | 13   | Iodide, oz.                      | 40   | 45   |
| Colchicum, lb.                                       | 40    | 45    | Glacial, lb.                                | 45   | 50   | Syrup, lb.                       | 40   | 45   |
| Columbo, lb.                                         | 20    | 22    | Benzoic, English, oz.                       | 20   | 25   | Lactate, oz.                     | 5    | 6    |
| Powdered, lb.                                        | 25    | 30    | German, oz.                                 | 10   | 12   | Pernitrate, solution, lb.        | 15   | 16   |
| Coltsfoot, lb.                                       | 38    | 40    | Boracic, lb.                                | 20   | 25   | Phosphate scales, lb.            | 1 25 | 1 30 |
| Comfrey, crushed, lb.                                | 20    | 25    | Carbolic Crystals, lb.                      | 30   | 38   | Sulphate, pure, lb.              | 7    | 9    |
| Cureuma, powdered, lb.                               | 13    | 14    | Calvert's No. 1, lb.                        | 2 10 | 2 15 | Exsiccated, lb.                  | 8    | 10   |
| Dandelion, lb.                                       | 15    | 18    | No. 2, lb.                                  | 1 35 | 1 40 | And Potass. Tartrate, lb.        | 80   | 85   |
| Elecampane, lb.                                      | 15    | 10    | Citric, lb.                                 | 65   | 70   | And Ammon. Tartrate, lb.         | 85   | 90   |
| Galangal, lb.                                        | 15    | 18    | Gallic, oz.                                 | 10   | 12   | LEAD, Acetate, white, lb.        | 13   | 15   |
| Gelsemium, lb.                                       | 22    | 25    | Hydrobromic, diluted, lb.                   | 30   | 35   | Carbonate, lb.                   | 7    | 8    |
| Genitan, lb.                                         | 9     | 10    | Hydrocyanic, diluted, oz. bot-              |      |      | Iodide, oz.                      | 35   | 40   |
| Ground, lb.                                          | 10    | 12    | les doz.                                    | 1 50 | 1 60 | Red, lb.                         | 7    | 9    |
| Powdered, lb.                                        | 13    | 15    | Lactic, concentrated, oz.                   | 22   | 25   | LIME, Chlorinated, bulk, lb.     | 4    | 5    |
| Ginger, African, lb.                                 | 18    | 20    | Muriatic, lb.                               | 3    | 5    | In packages, lb.                 | 6    | 7    |
| Po., lb.                                             | 20    | 22    | Chem, pure, lb.                             | 18   | 20   | LITHIUM, Bromide, oz.            | 40   | 45   |
| Jamaica, blechd., lb.                                | 27    | 30    | Nitric, lb.                                 | 10 1 | 13   | Carbonate, oz.                   | 30   | 35   |
| Po., lb.                                             | 30    | 35    | Chem, pure, lb.                             | 25   | 30   | Citrate, oz.                     | 25   | 30   |
| Ginseng, lb.                                         | 3 00  | 3 25  | Oleic, purified, lb.                        | 75   | 80   | Iodide, oz.                      | 50   | 55   |
| Golden Seal, lb.                                     | 75    | 80    | Oxalic, lb.                                 | 12   | 13   | Salicylate, oz.                  | 35   | 40   |
| Gold Thread, lb.                                     | 90    | 95    | Phosphoric, glacial, lb.                    | 1 00 | 1 10 | MAGNESIUM, Calc., lb.            | 55   | 60   |
| Hellebore, White, powd., lb.                         | 12    | 15    | Dilute, lb.                                 | 13   | 17   | Carbonate, lb.                   | 18   | 20   |
| Indian Hemp                                          | 18    | 30    | Pyrogallic, oz.                             | 35   | 38   | Citrate, gran., lb.              | 40   | 45   |
| Ipecac, lb.                                          | 2 65  | 2 75  | Salicylic, white, lb.                       | 1 80 | 2 00 | Sulph. (Epsom salt), lb.         | 13   | 3    |
| Powdered, lb.                                        | 2 80  | 3 00  | Sulphuric, carboy, lb.                      | 2 1  | 2 4  | MANGANESE, Black Oxide, lb.      | 5    | 7    |
| Jalap, lb.                                           | 55    | 60    | Bottles, lb.                                | 5    | 6    | METHYL, oz.                      | 35   | 40   |
| Powdered, lb.                                        | 60    | 65    | Chem, pure, lb.                             | 18   | 20   | MERCURY, lb.                     | 90   | 95   |
