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CANADIAN DRUGGIST.

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

Vol. 6.

STRATHROY, JULY, 1891.

No. 7.

CANADIAN DRUGGIST.

WILLIAM J. DYAS,
PUBLISHER.

SUBSCRIPTION, \$1 PER YEAR IN ADVANCE.
Advertising Rates on Application.

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.

New advertisements or changes to be addressed

CANADIAN DRUGGIST,

STRATHROY, ONTARIO.

ENGLISH OFFICE,

16 Trulock Road, Tottenham,

LONDON, N.

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The Coming Pharmacopœia.

The request from Prof. Atfield that the British Colonies aid in the compilation of an *Imperial Pharmacopœia* to answer for all parts of the Empire, has not met with the hearty response from Canadian pharmacists that is desirable. There seems to have been a growing sentiment here in favor of a purely Canadian edition to be recognized as the standard by the Dominion Government, but, as many strongly divergent views would have to be harmonized before such an idea could be put to practical use either for physicians or pharmacists, we are of opinion that it will be wise to profit by the opportunity afforded and secure what we can that will meet our views. Even though we as druggists might desire to emulate independent countries in preparing a pharmacopœia, we must bear in mind that we have not yet been able to place the medical profession under our absolute dictum, and that we would have to depend upon their concurrence and medical knowledge if we wished to prepare a codex that would not be a plagiaristic copy of those now in existence.

In thinking of a Canadian Pharmacopœia at all we do so in connection with a desire to have it become the legal standard for Canada, and our mind naturally frames it as a modification of the British and United States works. We are not at all sure that if we compiled a Canadian pharmacopœia it would be adopted as the legal standard by the Government, unless we are confident that a stronger national spirit exists in Canada than does in the United States, where the Pharmacopœia we are so pleased to quote still exists as an unofficial text book, being prepared solely by commissioners appointed by medical or pharmaceutical societies, and having no other authority, although generally accepted as a national work.

An independent pharmacopœia, issued by a dependency, would be somewhat of an anomaly, and would serve but little purpose outside of its immediate jurisdiction, and, even though a compilation could be arranged which would receive governmental authorization, it would only create a precedent for similar action in other Colonies and tend to multiply works, which, as children of a parent, could not reasonably hope to be greater than the parent.

With the very great facilities for rapid travel now afforded all countries, causing

constant intercourse of people of different nationalities, it is desirable that the greatest possible degree of uniformity in the formulæ of the more powerful preparations at least be striven for, and the fewer and more representative the authorities are the more likely will there be a concentration for international arrangement for such a purpose.

As liberal Canadians we cannot afford to be narrow minded. In a matter of this kind, where the general welfare rather than our individuality is the the question of supreme importance, our duty is clearly in line with the effort of the mother country to frame a pharmacopœia which will, as far as possible, be a credit to the imperial character designed for it by its liberal minded editor.

Will We Meet.

In our last issue we endeavored to direct some attention to the pending meeting of the Provincial Pharmaceutical Association, as we thought that a word in season might not be amiss. So far we have not been encouraged by the assurances of support we hoped might be given the very excellent officers the Association has selected to direct its affairs, and we fear that unless events shape themselves other than they appear to be doing at present, it will be wise to defer any meeting until some subject of immediate and general interest shall arise to call forth a spontaneous desire for a gathering to discuss it.

We, personally, are of the opinion that the subjects which could now be profitably treated of would warrant a full attendance of druggists from all parts of the Province, but, as our opinion is only an individual one, it can't bear much weight in arousing general interest to an extent necessary to make such a gathering the success it ought to be. The drug trade of the Province cannot expect to make its influence felt in regulating trade difficulties unless by concerted action upon well defined principles. The standing of its members cannot be properly elevated unless upon the same basis of concerted action looking towards scientific attainment. The changes, which new conditions of educational training and association with sister colleges makes necessary in the Act which governs our calling, makes imperative united action to secure them. The necessity of striving to secure a strong enforcement of the Act to protect the privileges of those who are properly qual

ified is so apparent as to need no comment. We cannot expect the Council to attend closely to the latter matter unless we are willing to support them. They are doubtless willing to put the law in motion where there is a reasonable hope of sustaining a case, but can have very little desire to go to the enormous expense necessary to prosecute unsupported actions before local magistrates, who, too frequently, are only too willing to give the defendant any chance which may offer to escape the penalty because they are acquainted with him, and are more anxious to help a known person than a stranger. Even if these matters were not of sufficient importance to warrant an attendance, the consideration of how we can best aid in the coming issue of the British Pharmacopœia should bring us together.

These are the grounds upon which we have asked the question, "Will we meet?" and, if the reasons do not appeal to others as they do to us, we cannot help it, and can only feel that we are doing our duty in drawing attention to them.

Opinions Solicited.

The drug journals, American and Canadian, have very fully expressed themselves regarding the prospective edition of an Imperial Pharmacopœia, and we, in doing so, have doubtless taken a view which even Canadian druggists as a body may not concur in. However that may be, we believe that a candid expression of opinion from pharmacists who have no connections with the editing or publishing of drug journals would be likely to more fully represent the general feeling in the matter than we can express it; and, as our columns are at all times open to our conferees for the discussion of matters of mutual interest to us, we now invite the fullest expression thereon.

With the object of concentrating opinions, we would ask that those who may not desire to write up their views fully, would answer according to the views they hold the following interrogative questions, and mail them to us either by letter or post card at their earliest convenience. The answer only, attached to the number of the question is all that is necessary.

1. Would an Imperial Pharmacopœia as outlined by Prof. Atfield, answer the needs of Canadian pharmacists?

2. What additional kinds of preparations would you like to see added to those now authorized by the B. P.?

3. Would you like to have the metric system made official, as well as the weights and measures now used?

4. Are you in favor of an independent Canadian Pharmacopœia?

5. Are you willing to have your name published supporting your views?

We will be pleased to receive replies from any part of the Dominion and to publish them to indicate the general sentiment regarding a matter of so much practical importance to the drug trade. Kindly evince your interest.

Drug Clerks' Column.

Last month we asked that any drug clerks in Canada, so desiring, should send us their names and addresses and names of parties with whom employed, for registration and publication.

We have received a number of replies to this announcement and next month will publish a list of those received. It is hoped that all drug clerks in Canada will avail themselves of this offer, which must prove of mutual advantage to clerks and employers.

A. P. A. Meeting.

Transportation Committee of the American Pharmaceutical Association.
New York, July 12th, 1894.

To the Editor CANADIAN DRUGGIST:

Thomas F. Hain, Chairman of the Committee, having resigned, President Patch has appointed in his stead as Chairman, Caswell A. Mayo, 37 College Place, New York City. The Committee is actively engaged in perfecting their arrangements as regards rates. A uniform rate of 1½ fares has been promised from most sections and will probably be granted from all over the United States. To obtain advantage of these rates it will be necessary for persons attending the meeting to pay full fare going and obtain a receipt for the ticket at the full rate from the ticket office at which it is purchased on an association certificate. This receipt, when countersigned by the Secretary of the Association at the meeting, will enable the delegate to purchase a return trip ticket for one-third the regular rate. In some sections it may happen that the regular summer excursion rate will be less than 1½ fares, in which case the delegates will probably be advised by the local members of the Transportation Committee to purchase regular excursion tickets. Details of the arrangements have not yet been completed but will soon be published.

The names of the Committee are as follows:—Caswell A. Mayo, 37 College Place, New York City; Harry Sharp, Atlanta, Ga.; S. A. D. Sheppard, Boston, Mass.; A. E. Ebert, Chicago, Ill.; W. J. M. Gordon, Cincinnati, Ohio; Charles M. Ford, Denver, Col.; A. K. Finlay, New Orleans, La.; M. W. Alexander, St. Louis, Mo.; Wm. H. Searby, San Francisco, Cal.

Yours very truly,
CASWELL A. MAYO,
Chairman.

An Explosion.

At the Therapeutical Society of Paris, M. Creguy called attention to the following accident which he had had. As a dentifrice he had to dispense:—

Potassium chlorate	.....	5 grammes.
Borax	.....	10 "
Magnesia	.....	10 "
Prepared chalk	.....	10 "
Oil of peppermint	.....	11 drops.
Saccharin	.....	5 grammes.

The pharmacist mixed the chlorate of

potash and the saccharin together in a mortar, of all things. He was saved the trouble of finishing the prescription, however, for a violent explosion resulted and he was badly burnt. The great imprudence in rubbing violently together a 10 per cent. mixture of saccharin with potassium chlorate is self evident, and has, unfortunately, been shown before by English chemists with the same inevitable result.

Rapid Preparation of Mercurial Ointment.

Georges Bagle, in the *Journal de Pharmacie d'Anvers*, recommends the following process:—

Put into the mortar 100 parts of an already prepared ointment, and add 500 parts of mercury. Triturate rapidly, and while doing so pour over the mixture 50 parts sulphuric ether. Continue the trituration and in a few moments the mercury will be in a state of the minutest sub-division, when you can add 100 parts of lard (or vaselin, or lanolin). A few minutes of vigorous trituration completes the operation. If upon close examination a few globules of uncommuted mercury be seen, add a trifle more ether and triturate. Finally add the other ingredients and incorporate. This method not only saves a great deal of time and labor, but insures a more perfect comminution of the mercury.

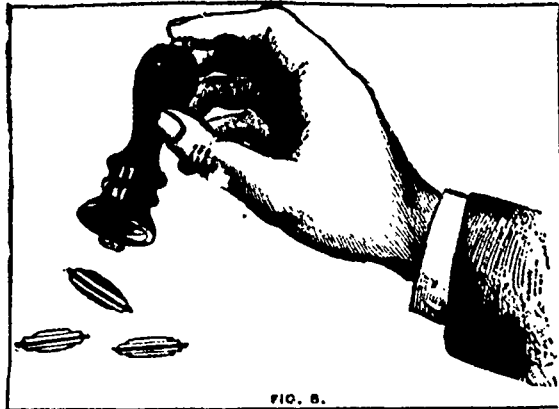
The Brazilian Rubber Supply.

Courtney DeKalb, of New York, who has been traveling along the Amazon, says at present there are no cultivated rubber-orchards in Brazil, but the destruction of the wild supply by the rubber gatherers and the rapid increase in the demand for rubber are making the necessity imperative of establishing large plantations. A rubber-tree requires twelve years to mature. Short crops may be obtained after the sixth year. When in full bearing the yield is an average of three pounds to a tree. The value of the rubber on the spot is probably never less than 55 cents per pound. Two hundred trees can be planted on an acre of land without undue crowding, and when once in bearing they continue to yield for periods of from 75 to 100 years. The exports of rubber from Para now exceed \$20,000,000 per annum.