| Kava Kava, lb.                                       | 40    | 90    | Tannic, lb.                                 | 90   | 1 10 | Ammon (White Precip.),           | 1 25 | 1 30 |
| Licorice, lb.                                        | 12    | 15    | Tartaric, powdered, lb.                     | 40   | 45   | Chloride, Corrosive, lb.         | 1 00 | 1 10 |
| Powdered, lb.                                        | 13    | 15    | ACETANILID, lb.                             | 90   | 1 00 | Calomel, lb.                     | 1 15 | 1 20 |
| Mandrake, lb.                                        | 13    | 18    | ACONITINE, grain                            | 4    | 5    | With Chalk, lb.                  | 60   | 65   |
| Masterwort, lb.                                      | 16    | 40    | ALUM, cryst., lb.                           | 13   | 3    | Iodide, Proto, oz.               | 35   | 40   |
| Orris, Florentine, lb.                               | 30    | 35    | Powdered, lb.                               | 3    | 4    | Bin., oz.                        | 25   | 30   |
| Powdered, lb.                                        | 40    | 45    | AMMONIA, Liquor, lb. 880.                   | 8 1  | 10   | Oxide, Red, lb.                  | 1 30 | 1 35 |
| Pareira Brava, true, lb.                             | 40    | 45    | AMMONIUM, Bromide, lb.                      | 65   | 75   | Pill (Blue Mass), lb.            | 70   | 75   |
| Pink, lb.                                            | 75    | 80    | Carbonate, lb.                              | 12   | 13   | MILK SUGAR, powdered, lb.        | 50   | 55   |
| Parsley, lb.                                         | 30    | 35    | Iodide, oz.                                 | 35   | 40   | MORPHINE, Acetate, oz.           | 2 00 | 2 10 |
| Pleurisy, lb.                                        | 20    | 25    | Nitrate, crystals, lb.                      | 40   | 45   | Muriate, oz.                     | 2 00 | 2 10 |
| Poke, lb.                                            | 15    | 18    | Muriate, lb.                                | 12   | 16   | Sulphate, oz.                    | 2 25 | 2 30 |
| Queen of the Meadow, lb.                             | 18    | 20    | Valerianate, oz.                            | 55   | 60   | PERSIN, Saccharated, oz.         | 35   | 40   |
| Rhatany, lb.                                         | 20    | 30    | AMYL, Nitrite, oz.                          | 16   | 18   | PHENACETINE, oz.                 | 45   | 50   |
| Rhubarb, lb.                                         | 75    | 2 50  | ANTISEPTIC, oz.                             | 85   | 00   | PHLOGARINE, Muriate, grain.      | 5    | 6    |
| Sarsaparilla, Hond, lb.                              | 40    | 45    | ANTIPYRIN, oz.                              | 1 00 | 1 10 | PIPERIN, oz.                     | 1 00 | 1 10 |
| Cut, lb.                                             | 50    | 55    | ARISTOL, oz.                                | 2 00 | 2 25 | PHOSPHORUS, lb.                  | 90   | 1 10 |
| Senega, lb.                                          | 55    | 65    | ASENIC, Donovan's sol., lb.                 | 25   | 30   | POTASSA, Caustic, white, lb.     | 55   | 60   |
| Squill, lb.                                          | 13    | 15    | Fowler's, sol., lb.                         | 13   | 15   | POTASSIUM, Acetate, lb.          | 35   | 40   |
| Stillingia, lb.                                      | 22    | 25    | Iodide, oz.                                 | 35   | 40   | Bicarbonate, lb.                 | 15   | 17   |
| Powdered, lb.                                        | 25    | 27    | White, lb.                                  | 6    | 7    | Bichromate, lb.                  | 14   | 15   |
|                                                      |       |       | ATROPINE, Sulp., in $\frac{1}{4}$ ozs., oz. | 7 00 | 8 00 | Bitrat (Cream Tart.), lb.        | 25   | 30   |

|                              |    |    |                                |    |    |                         |   |    |   |    |
|------------------------------|----|----|--------------------------------|----|----|-------------------------|---|----|---|----|
| Bromide, lb.                 | 46 | 50 | TARTAR EMETIC, lb.             | 50 | 55 | Lemon, lb.              | 2 | 75 | 3 | 00 |
| Carbonate, lb.               | 14 | 16 | THYMOL, (Thymic acid), oz.     | 55 | 60 | Lemongrass, lb.         | 1 | 50 | 1 | 00 |
| Chlorate, Eng., lb.          | 25 | 30 | VRIBATRINE, oz.                | 2  | 00 | Mustard, Essential, oz. |   | 60 |   | 05 |
| Powdered, lb.                | 30 | 33 | ZINC, Acetate, lb.             | 70 | 75 | Neroli, oz.             | 4 | 25 | 4 | 50 |
| Citrate, lb.                 | 75 | 90 | Carbonate, lb.                 | 25 | 30 | Orange, lb.             | 3 | 75 | 5 | 00 |
| Cyanide, fused, lb.          | 40 | 55 | Chloride, granular, oz.        | 13 | 15 | Sweet, lb.              | 3 | 25 | 3 | 50 |
| Hypophosphites, oz.          | 10 | 12 | Iodide, oz.                    | 60 | 65 | Origanum, lb.           |   | 65 |   | 70 |
| Iodide, lb.                  | 4  | 00 | Oxide, lb.                     | 13 | 60 | Patchouli, oz.          | 1 | 75 | 1 | 80 |
| Nitrate, gran., lb.          |    | 8  | Sulphate, lb.                  | 9  | 11 | Pennyroyal, lb.         | 3 | 00 | 3 | 25 |
| Pernmanganate, lb.           | 50 | 55 | Valerianate, oz.               | 25 | 30 | Peppermint, lb.         | 4 | 25 | 4 | 50 |
| Prussiate, Red, lb.          | 50 | 55 | <b>ESSENTIAL OILS.</b>         |    |    | Pimento, lb.            | 2 | 60 | 2 | 75 |
| Yellow, lb.                  | 32 | 35 | Oil, Almond, bitter, oz.       | 75 | 80 | Rhodium, oz.            |   | 80 |   | 85 |
| And Sod. Tartrate, lb.       | 30 | 35 | Sweet, lb.                     | 50 | 60 | Rose, oz.               | 7 | 50 | 8 | 00 |
| Sulphuret, lb.               | 25 | 30 | Amber, crude, lb.              | 40 | 45 | Rosemary, lb.           |   | 70 |   | 75 |
| PROPYLAMINE, oz.             | 35 | 40 | Rec't, lb.                     | 65 | 70 | Rue, oz.                |   | 25 |   | 30 |
| QUININE, Sulph., bulk        | 25 | 28 | Anise, lb.                     | 2  | 75 | Sandalwood, lb.         | 5 | 50 | 9 | 00 |
| Ozs., oz.                    | 32 | 38 | Bay, oz.                       | 50 | 60 | Sassafras, lb.          |   | 75 |   | 80 |
| QUININE, Sulphate, ozs., oz. | 16 | 20 | Bergamot, lb.                  | 4  | 00 | Savin, lb.              | 1 | 60 | 1 | 75 |
| SALICIN, lb.                 | 3  | 75 | Cade, lb.                      | 90 | 1  | Spearmint, lb.          | 6 | 00 | 6 | 25 |
| SANTONIN, oz.                | 20 | 22 | Cajuput, lb.                   | 1  | 80 | Spruce, lb.             |   | 65 |   | 70 |
| SILVER, Nitrate, cryst., oz. | 90 | 1  | Capaicum, oz.                  | 60 | 65 | Tansy, lb.              | 4 | 25 | 4 | 50 |
| Fused, oz.                   | 1  | 00 | Caraway, lb.                   | 3  | 50 | Thyme, white, lb.       | 1 | 80 | 1 | 00 |
| SODIUM, Acetate, lb.         | 30 | 35 | Cassia, lb.                    | 1  | 40 | Wintergreen, lb.        | 3 | 00 | 3 | 50 |
| Bicarbonate, kgs., lb.       | 2  | 75 | Cinnamon, Ceylon, oz.          | 1  | 50 | Wormseed, lb.           | 3 | 50 | 3 | 75 |
| Bromide, lb.                 | 63 | 65 | Citronelle, lb.                | 70 | 75 | Wormwood, lb.           | 6 | 50 | 6 | 75 |
| Carbonate, lb.               | 3  | 6  | Clove, lb.                     | 1  | 60 | <b>FIXED OILS.</b>      |   |    |   |    |
| Hypophosphite, oz.           | 10 | 12 | Copaiba, lb.                   | 1  | 60 | Castor, lb.             |   | 9  |   | 11 |
| Hypophosphite, lb.           | 3  | 6  | Croton, lb.                    | 1  | 50 | Cod LIVER, N. F., gal.  | 1 | 00 | 1 | 25 |
| Iodide, oz.                  | 40 | 45 | Cubeb, lb.                     | 9  | 50 | Norwegian, gal.         | 1 | 25 | 1 | 50 |
| Salicylate, lb.              | 1  | 80 | Cumin, lb.                     | 5  | 50 | COTTONSEED, gal.        | 1 | 10 | 1 | 20 |
| Sulphate, lb.                | 2  | 3  | Erigeron, oz.                  | 20 | 25 | LARD, gal.              |   | 90 |   | 1  |
| Sulphite, lb.                | 10 | 12 | Eucalyptus, lb.                | 1  | 50 | LINSEED, boiled, gal.   |   | 65 |   | 67 |
| SOMNOL, oz.                  | 85 | 90 | Fennel, lb.                    | 1  | 60 | Raw, gal.               |   | 63 |   | 65 |
| SPIRIT NITRE, lb.            | 30 | 60 | Geranium, oz.                  | 1  | 75 | NEATSFOOT, gal.         | 1 | 00 | 1 | 10 |
| STRONTIUM, Nitrate, lb.      | 18 | 20 | Rose, lb.                      | 3  | 20 | OLIVE, gal.             | 1 | 30 | 1 | 35 |
| STRYCHNINE, crystals, oz.    | 1  | 00 | Juniper berries (English), lb. | 4  | 50 | Salad, gal.             | 2 | 25 | 2 | 40 |
| SULFONAL, oz.                | 32 | 34 | Wood, lb.                      | 70 | 75 | PALM, lb.               |   | 12 |   | 13 |
| SULPHUR, Flowers of, lb.     | 23 | 4  | Lavender, Chiris. Fleur, lb.   | 3  | 00 | SPERM, gal.             | 1 | 75 | 1 | 80 |
| Pure precipitated, lb.       | 13 | 20 | Garden, lb.                    | 1  | 50 | TURPENTINE, gal.        |   | 65 |   | 68 |

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