Metallic Amides.

An interesting paper on the amides of sodium, potassium, and lithium has recently been published. Sodamide NaNH_2 is best prepared by the action of dry ammonia on metallic sodium at about 350° in an iron retort. It forms a white, crystalline mass, decomposing at 500° into Na, N and H. Potassamide is prepared in a similar way, and possesses similar properties to sodamide. Lithamide LiNH_2 has also been prepared in the same manner.—*Apotheker Zeitung*.

S. Chapireau's Cacheteuses & Cachets.



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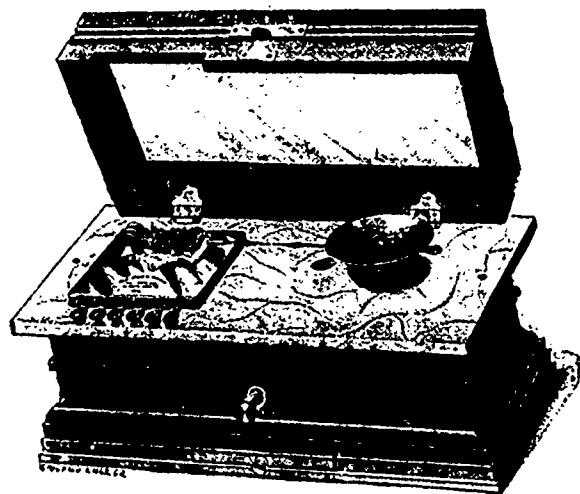
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Trade Notes.

Fire destroyed the drug store of C. Parker, St. John, N. B., on June 3rd.

George Thompson, druggist, Edmonton, N.W.T., has made an assignment.

Dubois & Primrose, druggists, Bridgetown, N. S., have sold out to S. W. Weare.

J. A. Hobbs has purchased the drug business of R. F. Greer at Morden, Man.

The firm of H. McDowell & Co., druggists, Vancouver, B. C., has been incorporated.

E. Scarlett, of Manitou, has purchased the drug stock of J. A. Hobbs, Pilot Mound, Man.

M. Banks, of Carman, Man., has moved to Winnipeg, and will open a drug store on the South Side.

J. F. Howard & Co., Winnipeg, Man., have been the successful tenderers for the supply of drugs to the Manitoba Penitentiary.

The drug stock of A. G. Orchard, Indian Head, N.W.T., was destroyed by fire June 25th. Insurance, \$1,000, on a stock of \$2,000.

A new drug store is about to be opened in Goderich, Ont., by J. A. Coombe, of Clinton. It will be under the management of Mr. Williams, of Toronto.

F. J. Hall is now sole proprietor of the Central Drug Store, Victoria, B. C., having purchased the interest of Geo. Mallory, who formerly managed the business.

F. X. Langelier and Gustavo Boulanger, doing business as "The Montreal Chemical Co.," have dissolved partnership. The headquarters are now at St. Johns, Que.

Amongst the recent graduates at the Optical Institute of Canada we find the names of Messrs. Hopper, of Cobourg, McFee, of Belleville, Welch, of Strathroy, and Bonewell, of Thorold.

Montreal Druggists' Association.

At a meeting of this society held in the Montreal College of Pharmacy, the following officers were elected.—

President—S. Lachance.

Vice-President—W. H. Chapman.

Treasurer—A. D. Mann.

Secretary—A. J. Laurence.

Executive Council—Messrs. Jos. Contant, H. R. Gray and B. E. McGale.

Evans—Cassils.

Mr. Alfred B. Evans, managing partner of the wholesale drug firm of Evans & Sons, Montreal, was married last month to Miss Agnes R. Cassils, eldest daughter of Mr. John Cassils, of Montreal. The wedding took place in Erskine church, which was most effectively decorated with flowers for the occasion. Amongst the numerous handsome presents, was a grandfather's clock which was presented by the employees of the Montreal and Toronto

houses. Mr. Evans and his bride left for England, and expect to be away about six weeks.

Montreal Notes.

Mr. D'Avignon, of Windsor, has a very sensible letter on the Pharmacopœia question in the last number of your Montreal contemporary. There appears to be a consensus of opinion amongst pharmacists in Montreal that a Canadian pharmacopœia would be premature, and would lead to unnecessary complications. Either the British or the United States Pharmacopœia would suit Canadian pharmacists very well, providing one or the other be made official by law in the whole Dominion, in which case, the new British, when published, would probably be most suitable.

An advertisement in the *Chemist and Druggist*, of London, of May 19th, over the name of the managing director of the Anglo-American Drug Company, London agents for Winslow's Soothing Syrup, states there is $\frac{1}{4}$ of a grain of morphine in each fluid ounce of the syrup. In view of recent prosecutions by the Pharmaceutical Society this authoritative statement will put a stop to the sale of the syrup except by duly qualified druggists.

The Montreal Druggists' Association held a meeting in the College of Pharmacy last week, and the members present were unanimous that the good work done by the Association should continue. Many present gave testimony to the advantage of having an authorized price list, and, although there were a few complaints of short-sighted neighbors having broken their promises, nevertheless, on the whole, the druggists of Montreal had adhered to the price list and were now reaping the benefit. A council was named to act with the President, Secretary and Treasurer, and Druggists generally were invited to send suggestions as to prices to any of the officers for consideration prior to the issuing of proof sheets of the new edition of the price book, which would be submitted to a general meeting as soon as ready. The nominal subscription of \$1 per year is now due and will be welcome as it will enable the Treasurer to pay for the list when published. It was hinted that one of the wholesale houses would probably desire to follow the excellent example of Messrs. Lyman, Sons & Co., who published the price list last year and presented it to the Association, thereby doing their best towards securing legitimate and uniform prices for retailers. Mr. S. Lachance was elected President for the present year in place of Mr. Contant, who received a vote of thanks for his valuable services.

B. E. McGale and John Nault are in the throes of expropriation just now. It is always a more anxious time with a pharmacist than with any other class of business men. It is a serious matter being turned out of one's stand, and corporations ought to pay well when ex-

cising their rights. Many pharmacists here have been expropriated during the last few years. We believe the first was the late John Gardner, when Notre Dame St. was widened, and it proved a serious blow to him. The rate of compensation is evidently made by the Commissioners on no settled principles, and the damages awarded vary considerably. When Mr. Gray was expropriated he was lucky enough to get possession of a good corner store on the same street some four months before his old stand was demolished. On the other hand, Mr. Clive was obliged to rent a temporary store on a side street while his part of Notre Dame St. was being widened, which must have been a great loss to him.

Dr. LaSalle Provost, who lately kept a drug store at the corner of Bouscours and Craig Sts., was married last week to Miss Skelly, a Montreal heiress. They left immediately after the wedding to spend their honeymoon in Europe.

Nova Scotia Notes.

Geo. V. Rand, of Wolfville, N.S., is putting up a handsome building, which he intends to use for a Post Office and Drug store. Mr. Rand hopes to get in his new quarters about September 1st.

Wm. Crowe of Crowe Bros., Truro, was in the city the other day, looking as bright as usual. Mr. Crowe reports business good in his town.

R. H. Tremaine, of Amherst with a party of friends is making a bicycle tour of the province.

S. N. Weare, formerly at Cochrant's Drug store, Kentville, has taken charge of the business at Bridgetown, formerly owned by Drs. DeBlois & Primrose.

Geo. McDougall of Kentville, who has been spending about a year in Massachusetts, has returned to Halifax, and remains here for the heated term.

Mr. and Mrs. Frank C. Simson, Halifax, who have been making a tour of the western provinces, returned last week, both looking wonderfully well after their trip.

Hector McKinnon and Ed. Sherburne Blaikie, have lately passed their examinations successfully before the Pharmacy Class of Dalhousie College, and have been granted Diplomas. Under the new regulations, these diplomas entitle them to registration in the Nova Scotia Pharmaceutical Society.

The annual meeting of the Nova Scotia Pharmaceutical Society was held on June 28th. There was little of importance transacted at the meeting, owing to the Association being in such thorough working order. Funds are reported in a good state. Prosecutions for infringement of the Act during the year were vigorous and successful.

The Council elected were Frank C. Simson, A. H. Buckley, W. F. Odell, Geo. Burbidge, J. H. Angwin and L. J. Mylius.

The following is the price list of candi

dates at the recent Pharmaceutical Association held in Halifax:—Hugh E. Calkin, Jas. W. McPartridge, William Hines, Clifford A. Mumford, William H. Moody, Edward T. Power, Leonard Murray, John D. Tuppen.

New Brunswick Notes.

On the 19th June the N. B. Pharmaceutical Society held their annual meeting in St. John. After the meeting was over the Council met to elect officers for the ensuing year. R. E. Coupe, St. John, was elected President, M. V. Paddock, Vice-President, R. W. McCarty, Registrar, and H. J. Dick, Treasurer. Council, Winslow Tilley, St. Marys, C. H. Fairweather, Sussex, W. B. Smith, St. John, W. H. Mowatt, J. Walter Clarke, C. W. Parker, Struan Robertson, George A. Moore. In the afternoon the members of the Society were taken out to Ben Lomond on the tally ho and buck board, where, with the visiting friends, they were entertained by the St. John druggists. After partaking of a substantial repast, the usual toasts were proposed, and songs, recitations, etc., given. At about 11 p. m. the toast, "To our next Merry Meeting," was drunk, hands all round, followed by the toast of "our host and hostess," Mr. and Mrs. Richards, after which the party broke up and returned home, having spent a very pleasant day.

Messrs. Thomas Wran, P. J. Donohoe and F. A. Sharpe, all of St. John, passed the final examination held in St. John on June 12th.

Early in June the building in which Chas. W. Parker had his drug store took fire, cause unknown. His stock was much damaged by smoke and water. The building was four stories, brick. The two upper flats, occupied by a wholesale dry goods firm, were almost entirely destroyed by fire, and the roof burnt off. Mr. Parker's stock was valued at about \$5,000, insurance about \$2,500. Mr. Parker has temporarily moved his business to Prince William street. He will return again to his old stand when the repairs on the building are completed.

Pharmaceutical Examinations.

The quarterly meeting of the preliminary Board of Examiners of the Pharmaceutical Association of the Province of Quebec was held in the Montreal College of Pharmacy, 595 LaGauchetiere street, and Laval University, Quebec, on Thursday, July 5th, when thirty-six candidates presented themselves in Montreal and seven in Quebec, and of these, the following passed in order of merit, namely:—J. Vaschereau, J. O. Mathieu, A. Arcand, G. Richard, V. F. Forges, O. Robert, P. J. Taylor, A. Lord, O. Thibault, O. H. Tansley, G. P. Plamondin, T. E. Gagner, J. A. Gayer, and L. Achille Roy. The following candidates passed on all subjects but arithmetic, namely:—Percy E. Jones, and E. Jacotel, who will have to present

themselves for that subject in October next. The remainder of the candidates are referred back for further study, and will be required to take up all subjects should they again present themselves. The subjects of the examination are English and French Grammar, English and French Translation, Latin, Arithmetic, History and Geography.

The Preliminary Board of Examiners are Professors A. Leblond de Brumath and Isaac Gammell, with A. La Rue, of Quebec, as Supervisor of Examinations for Quebec City and district.

The next examination will be held on the 4th October, and candidates are required to give ten days' notice of their intention to present themselves. This rule is strictly carried out.

Notes from England.

(From our own Correspondent.)

London, June 27th, 1894.

In several letters recently I have drawn attention to the conspicuous advantages which pharmacists possess over other trades and professions in introducing specialties or proprietary preparations. I suppose there is hardly a chemist in the Dominion, any more than here, who does not possess one or more special preparations, which, by judicious advertising, might develop into a big and profitable addition to his ordinary business. Our trade journals have been placing the matter plainly before the trade, but the great difficulty which presents itself first of all is the preliminary outlay. To what extent is a man justified in sinking capital over an experiment that may involve failure and pecuniary loss? This is always the most difficult question to answer and must depend upon the view that a man takes as to success. Let it be clearly understood that to obtain a general sale of a proprietary preparation all over the country in a short space of time is a very difficult and arduous task. The number that are launched yearly and yet fail to establish themselves is a convincing proof that the struggle is greater than it used to be. Briefly, the reasons for this may be stated as follows:—1st. Wholesale and retail druggists alike have so frequently been bitten by the ephemeral career of some of these comet-like preparations that they always look askance at a new proprietary and refuse to stock them until obliged. This is an important point which should be borne in mind and which everyone can verify. 2nd. The introduction of a new remedy is daily becoming more difficult as nearly every field is occupied by some well-established *specialite* which it is almost impossible to shift. 3rd. The public require a certain assimilation-period before they are induced, no matter the advertising, to patronize an hitherto unheard of remedy.

These are the matters which naturally prevent many a druggist from running his favorite cough-mixture, corn solvent or embrocation for rheumatism, &c., as a

specialite outside his immediate connection. But although these reasons, as above detailed, are sufficient to prevent a too ambitious start, they do not seem adequate to deter any one from adopting a modest plan for extending the sale of his proprietary preparations.

The superior advantage of a chemist is in the starting-point. Around him he has a connection already accustomed to his name and relying upon his judgment in many a trivial ailment. Let him take the best of his proprietaries, and, of course, the one that penetrates a comparatively new field will, all things being equal, probably be the best. It is advisable to register a name and trade mark, for when imitations commence, these will be invaluable. A plentiful supply of the remedy should be stocked in a conspicuous part of the shop and the window occasionally filled with it. A circulation of a pamphlet or hand-bill from house to house two or three times a year, according to the season and nature of the preparation, is a cheap and effective form of advertisement. Special arrangement should be made for an occasional display in the local newspaper—in fact, take every opportunity of extending the local acquaintance of your article. The larger and more ambitious work may well come after experience has been gained in this manner.

Of all forms of advertising, newspaper advertising is the most expensive, as it is absolutely essential that the advertising should be consistently carried on. This it invariably the reason for success given by all big *specialite* proprietors, although their methods are often very different. Thus Eno continues the old prose method of advertising that was popular 20 years ago. Pears have always adopted the pictorial method. Some constantly change their illustrations and reading matter, like Guy's Tonic and Frazer's Tablets. Others, like Carter's Little Liver Pills and Owbridge's Lung Tonic, have only had one or two advertisements which they have used right through. But each and all constantly maintain their advertisements and are continually seeking new media by which to reach the masses.

One point is worth remembering by a druggist who advertises a *specialite*. Every dollar spent is indirectly spent in pushing his ordinary business as well. This is an important fact that should carry a good deal of weight.

In my letter last month, I mentioned some of the veterinary work and remedies which druggists might well develop. We have just had the annual Veterinary Congress held in the rooms of the Society of Arts, in London. The attendance was small and the exhibition of drugs and instruments in the annual museum looked meagre beside the similar affair at the medical meetings. But I was struck with the fact that specialties are evidently very largely employed by the veterinary profession as they are by the medical. Each of the wholesale druggists exhibiting had quite a number of these, and un-

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**WILSON'S
FLY PADS**



Nothing else kills
FLIES
in such quantities.



No other Poison has
ever had such a sale in
Canada.



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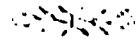
Dear Sir,
The following may be of use to you: "A customer of mine, who keeps a butcher shop in this town, bought a 10-cent package of your Fly Pads from me and in ten days he led over A BUSHEL MEASURE OF FLIES." Yours truly,
F. G. SANDERS-D

IT WOULD TAKE OVER
300 SHEETS OF STICKY PAPER
TO HOLD THIS BUSHEL OF FLIES


FLY PADS
SOLD BY ALL DRUGGISTS

YOU CAN RECOMMEND

**WILSON'S
FLY PADS**



But beware of imitations which are always unsatisfactory to customer and dealer alike.

FLY PADS
are sold by all Wholesale
Druggists.

Archdale Wilson & Co.

WHOLESALE DRUGGISTS,

Manufacturing Chemists and Pharmacists,

HAMILTON, ONT.



OFFER to the Drug Trade only, a full stock of Crude and Staple
Drugs, Fine Chemicals, Drug Sundries, Perfumes, Toilet Articles,
Glassware, and every requisite of the Modern Drug Store.

Sole Canadian Agents for 

ARTAUD'S PERFUMES.

FREDERICK STEARNS & CO.

ESTABLISHED 1855 (39 YEARS.)

MANUFACTURING PHARMACISTS,

DETROIT, MICH.

WINDSOR, ONT.

NEW YORK.

WE OFFER to the trade full lines of the following Standard Pharmaceutical Products of our own manufacture, as well as many specialties not classified under any of the general heads, but fully described in our PRICE LISTS and CATALOGUES, any of which will be mailed, post-paid, on application.

ASSAYED FLUID EXTRACTS—Standardized and of uniform and unvarying strength.

SOLID EXTRACTS Prepared with great care at a low temperature to insure the resinous and volatile principles from injury in manufacture.

ELIXIRS, WINES, TINCTURES, OINTMENTS and CERATES.

PILLS—SUGAR COATED, of all tints. **GELATINE COATED**, extremely soluble with continuous coating, no pin holes.

(We have perfect facilities for turning out Pill work of all kinds, and solicit correspondence.)

CONCENTRATED LIQUORS; DIGESTIVE FERMENTS; Lozenges, Eff. Granular Preparations.

CASCARA SAGRADA—In form of Fluid and Solid Extracts, Cordials, Pills, and Granules.

PERFUMES—Hunkerehief Extracts, Toilet Waters, Sachet Powders.

SPECIALTIES.

STEARNS' WINE OF COD LIVER OIL WITH PEPTONATE OF IRON.

An entirely new and original preparation which contains 25 per cent. of pure Cod Liver Oil, as represented by its active principles and alkaloids. Modern investigation has proven that the value of Cod Liver Oil as a medicinal agent is not due simply to the fact of its being an oil, but to the valuable active principles which it contains. Each fluid ounce of the Wine contains four grains of PEPTONATE OF IRON, a readily assimilated and valuable form of Iron, being partially predigested and free from styptic properties. In pounds, \$8.00 per dozen.

STEARNS' CASCARA AROMATIC. (THE ORIGINAL)

A fluid extract of prime and selected two-year-old Bark, which is sweet in taste instead of being bitter, as is the ordinary fluid extract, powerful yet gentle in effect, and in addition does not gripe. An ideal laxative, prescribed by physicians everywhere. Price, \$1.20 per pound, not more in cost than ordinary bitter fluid extracts.

We will be pleased to mail samples of our Specialties to any druggist or physician, on request.

DIKE'S PEPSIN

Is superior because of its high digestive power (1:200 U. S. Ph. 1894). Its odor is sweet and wholesome. It is soluble, and can be dispensed in prescriptions in solution. It retains its activity indefinitely. It is free from peptone and other bodies which attract moisture and make a pepsin gum up. On this account it can be combined safely with powders without special precaution.

To recapitulate: If a reliable, odorless, sweet, beautiful, non-hygroscopic Pepsin in scales, which is reasonable in price, of full strength of the U. S. Ph., is wanted, Dike's will fill the bill, and is the only pure Pepsin that will meet all these requirements.

Price, 75 cents per ounce.

STEARNS' INSTANT HEADACHE CURE

Is the best and most satisfactory preparation of the kind on the market. Sell on sight and makes customers wherever sold. \$1.50 per dozen. Kept in stock by all leading wholesale houses.

"THE BEST OF AMERICAN."

PLANTEN'S CAPSULES

Known as Reliable over Half a Century.

The Pioneer Capsule House of the United States.

H. PLANTEN & SON, } ESTABLISHED 1836 { NEW YORK,

—MANUFACTURERS OF—

Soluble Hard & Elastic Soft CAPSULES.

Improved French Pearls and Globules.

SOME SPECIALTIES.

Sandalwood, Copalva, Erigeron, Creasote, Comp. Cop and Cub, Terchene, Comp. Sandal, Iodide Ethyl, Wintergreen, Apioi, Male Fern, Etc.

Planten's Comp. Cop & Cub Capsules,

(Planten's Celebrated Black Capsules.)

and PLANTEN'S SANDAL CAPSULES

Have an ESTABLISHED WORLD REPUTATION for UNIFORM RELIABILITY.

IMPROVED EMPTY CAPSULES

For Powders, 8 Sizes. Liquids, 8 Sizes. Rectal, 3 Sizes. Vaginal, 9 Sizes. Horses and Cattle (Oral) 6 Sizes. Horses and Cattle (Rectal) 3 Sizes.

CAPSULES FOR MECHANICAL PURPOSES.

Capsules to order. New Articles and Private Formulas a Specialty.

Specify **PLANTEN'S CAPSULES** on all orders.

Send for Samples and Formula Lists. Sold by all Druggists.

Beware of Substitution of Inferior Brands.

RADLAUER'S ANTISEPTIC PERLES

Of Pleasant Taste and Fragrance, Non-poisonous and strongly Antiseptic.

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

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

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

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

METHOD OF APPLICATION:

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

MANUFACTURED BY

S. RADLAUER, - **Pharmaceutical Chemist,**

BERLIN W., GERMANY.

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

commonly remunerative they must be. There were antiseptic dressings for mange, lotions for cracked heel, ointments for diseased hoofs, fever powders and drenches, dog pills, compound turpentine liniments for bruises, blister ointments, tonic mixtures for horses and cattle, etc. Large blocks of curacoa aloes were exhibited and also some in gourds. As I mentioned before aloes occupies the position in veterinary therapeutics that opium does in medical practice. Messrs. Arnold & Sons had a special exhibition of instruments, some of them fearful and wonderful to look upon. The other exhibitors included Corbyn, Stacey & Co., Willows, Francis & Butler, Wyley's & Co., Hewlett & Son, Jeyes' Sanitary Compound Co., Muckey, Mackey & Co., etc.

Emol-Kelcet is the euphonious title of Messrs. Burroughs, Wellcome & Co.'s latest specialty. It is the name given to a dusting powder of exceptional fineness and possessing several unusual characteristics. The basis appears to be stearite or soapstone with some armenian bole to color it a flesh tint. There is also some purified tale or similar absorbent material present. It has received high praise from medical quarters and is put up in tasteful tins with gilt labels. It is specially recommended as a dusting powder in urticaria, pruritic affections and eczematous diseases. From a dermatological point of view, it is interesting as apparently alkaline enough to remove the epidermis when made into a paste and laid on the skin for a time. The name appears to me to be another addition to a rather long list of Messrs. Burroughs, Wellcome & Co.'s selecting which are, unfortunately, not easily remembered or their meaning clear. *Emol* is plainly a contraction of the word Emollient; but *Kelcet* would appear to be more suitable for an insect powder than a toilet preparation.

A new line in lozenges has just been introduced by Messrs. R. Gibson & Sons, of Manchester. The tablets are similar to the ordinary cream of tartar and sulphur ones but contain, in addition, the equivalent to a small dose of the compound decoction of sarsaparilla. This combination is claimed to be a great improvement, and, in the summer months, the consumption is proving to be very large and still increasing.

Gelatin.

Gelatin, in a dry state, is a hard, brittle substance; it is semi-transparent. The finer sorts are almost free from color, but the lower grades have a yellowish tint. When dry, gelatin, if placed in cold water, absorbs about forty per cent. of moisture, but is insoluble until heated.

Gelatin is produced by the solvent action of high pressure steam upon the skin and bones of animals, and the product—gelatin, glue or size—depends upon the selection of materials, and the temperature to which the solutions are exposed, degree of clarification attained, etc. Gel-

atin is best extracted from bones by the combined action of steam and a current of water arranged to trickle over the crushed fragments in a suitably constructed apparatus. The crushed fragments are subjected to a steam blast at a temperature of 223 degrees F., and at a pressure of about thirty pounds to the square inch. The solution obtained is purified by melting at 120 degrees F., and straining (in some processes the aid of albumen is resorted to in this last operation).

From skins the "brilliant gelatins" are prepared thus: The hides and skins are cleaned with water, and then cut into small pieces, and crushed into pulp by machinery. The pulp is passed between rollers, next mixed with water, and then heated from 150 degrees F. to 212 degrees F. When a fine and pure product is desired, the solution is mixed with a small quantity of ox-blood at a temperature not exceeding 170 degrees F. and heated. The albuminous matters in the blood become coagulated and rise as a scum, carrying with them the impurities. The heat is then withdrawn, the scum removed, and the purified liquid allowed to settle and run into coolers to congeal and dry. It is evaporated in vacuo to avoid undue exposure to heat.

Much of the French gelatin used for confectionery and culinary purposes is prepared from bones by the action of acid. The bones employed are placed whole in vessels containing a mixture of one part strong hydrochloric acid and four of water. They are allowed to remain in the acid liquid for about seven days, during which time all the earthy matter becomes dissolved, and only the animal, or gelatinous, parts remain. This is called osseine. While this process is going on, great care is taken to keep down the temperature of the place where the vessels are kept, for if too much heat is allowed, there is a risk of the materials becoming putrid. After a week the mass is removed from the liquid and dried. It is next digested in boiling water, at a temperature of 212 degrees F., until dissolved and converted into gelatin. When the process is ended the solution of gelatin is strained into a clean vessel, allowed to become solid, and is then cut into blocks, the large pieces being afterwards divided into thin, transparent plates or strips. Sometimes the fluid is removed from the pans in which it is made while boiling, and is poured into a vessel surrounded by cloth, or some other non-conducting substance, in which it is allowed to slowly cool, depositing its impurities as it does so. During the boiling of the macerated bones, some fat usually rises to the surface of the liquid, this is collected and sold for various purposes.

The red, or Russian gelatin, as it is sometimes called, is simply gelatin colored with cochineal, and dried in small thin sheets. It may be used, precisely the same as any other gelatin. As the demand for it is light it is not universally held in stock by dealers.

The Chinese and Japanese manufacture a very powerful gelatin from a variety of seaweed, gathered on various parts of the coast of those countries. The weed is called by the natives tengusa and the gelatin product obtained from it is hai thuo. The latter is prepared in various ways: in thin tablets, in bundles or thin thread like strips, and also in sheets as thin as paper. By soaking in cold water for twelve hours it becomes jellyed, and in so doing absorbs an enormous quantity of the moisture. A very valuable quality in this gelatin is that it is not affected by any change of climate; jellies made from it will be as good, and relatively firm, in a temperature of 160 degrees F. as in that of 40 degrees F., a fact which makes it a very excellent article for exporters of jams and jellies. It is very largely used by manufacturers of table jellies and concentrated jellies, and for fortifying weak jams. There cannot be a doubt that where good and pure qualities of gelatin are used it forms a nutritive and useful article of food, besides being a valuable and economical ingredient for the purposes of the confectioner and pastry cook.—*Confectioners' Union.*

Doses for Pharmacists.

H. M. WHURPLEY, PH. G., M. D.

Read before the Missouri State Pharmaceutical Association, June, 1894.

The calling of the pharmacist is in responsibility on a parity with its ancient, honorable and sacred history. His duties as a servant of the public are many, and their number does not seem to diminish with the advance of time and tread of new inventions. It is not my purpose to remind you of the individual amenable duties or write an essay on the vocation of the compounder of prescriptions. What I crave is your attention to but one feature of the pharmacist's life. It is one which renders his vocation at once grave and responsible. I refer to the fact that a druggist must compound prescriptions containing, and sell over the counter medicines constituting, agents potent to the extent of taking human lives. What adds to the seriousness of the occupation is the innocence of the customer and patient, who are in no position to judge of the nature or power of the substances handled. The confident customer, trusting the knowledge of his physician and assured of the ability of the pharmacists, will take a prescription containing half-grain doses of strychnine with the frankness of a friend eating at a social dinner. So it is with the customer who calls for oxalic acid when he wants tartaric acid. To him

"A rose by any other name would smell as sweet," and "oxalic" does not startle his caution unless the pharmacist mentions the dose and lethal action of the poison.

How important it is, then, that a pharmacist has at his wit's end the dose of each remedy. True, the list of remedies is too long for mortal memory, but those

doses not in mind must be within ready access to the prescription case and dispensing counter. Never guess at a dose; if in doubt, look it up and see to it that reference books are always convenient for this purpose.

The word "dose" is a short combination of letters coming from the Greek word meaning "to give." In our minds and practice must be associated not only the idea of giving, but also that of the "amount" given. It is of this quantity that constitutes a dose and the conditions that increase or decrease the amount to be taken that I propose to speak.

From the dogmatic manner in which doses are stated in text and reference books we are led to believe that a dose is a dose, and that we can depend on the size with mathematical exactness. Far be this from the physiological and therapeutic truth.

The dose of a medicine is the amount of the substance which exists in the blood or comes in contact with and acts upon the tissues at one time. This is the true meaning of the word when considered from the standpoint of pharmacodynamics. A more common definition and one that applies to the everyday use of the word would be that "a dose is the quantity of a medicine required to produce a given effect and is usually given at one time." A still more common application of the word is to consider the amount of a remedy given at one time to be a "dose." Thus it is considered by the laity. The pharmacist, however, should consider the dose as the amount required to produce an effect. This leads him to read the directions on the prescription and see how often as well as how much is to be taken.

The size of the dose is regulated not only by the frequency of the administration, but by several other conditions worthy of our consideration.

The weight of the patient should be taken into account, for the result of the action of a remedy is in proportion to the weight of healthy tissue with which it comes in contact. Thus, one grain of a medicine will, other conditions being equal, produce the effect on a person weighing 100 pounds that will result from a two grain dose on a 200 pound individual. Patients with dropsy, tumors or excessive fat are not amenable to this rule. The average man weighs 143 and the woman 121 pounds. Women require smaller doses than men, not only on account of their being less in weight, but also from a greater susceptibility to the action of medicine.

The method of administration affects the size of the dose. We give but one-half or one-quarter as much hypodermically as by mouth, while enemata require about twice the ordinary dose. It has been found that different tissues of the body take up medicine with varying rapidity, and the serous membranes are most active, intercellular tissue next and mucous membranes next. The size of doses should be in the ratio of this absorption. Liquid preparations are readi-

ly absorbed when compared to powders and pills. This calls for smaller doses of tinctures and fluid extracts than of powder or pills of the same remedy.

Familiarity breeds contempt for the power of medicine, as is evidenced by the excessive doses of morphine that an habituate will take without serious results. Race has its peculiarities, and only about half the ordinary dose is required by the Indians, Chinese, negroes and other dark and yellow races. Some claim that blond Anglo Saxons require larger doses than the brunettes.

The dose of the same remedy varies greatly with the object for which it is administered. Thus, ipecac in large doses is an emetic, while smaller doses will cure obstinate vomiting due to depression. The effect on dose of the age, purity and strength in the active principle of drugs requires no more than mere mention to pharmacists.

New remedies are sometimes given in doses that time and experience revise by either increasing or decreasing the size.

The minim or drop is sometimes used as equal measures when designating doses. The drop, unless made under proper conditions of temperature, size of container, nature of orifice from which drop is passed, quantity of liquid in container, and rapidity of dropping, will vary greatly with the same liquid. The relative size of drops of different liquids is shown by tables to be found in most standard works of reference.

The age of the patient plays such an important part in the regulation of the size of the dose that many rules have been devised to estimate the approximate dose in relation to age. Perhaps Dr. Young's is as safe and generally used as any. It is as follows:

Add twelve to the age of the child and divide the age by this sum. The quotient is the fraction of an adult dose to be administered. Thus: A child two years old would require 2 plus 12, equal 14; 2 divided by 14 equals one seventh. If the adult dose was seven grains the dose for a child of 2 years would be about one grain.

Old age again calls for smaller doses, but the requirement is not as generally respected as in childhood.

A table of doses is given below which will assist in determining the amount for different ages:

Age.	Dose.	Grams.
1 month	3 grs.	0.200
3 months	4 grs.	0.250
6 months	6 grs.	0.400
9 months	7 grs.	0.450
1 year	9 grs.	0.550
2 years	10 grs.	0.650
3 years	12 grs.	0.750
4 years	15 grs.	0.950
5 to 6 years	20 grs.	1.250
7 to 8 years	30 grs.	2.000
10 to 12 years	40 grs.	2.500
13 to 15 years	45 grs.	3.000
18 to 20 years	50 grs.	3.250
20 to 50 years	1 dram.	4.000

Age.	Dose.	Grams.
50 years	50 grs.	3.250
60 to 70 years	45 grs.	3.000
80 to 90 years	40 grs.	2.500
100 years	30 grs.	2.000

Aside from these influences on the size of the dose the physician must keep in mind the condition of the stomach, personal idiosyncrasy, temperature, temperament, climate, season, time of day, effects of disease, city or country patient, passions under which the patient may be laboring and many other controlling conditions.

I have endeavored to illustrate that no "rule of thumb" can be applied to dosage, so at best our posological tables are suggestive rather than dictatorial. It is unfortunate that we have no absolute guide, but such is the fate of the professional man. Study, consideration and the exercise of judgment are required.

Although my paper may have shaken your faith in dose tables I trust it has increased your interest in pharmacology.

Turmeric-Growing in Bengal.

Turmeric is mostly grown in Bengal on soil containing a mixture of two-thirds of sand and one-third of clay. Stagnant water is always injurious to it, and high, well-drained land is therefore generally selected for its cultivation. The best crops are produced on land of loose texture, which has been lying waste for ten or twelve years. The plants are grown on ridges from 8 to 24 inches apart. Harvesting takes place in January and February. In the Cuttack districts the growers do not allow the turmeric to remain in the land for more than a year, but in other parts of Bengal the outturn of the second year is supposed to be superior in quality and quantity to the first year's harvest. When the rhizomes have been dug out, they are cleared of mud and their rootlets removed. They are then boiled in water in earthen pots, the mouths of which are carefully closed, a very small opening being left. When the water oozes out of this opening, the turmeric is taken out and dried in the sun for eight or ten days. It is then fit for the market.—*Chemist and Druggist.*

To REMOVE ODORS FROM ALENHICS.—To remove from alembics and stills the odors of essential oils, aromatic waters, etc., ammonium carbonate is highly commended. Add a few ounces of it to the water used for cleaning, and let solution remain in contact from ½ to ¾ of an hour.

SITUATIONS WANTED.

POSITION wanted by young man with five years' experience. Graduate O. C. P. Good references. Address—"G. A. S." Box 95, Fergus, Ont.

SITUATION WANTED as Assistant Manager, by a young man with over five years' experience. Accurate dispenser; A. 1 references; graduate O. C. P., Class '94; taken Phm. B. diploma of Toronto University, also sound operator. Address—Box 30, Milton, Ont.

JOHNSON'S BELLADONNA PLASTER.

JOHNSON & JOHNSON—New York.

HAS BEEN ADOPTED BY OVER 400 HOSPITALS AND MANY THOUSANDS OF PHYSICIANS AS THE STANDARD OF EXCELLENCE—AS GIVING MORE IMMEDIATELY PRO-NOUNCED AND UNIFORM ACTION THAN ANY OTHER KNOWN.

Order of your wholesale house and specify
JOHNSON & JOHNSON.

Prices and all information on application to
THOS. LEEMING & CO.,
25 St. Peter St., MONTREAL.



—THE—
LADIES'
SILVER
CACHOUS
(Rose Flavour.)

"Impart a Delightful Odour to the
Breath."

Put up in the Pretty, Novel, and Convenient Pocket Bottle.

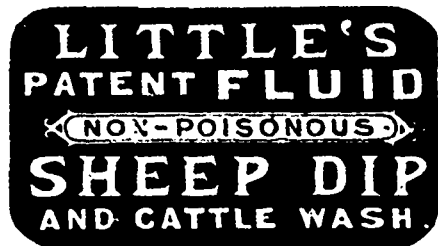
IT WILL PAY YOU TO STOCK THIS
ATTRACTIVE ARTICLE.

ALL PASCAL'S SPECIALTIES

MAY BE OBTAINED FROM

ANY WHOLESALE HOUSE.

J. PASCAL, LONDON, S. E.



FOR THE DESTRUCTION OF TICKS, LICE, MANGE, AND
ALL INSECTS UPON SHEEP, HORSES, CATTLE,
PIGS, DOGS, ETC.

Superior to Carbolic Acid for Ulcers, Wounds, Sores, &c.

Removes Scurf, Roughness and Irritation of the Skin,
making the coat soft, glossy and healthy.

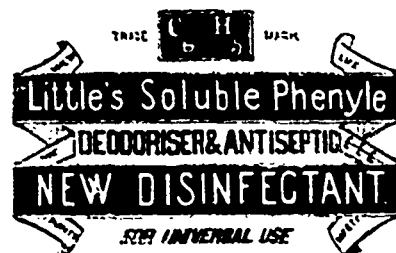
Removes the unpleasant smell from Dogs and other
animals.

"Little's Sheep Dip and Cattle Wash" is used at the Dominion
Experimental Farms, at Ottawa and Brandon; at the Ontario Industrial
Farm, Guelph, and by all the principal Breeders in the Dominion—and
pronounced to be the cheapest and most effective remedy on the market.

27 17 Gold, Silver and other Prize Medals have been awarded to
"Little's Sheep and Cattle Wash" in all parts of the world.

Sold in large Tins at \$1.00. Is wanted by every Farmer and
Breeder in the Dominion.

ROBERT WIGHTMAN, DRUGGIST, OWEN SOUND, ONT.
Sole Agent for the Dominion.
To be had from all Wholesale Druggists in Toronto, Hamilton & London.



CHEAP, HARMLESS AND EFFECTIVE.

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

NON-POISONOUS AND NON-CORROSIVE.

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

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

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

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

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

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

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

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

LEWY'S STAINLESS

PACKING

CAMPHOR

FOR THE PROTECTION OF

CLOTHING,
WOOLENS, *
FURS, *
* CARPETS,
FURNITURE,

—AGAINST—

MOTHS AND INSECTS.

Wholesale Agents for Canada.

The London Drug Co.

LONDON, ONTARIO.

Bole, Wynne & Co.

Wholesale Druggists

—AND—

MANUFACTURING CHEMISTS.

We would be glad to correspond with Druggists in Western Provinces when in the market.

OFFICE AND WAREHOUSE,

WINNIPEG, MANITOBA.

**ONTARIO -
VACCINE
- FARM.**

Pure and Reliable Vaccine Matter always on hand. Orders by mail or otherwise promptly filled.

10 Ivory Points, \$1.00; 5 Ivory Points, 65 cts.; single Points, 20 cts. Discount to the trade.

Address all orders—VACCINE FARM,

A. STEWART, M. D. Palmerston, Ont.

KENNEDY'S

Magic Catarrh Snuff

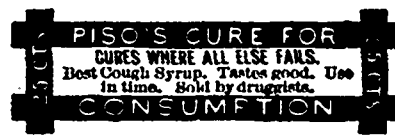
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This preparation has been proved to be a POSITIVE CURE for

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 burning 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 1859.

Pharmaceutical Chemist

22 St. Lawrence Main Street,

(Corner of LaGauchetiere)

MONTREAL.

Major's Cement.

ESTABLISHED 1876.

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

For repairing China, Glassware, Furniture, Meerscham, 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."

The Practical Value of a Drug Journal.

ALBERT N. DOERSCHUK, PH. G., KANSAS CITY, MO.

In determining the practical value of a drug journal, it will be most convenient to first ascertain what features make a drug journal practically valuable, and then to draw our conclusions from such abstract consideration of the subject.

The task of treating this matter from an impartial standpoint is no light one. Editors of many prominent drug journals seem to differ materially on certain salient points concerning the running of a druggist's paper, and this personal rivalry creeps out in the columns over which they preside, making it almost impossible to estimate the merits of these journals from a common point of view. It will be convenient, therefore, to determine the practical value of drug journals from the expectations druggists can reasonably entertain of them, as well as from the actual merits common to the higher class of these journals.

Druggists follow a peculiarly international profession. In the conducting of their affairs they are not hemmed in by local prejudices or customs, are not dependent on local resources, and are not affected by State or national lines except in times of social disturbance. By the resources at their command they profit by the labors of men in all parts of the globe. An original success achieved by pharmacists or chemists in Paris or Berlin to-day, becomes an experiment in New York to-morrow; being successful there, the result is flashed over a thousand wires and in a few hours a continent is informed of the achievement, and in an incredibly short time the world is profiting by the results.

Drug journals exhibit a pre-eminently practical value when they confirm and minutely report and explain such developments resulting from scientific research. Druggists cannot afford to be behind the times, and by placing dependence in these mediums, they are enabled to benefit their patrons by recent progress made in their profession.

Next to the attention given general progress, the practical value of a drug journal is largely embodied in its editorial department. Editorial writing has indeed become a fine art. A man must have a vast amount of skill, experience and general knowledge before he can begin to meet the demands made upon an editorial writer of a drug journal. From this department are promulgated from time to time, as occasion dictates, those unwritten fundamental laws that make pharmacy a profession. An editorial writer is generally conversant with the various phases of pharmaceutical affairs, and from his ripe judgment and the resources at his command, professional questions of vital importance are best decided. He is largely responsible for the plans and ideas put into execution at

the various association meetings, for by the influence of his pen necessary innovations are popularized, legitimate schemes are developed, and professional pharmacy is encouraged. In this department fakes have found their death, cranks have been permanently discouraged, and petty schemes put to shame. Here the druggist finds well-weighed thoughts on the proceedings of pharmaceutical bodies, and comments on general topics most profitable to his interests. He finds views that are at once broad and conservative, progressive and cautious, reasonable and always professional.

The practicability or real merit of new plans and plausible suggestions can be accurately determined only when they have been put into actual operation and their direct results are at hand. It is for this reason that original communications to drug journals are always of especial interest. They set forth the success or failure of boasted schemes and experiments, and bear the marks of authority because they are unprejudiced reports of results arrived at by actual experience. By paying attention to these communications, practical druggists often profit by the trials of others.

There is among pharmacists a deep-rooted feeling of mutual sympathy which manifests itself towards all the members of their profession. Our sympathies are affected by the successes or misfortunes that come to the druggists in various parts of the country, much as if we experienced the same conditions, and for this reason personal news given in drug journals is read with interest. In this connection, however, it may be said that commonplace personals involving small details, are especially tiresome and disgusting when they appear in pharmaceutical literature.

We have yet to consider the prices current and advertisements given in every well-regulated drug journal. These features are most convenient and valuable to the thrifty druggist; from the one he ascertains the fluctuations in prices of drugs, and, incidentally, any advantages his wholesaler may be taking of him, and from the other he determines by what new features he will profit, or add to the attractiveness of his place of business. There are those who argue that to have advertisements in a drug journal detracts from its practical value and places it upon a mercenary basis; this, however, is hardly true, for in our successful journals great care is taken not to give prominence to trade features at the expense of professional interests. And, moreover, among the details necessary to support a drug journal, sinews of war figure quite extensively. It is well to bear in mind that these valuable journals are placed at so small a price, within the easy reach of all druggists, largely because advertisers are willing to part with goodly sums of the necessary evil in return for the privilege of communicating with the drug trade.

To conclude, then, the practical value

of a drug journal is embodied in its ability to keep the modern druggist informed as to chemical and pharmaceutical progress, the transactions of pharmaceutical bodies, interesting drug news, fluctuations in prices of drugs, the general movements in drug centers, and trade features by which he can profit. Many journals do this remarkably well and we can easily be proud of them. That a few are still behind the times and are continually croaking verbose negations and pessimistic cant is a fact exceedingly to be regretted.

The live original drug journal is of the utmost practical value to druggists of to-day, and it is a constant instructor and guardian of the modern pharmaceutical profession.

What is a Poison?

ALBERT N. DOERSCHUK, PH. G., KANSAS CITY, MO.

Read before the Missouri State Pharmaceutical Association, June 15th, 1891.

One of the remnants of the dark ages to which many people of the present day still cling with great tenacity, is the use of the word *poison* in designating such substances as arsenic, strychnine, corrosive sublimate, and the many others that cause serious effects when absorbed by the human system in comparatively small quantities.

The English language affords scarcely a word that has caused so much diversity of opinion respecting its real meaning as has this word "poison." As might be expected the views on this subject maintained by professional men differ greatly from those held by the laity. Quite as marked, however, are the differences in opinion prevailing among the professional men themselves. In courts of law, for instance, the defendant in cases of murder by poisoning has been known to escape on technical grounds arising from wrangles among medical witnesses as to what really constitutes a poison. In law an adequate definition of this word is scarcely ever prescribed for the guidance of authorities, and many have been the inconveniences, not to say difficulties, arising on this account.

All persons have well fixed individual opinions as to whether this or that substance is poisonous, but the fact that the same substance can be turned to value and use in its proper relation to man does not seem to bear much weight with them. Thus, certain people are very fond of mushrooms and know full well that the genuine article cannot possibly be injurious, while others insist that this fungous growth is poisonous under all circumstances, and would not think of touching it, even though it is a nourishing food in constant use. In some localities people eat pokeberry pie and think no more of it than of drinking water, while in other places these berries are supposed to be fraught with all manner of poisonous principles, and their

proximity is dreaded. The general prevalence of the impression that substances like arsenic or strychnine are deadly poisons under all circumstances, further illustrates how firmly the masses hold to such unwarranted prejudices. Many people hold up their hands in holy horror when they learn that their physician has prescribed these medicinal agents for them.

Two distinct schools have naturally developed among those who differ as to the correct meaning of this word "poison."

The one holds that a substance only becomes a poison when, by its innate chemical nature, it causes impairment or destruction of function.

The other asserts that only a certain fixed class of substances, such as hydrocyanic acid, corrosive sublimate, morphine, and others that are capable of causing serious effects when absorbed by the human system in comparatively small quantities, can be termed poisons; and that drugs of this class possess certain native properties for the destruction of function not found in substances reputed inert.

The latter description, it would seem, is entirely too narrow and restricted. If we accept it as the logical definition, then all those substances not included among the arbitrary poisons must, of course, be reported as innocuous—and many of those substances reputed inert operate in precisely the same manner as those termed virulent, when taken into the system in unusual quantities. For example, opium, when absorbed by the system in overdoses, causes death for the reason that it then becomes a narcotic poison; strychnine, because it becomes a narcotico-irritant, and arsenic an irritant poison. Now the mode of operation of one-half pound of common salt when taken into the stomach, is precisely the same as that of five grains of arsenic. Both cause death for the reason that in the quantities mentioned they act as powerful irritants on the sentient extremities of the nerves of the lining membrane of the blood vessels, thereby producing a fatal impression sympathetically upon the general nervous system. In this instance, why shrink from calling common salt a poison, simply because a much larger quantity of it than of arsenic is necessary to act fatally? Both these substances in the quantities mentioned operate in precisely the same manner, causing suspension of life by overcoming the vital forces. The natural conclusion is, therefore, that a substance is a poison in relation to man, in the actual sense of the word, only when by its innate chemical nature it causes impairment or destruction of function; and from this it must be decided that no substance can be termed a poison *per se*.

Among medical men the following has generally been accepted as an authentic definition of this word "poison." It reads: "A poison is a substance capable of destroying life when taken internally or applied to the surface of the body, without acting

as a purely mechanical irritant." This, however, is open to the same objection that it at once fixes a distinct class of substances as poisons under all circumstances.

The word "a deadly poison" form a phrase very generously abused in newspaper accounts of casualties by poisoning. Ammonia water, copperas, or salts of tartar are made to suffer under the same horrid epithet as the dangerous alkaloids or mercurials, when accidentally responsible for serious results. This term should be used only in describing those drugs which are poisonous in very small quantities.

The old aphorism, "One man's food is another man's poison," is nicely illustrated in the fact that many valued articles of food, such as fish, oysters, rice, strawberries, cranberries, apples and many others, often cause a form of poisoning characterized by eruptions of the skin termed "urticaria," when ingested by certain persons who are incapable of properly assimilating these palate-pleasing foods.

When this word "poison" is considered in its more general significance, independently of its relation to man, the fact of its being an indefinite relative word with only an approximate meaning, is clearly demonstrated in the circumstance that certain species of birds satiate themselves with the berries of deadly nightshade, finding in them nourishment, and goats eat with impunity the leaves and pods of stramonium; so dangerous to man, this herb is to them, as it were, a rare and tempting delicacy.

Why Not Turn Your Knowledge to Account?

BY FRANK EDEL.

The pharmacist is often called upon to dispense odd chemicals, and if he were to keep anything like the assortment in stock that he may have calls for occasionally, he would soon find his shelves stored with goods in some instances likely to spoil and in others to be unsalable. It is astonishing how often pharmacists let customers go without once remembering that on their shelves are all the chemicals necessary to produce easily and simply the required article. And if a given substance is wanted in the form of solutions, its preparation would often require but a minute.

The pharmacist, by so doing, can easily make a reputation for himself in the manufacture of these goods, and one can often hear people say, "We will go to So and So's pharmacy, for if he hasn't got it in stock he will make it for us." It is astonishing how soon such things become known, and when known, what a powerful influence they are towards building up a tradesman's business.

The writer calls to mind an instance of a physician who, after going the rounds of the stores, inquiring for subiodide of bismuth, came to the establishment where

he (the writer) was employed, and inquired for the article. He was told that it was not in stock but could be made for him within a certain time. At another time he wanted iodide of lime, and then saccharated iodide of iron, and thus became a regular customer. Another time a certain photographer came in and asked for chloride of lead and sulphate of lead. He was told that they were not in stock, but would be made for him. This gentleman afterwards took particular pains to send people to the store.

Elsewhere, in an article on the remedy for the specialty nuisance, the writer has said that there is no place where a pharmacist can so easily make a reputation for himself, no place where he can occupy his spare time to so much advantage, as in laboratory work. And this work can be done without neglecting the mercantile part of his business. It is not the purpose of this article to advocate the making of chemicals in the drug store, for the reason that in most cases they can be purchased from reputable manufacturers for as little money as they can be made for by the pharmacist. And, therefore, there is no argument in favor of making them on the ground of economy.

But with odd chemicals it is different. The pharmacist cannot afford to buy them, for the sale would not justify, and in most instances they can be prepared from those chemicals carried in stock, and many of them can easily be made. Take, for instance, the lithium salts. Having the carbonate of lithium in stock, the pharmacist is able to supply the citrate, salicylate, benzoate, borate, etc., if in solution, in a few minutes. And he can, also, easily prepare the salts themselves when so desired. The same is true of the ammonium salts, also of those of potassium and sodium.

Some years ago, while employed in a pharmacy where many prescriptions calling for solution of benzoate of ammonium, 10 grains to each dram, were filled, the writer had his attention called to the insolubility of the preparation as sold in the market. This is entirely due to the salt being of acid reaction instead of alkaline, as directed in the Pharmacopœia. Of course, solution could be effected by heat, but it would crystallize out when cold. This difficulty was remedied by adding ammonia in slight excess. In order to overcome the trouble, a permanent stock-solution was made up, containing 10 grains to the dram. This solution was made by taking the proper amount of benzoic acid and water, applying heat, and adding ammonia to slight excess, filtering, and adding water to make the proper volume. Thus we were able to dispense these prescriptions rapidly and properly. It is an old practice, and a good one, to keep a 50-per cent solution of acetate of potassium on hand for dispensing. Such a solution keeps well and is easily made.

It is astonishing what a number of chemicals the pharmacist can prepare

Labels and Boxes.

LAWSON & JONES,

PRINTERS,

Lithographers, Box Makers, Etc.

LONDON, - CANADA.

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

We are special Wholesale Agents for the Dr. Eseljay Medicine Company. Send us your order for ESELJAY'S LIVER LOZENGES.

LAWSON & JONES,

Clarence St., LONDON.

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.

ALPHA RUBBER CO. Ltd.

MONTREAL.

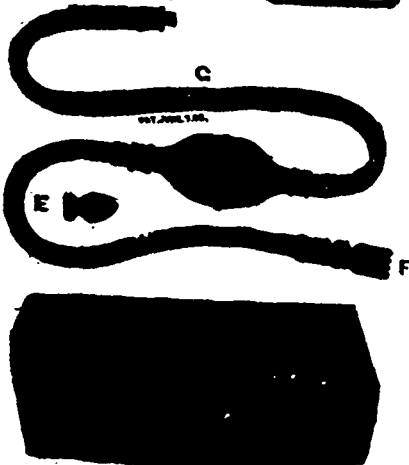
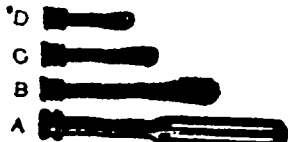
WE MANUFACTURE A FULL LINE OF RUBBER GOODS FOR DRUGGISTS AND STATIONERS.

All our goods are sold under a Guarantee.

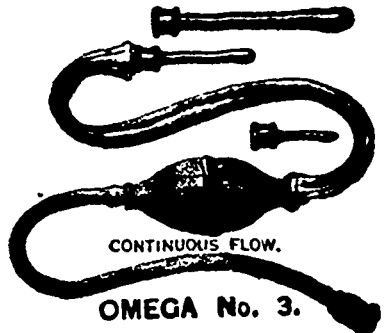
A CONTINUOUS FLOW OF FLUID,
THEREFORE
NO AIR CAN BE INJECTED.

SPECIALTIES :

FOUNTAIN SYRINGES,
WATER BOTTLES,
COMBINATIONS,
- ATOMIZERS, -
PURE RUBBER BANDS.



Alpha "D" Syringe.



Omega No. 3 Syringe.

Our New Price List contains revised prices up to date and will be mailed on application to anyone in the trade.

Our goods are to be had from the Wholesale Drug Trade or

P. O. Box 28.

ALPHA RUBBER CO. Ltd., Montreal.

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 as 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.

WM. J. DYAS, Manufacturers' Agent.

Chemicals,
Druggists' Specialties,
Proprietary Medicines.

WAREROOMS & LABORATORY:
Strathroy, Canada.

TORONTO OFFICE: 111 RICHMOND ST. WEST.

To the Trade.

In all localities from which we have secured and published testimonials for our **Dodd's Kidney Pills**, the sale has been greatly increased, which resulted to the benefit of the druggist as well as ourselves.

We would therefore respectfully request all druggists to forward us the names of any of their customers who have been cured or benefited by our **Dodd's Kidney Pills**, and secure us the testimony for publication if possible. In return for which we will be pleased to give them the benefit of any advertising connected therewith if desired.

Thanking the Drug Trade for their assistance towards the success of our Remedies, and respectfully soliciting a continuance of same.

Respectfully,

THE DODDS MEDICINE CO., Limited.

Toronto, March 1, 1904.

The Montreal Optical & Jewellery Company

(LIMITED)

*The only firm of Manufacturing Opticians
in the Dominion.*

Prescription Work a Specialty.

Country orders filled with care and promptitude.

*If you are dealing in OPTICAL GOODS it will PAY YOU
to do business with US, and if you are not doing so already,
write and get our Catalogue and Price List.*

EXCELSIOR

Drug = Mixer = and = Sifter.

IMPROVED AND PERFECTED

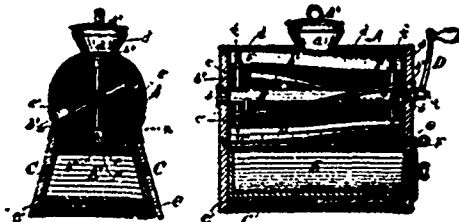
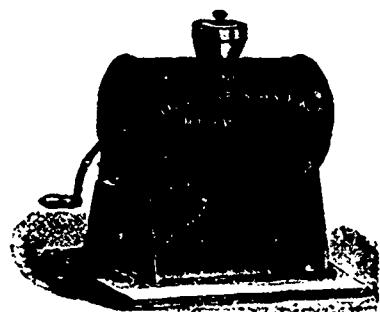
For Druggists, Manufacturing Chemists, Perfumers, Etc.

Suitable for the manufacture of Baking Powder, Tooth Powder, Face Powder, Condition Powder, and for the Compound Powders of the Pharmacopœia.

THESE ARE MADE IN THREE SIZES:

SUITABLE TO MIX—5 lbs., 10 lbs. and 25 lbs.—at \$6, \$12 and \$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.

These machines mix the powders thoroughly and then force them through sieves of the proper fineness for the intended powders. Two Sieves, 40 and 60 mesh, with each Mixer.

This Mixer and Sifter is handled by the prominent wholesale druggists of the United States and gives general satisfaction. Amongst those handling them are: Morrison & Plummer, Chicago; Bullock & Crenshaw, and Smith, Kline & Co., Philadelphia; W. H. Scheffelin & Co., and McKesson & Robbins, New York, and others.

The 10 lb. Mixer is specially adapted for the general requirements of the Retail Druggist.

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

himself, with comparative ease, if he will consult his reference works. Such work makes him a better pharmacist, gives him a more accurate and practical knowledge of chemical processes and the chemistry of what chemicals he handles. In fact, there is no line of work so conducive to the actual thoroughness of the pharmacist as this. It enables him better to understand the action of one chemical upon another, and to forecast results of combinations ordered in prescriptions, and often to save physicians from serious error. Again, it gives a clear and more practical insight into the arithmetic of chemistry, and in every way conduces to the benefit of the pharmacist. And the good which comes from this line of work is the advantage it is to the apprentice. He thus becomes familiar with working-methods, and it is of great advantage to him. Seeing practical demonstrations of what pharmacy should be, he is better able to appreciate the teachings of the schools.—*Western Druggist.*

Facts About Opium.

ITS PRODUCTION IN ASIA MINOR.

Our readers who purchase opium will no doubt be interested in the following particulars:—Opium is perhaps the most interesting, the most valuable, and the most famous product of Asia Minor. This substance, which resembles a resinous gum, is extracted from the capsules of poppy-heads. Incisions are made in the capsules after the fall of the flowers, and the juice which runs from them is then dried and made up into blocks of various sizes. These are covered with leaves, and sent in special bales to the market of Smyrna. The poppy is usually cultivated in the central regions of Asia Minor, on firm soil of sandy or chalky clay, richly manured. Several sowings are made throughout the course of the year, but these are grouped under two general denominations, the autumn and the spring crop. The autumn sowings are begun towards the end of the month of September, and produce the greatest part of the harvest. The seed is sown in fields which have been ploughed or dug up, and when the plants have appeared a great many are destroyed, in order to assure to each plant a clear space of about 75 centimetres. The earth ought to be stirred and hoed three times over before the time for picking the poppy-heads has come. After the month of November the snow almost always covers up the young plant, which is thus preserved from frost and the severity of the winter until the snow melts, that is to say, until March. It then grows vigorously until it becomes from 1 to 1½ metres in height. Each plant produces from 5 to 30 globular capsules, which are generally oval in form. The flowers are large, solitary at the top of the ramifications, and composed of four or five petals set in the form of a cross, and crumpled until they expand. They are of all shades from white to red. When

the capsule is ripe it takes a pale yellow tint. This is the moment for making the incisions. They are always made at sunset; the juice, which oozes from them in the form of tears, is collected next morning at dawn, in shells. It is then dried and moulded into the form of blocks, which are wrapped in leaves of the same plant. From its first appearance until the moment of harvest the plant is exposed to all the intemperance of the weather, excess of rain or drought, of cold or heat, violent winds, &c., and these are peculiarly liable to injure it on the nights which precede the incision of the capsule. The seed is sown two or three times in spring, between the beginning of February and the end of April. This crop requires greater uniformity of weather, especially frequent rains. The consequence is, that the spring sowings are more delicate, and their product is sensibly inferior to that of the autumn crop. The blocks are left to dry, and are then arranged in high baskets, containing about 75 kilogs., with certain leaves which have the property of keeping the opium in good condition, and of preventing the leaves from sticking to one another. The bales are then forwarded to Smyrna and Constantinople, to be sold there to exporters. Turkish opium has produced during the last fifteen years an average of 6,000 bales. One single year, which was absolutely exceptional, produced 1,100 bales. But this year we have only 3,000, a figure just as abnormal as the preceding.

THE VARIETIES AND VALUES OF OPIUM.

These are the various varieties of opium and their respective values:—

Malatia, Tokat, Zileh.—Quality extremely fine, and of a paste much appreciated by Chinese smokers for its delicate flavor. Amount of morphine very small, varying from 8 to 11 per cent. which is only obtained by means of a special selection.

Boghadiéh.—The best quality of Turkish opium, paste delicate and fine, greatly appreciated, especially by the smokers of Central America.

Yerli.—All opium which is grown in the neighborhood of Smyrna is called Yerli. It is less valued than that of Boghadiéh, but is rich in morphine. This is the quality which is used for drugs and medicine.

Chaw.—This kind is so like that of Yerli that it may be included in the same category.

Salonica.—The cultivation of opium at Salonica is of relatively recent date. It has greatly extended, and produces about 800 bales per annum, half of which, of very fine quality, is more appreciated than even the Boghadiéh.

Karattrissar.—This is the district which produces the most opium, and which supplies, on a large scale, the trade of England, America, and Holland. The quality of this variety is very good; the morphine varies from 9 to 12 per cent.

Adeth.—Average quality brought from

all parts of the interior. The Turkish word "adeth" means "usual." It represents the ordinary type, which is easily sold for China and America, and the amount of morphine is almost uniformly 9½ per cent.

Chinquati.—This name is given to a quality of opium from various parts of the interior. It is opium mixed with foreign matter, it contains morphine, sometimes to the extent of 9 per cent.

So so.—Under this name are designated those opiums which are bought in the condition in which they arrive from the interior. There is a mixture of five kinds and of Chinquati. The morphine is from 9 to 11 per cent. It should be noted that mouldy opiums of bad appearance, which are rejected, are often found figuring afterwards in the category of the "So so's."

THE PRICE OF THE DRUG.

The maximum price of opium of late years has been 10 francs the kilog., and the minimum price to which it has fallen 18 francs; but this last only occurred once, and lasted but a very short time. In any case we are very far from that period when this article, which used to play a preponderating part in the export trade of Smyrna, sometimes reached very high prices indeed.

The price used to go up and down, producing great profits and serious losses. But the speculative spirit which used to mark the opium trade has entirely disappeared; the variations of price are slight, and only follow the normal law of supply and demand, in consequence of the extent of the crops and the requirements of the consumer.—*Foreign and Colonial Importer.*

Tapioca.

Tapioca at one time was a favorite article for speculation, says the *New York Journal of Commerce*, but the disastrous results attending the operations of recent years have taken the spirit completely out of the old-time plungers, it being a difficult matter now to influence attention from large operators, and the jobbing-houses also are seemingly indifferent as to whether they carry any considerable quantity of the goods in stock or not. The consumption of the article is probably greater to-day than ever before, large quantities being used in the manufactures, in addition to the extensive sale as a food staple. Prices are indeed low, though there has been some recovery from the extreme point touched during the period of the greatest depression which prevailed last year. Pearl, since sago disappeared from the market, is now given the preference by most buyers.—*Et.*

TO INCREASE THE SOLUBILITY OF BORAX
The addition of a small amount of sugar greatly increases the solubility of borax. It will also rapidly liquefy a solution of gum arabic which has become gelatinous from the presence of borax.

Canadian Druggist

WM. J. DYAS, EDITOR AND PUBLISHER.

JULY 15th, 1894.

Congratulations.

We are pleased to extend our congratulations to Prof. Shuttleworth who has been honored by being elected Fellow of the Chemical Society of England, thus enabling him to add the distinctive letters F. C. S. to his name.

Such an honor, conferred upon a Canadian, has in this instance been well placed and furnishes an additional link of connective relationship between co-operative laborers in the old world and the new.

Druggists as Opticians.

It has long been recognized as a fact that the science of optics is one of those branches which only an intelligent person can be entrusted to practice, and, while not wishing to claim that druggists have a monopoly of intelligence, yet the very fact that the educational standard to which they are obliged to attain before embarking on their profession is quite equal to that of any of the other professions, points to the pharmacist as the one of all classes, combining as he does the tradesman with the professional man, to whom should be entrusted a matter of so much importance to the present as well as to future generations, viz., the improvement and care of the eyesight.

It undoubtedly is only a question of time when governments must insist on the proper qualification of those who undertake this matter of optics and we would strongly advise our drug friends to take advantage of what opportunities of instruction they can and not let this branch of business so peculiarly adapted to them and one which commends a good margin of profit, slip into the hands of other tradesmen. It should be borne in mind that the old slip shod way of fitting glasses will not do in the present day, and the man who thoroughly masters this science and devotes proper attention to it, will find it one of the most profitable parts of his business both directly and indirectly.

A "Preparation."

A recent issue of *The Pharmaceutical Journal and Transactions* contains an article entitled "What is the pharmaceutical meaning of the term preparation," where it is plainly laid down as an incontestable fact that all medicinal compounds, whether they are official in the Pharmacopœia or are mixtures of any drugs or medicinal agents, when they contain any articles named in the poison schedule, are subject to the provisions of the Pharmacy Act of Great Britain as affecting the registration and sale of poisons. If this contention is right, and we see no reason why it should not be, the various Pharmacy

Acts in Canada will bear of the same interpretation, and any articles named in the schedule as "poisons," whether sold separately or in any mixture whatever, are subject to the same requirements as to sale and also the liability of the vendor.

Ontario College of Pharmacy.

The semi-annual meeting of the Council of the Ontario College of Pharmacy will be held in the College building on Tuesday, Aug. 7th, for the purpose of granting certificates of competency and for general business in connection with the College.

Poisons at Wholesale.

Under the above heading the *Pharmaceutical Era* calls attention to a matter which has also been the subject of some newspaper controversy in this country regarding the unfairness to the retail trade as well as the insecurity to the general public from the handling of poisons, etc., by unqualified clerks in wholesale houses and by general dealers. The *Era* puts the matter very plainly as follows:

"It is difficult to buy a grain of poison but easy to get an ounce. That is, the retail druggist has to observe, more or less, the rigid restrictions in selling poisons, must register the sale, name of purchaser, etc., but at the wholesale druggist's the customer has no difficulty in obtaining whatever quantity he desires. Morphine and cocaine fiends know this and act accordingly. There is necessity for better legal regulation of the sale of poisons. The grocer can sell Paris green and poison-containing patent medicines at his own sweet will. Laws should be enacted calculated to confine the traffic in all medicines and poisonous chemicals in legitimate channels. Do not make exceptions of the wholesaler, grocer and peddler. Boards and associations of pharmacy can do much to bring it about."

Twelve Thousand Prescriptions.

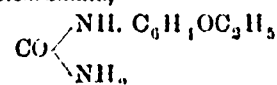
In Prof. Martindale's "Analysis of Twelve Thousand Prescriptions," for a copy of which we are indebted to the publisher, H. K. Lewis, 130 Gower St., London, W. C., statistics are given as to the frequency in which several preparations have been designated in prescriptions dispensed in six different pharmacies in various portions of the United Kingdom. Spiritus Chloroformi holds the lead, it occurring 1117 times, then comes Tinct. Nucis Vomica 991 times, Glycerinum 875 times, Sodii Bicarbonas 807, Syrup Aurantii 796, Spts. Ammonie Aromaticus 675, Quinina Sulphas 598, the lowest on the list being Succus Limonis, 30 times. Of the *unofficial* preparations, Ung. Hydrarg. Oxid. Flav. occurs 29 times and Tinctura Laxativa, the lowest, 10 times. These statistics do not include the sales of articles by retail, but merely the prescriptions of physicians. The work should

prove a useful aid to the compilers of the proposed new pharmacopœia, indicating, as it does, the changes which occur in the advances made in medical treatment, and also pointing out those preparations which have become almost obsolete.

Dulcin.

Dulcin is an artificial sweetening agent, 200 times sweeter than cane sugar, according to comparative tests by Prof. Zuntz. It has a pure and agreeable sweet taste; and as physiological experiments have proved unanimously that the amount necessary for use will not cause disorder in the human or animal organism, Dulcin can—similar to saccharin—be used advantageously in place of cane sugar.

Chemically Dulcin is described as parphenetolcarbamid,



It was first produced *by Berlinerblau some years ago. But J. D. Riedel, of Berlin, was the first to produce Dulcin by perfected process at a reasonable cost. This process, patented in Germany and other civilized countries, consists practically in bringing urea to act upon hydrochlorate parphenetidid or Diparphenetolcarbamid at high temperature under pressure.

Dulcin is supplied by J. D. Riedel in the form of colorless needles or as a fine white powder, and also—mixed with mannit for the use of diabetics—in 0.25 g. tablets, each containing 0.025 g. Dulcin or the equivalent of a 5 g. lump of cane sugar.

Pure Dulcin melts at 173 to 174° C.; its solubility in water is difficult; one part in 800 parts of water at 15° C.; it is soluble in 50 parts hot water, and readily in 25 parts 90 per cent. ether.

Dulcin can be boiled in water without decomposing, and will not escape in the steam. If Dulcin is heated beyond its melting point, ammonia is eliminated and parphenetolcarbamid changes to diparphenetolcarbamid.

The tests for purity of dulcin are found in its melting point, the colorless crystals, and the property of dissolving without coloration in cold concentrated sulphuric acid.

Dulcin is a very staple product, and can be utilized for all purposes as a perfect substitute for cane sugar.

"CINCHONA" sends a copy of a recipe which was handed him to fill. He thinks it must have originated with "Bill Nye":

Equal parts
Tinctur of opheum
" champere
" red pepper
" rubbarb
" pepement
Dose, 20 drops.

*H. Thoms: Ueber Dulcin. Berichte d. pharm. Ges., 1893, No. 5.



BY HANDLING
TANGLEFOOT
 ~ ~ SEALED ~ ~
STICKY FLY PAPER

THE DRUGGIST AVOIDS
COMPLAINTS, ANNOYANCE AND LOSS.

Every Purchaser is Satisfied and Pleased. Every Sheet Used Sells More.
PRICE REDUCED. PROFIT LARGER THAN EVER.



The Wax Sealing Border surrounding each sheet of Tanglefoot permanently restrains the soft catching material and preserves each sheet until used, preventing Loss and Annoyance to the dealer and the Displeasure of the user.

Tanglefoot is spread upon paper made especially for the purpose; designed to be strong, impervious to the sticky composition and practically air-tight, it perfectly fulfills its peculiar functions.

Each double sheet is formed from two distinct and perfect single sheets, adding to its convenience and appreciated by the user.

Each box is provided with one Holder free for the dealer's own use or to be presented with a liberal purchase of Tanglefoot. It is the only device useful, practical or desirable.



A successful Sealing Border must be firm enough to hold the catching material in all positions.

It must adhere closely to the paper yet separate readily at all temperatures.

It must not become soft at a high temperature and give away allowing the escape of the sticky composition.

It must not increase in adhesiveness at a high temperature to cause the paper to tear in separating the sheets.

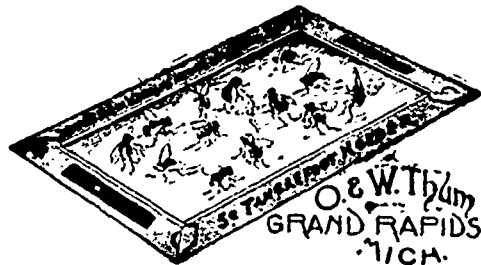
In fact the Border as well as the Sticky Material must retain its identity over a range of all climatic conditions from Manitoba to the Equator and as far South.

These qualities the Sealing Border of Tanglefoot embodies to perfection and is the only successful device yet invented for the purpose, giving universal satisfaction.

FOR SALE BY EVERY WHOLESALE DRUGGIST IN CANADA.

55 CENTS PER BOX.

\$5.00 Per Case.



IN 5 CASE LOTS

\$4.75 Per Case.

EACH BOX CONTAINS 25 DOUBLE SHEETS AND ONE TANGLEFOOT HOLDER.

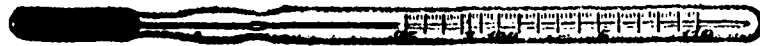
EACH CASE CONTAINS 10 BOXES.



THE TWIN
HALF MINUTE
Clinical Thermometer.

FOR QUICK REGISTRATION OF TEMPERATURE.
INDELIBLE BLACK.

The most substantial
sensitive
Thermometer ever
offered to the
Medical Profession.



PATENTED MARCH 25, 1900.

With the atmospheric register at 60°, if "THE TWIN" be immersed in warm water of 105°, the mercury will reach that degree in less than 20 Seconds.

The welding the two bulbs into one without any intervening space renders "THE TWIN" much stronger and less liable to break than any other heretofore offered.

It will also be found much more convenient to carry, requiring less room in a case or in the vest pocket. For these reasons, as well as for its **Guaranteed Accuracy**, "THE TWIN" is universally recommended by the medical profession.

FOR SALE BY ALL DEALERS. \$2.00 EACH.

To Dealers who mention the CANADIAN DRUGGIST in Orders of not less than 1 dozen.—TWIN LENS, \$9.00 dozen; TWIN PLAIN, \$8.00 dozen. If in Gold Case with Chain and Pin, \$2.00 net.

JOHN BARRY, Patentee and Maker, 62 Fulton St., N. Y.



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

Radlauer's Somnal.

AETHYL-CHLORALURETHAN.

(REGISTERED)

THE NEWEST & MOST EFFICIENT SOPORIFIC REMEDY.

Taken in doses of 32 grains, or half a teaspoonful, in milk, ale 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.

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

W. J. DYAS, Strathroy, Ontario.

Radlauer's Antinervin.

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

ANTINERVIN replaces and surpasses Antipyrin, has no hurtful 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.

Wholesale Agent for Canada.

MUNN'S

GENUINE

Cod Liver Oil

Is non-freezing and remains perfectly clear at 13° above zero.

Sold in 15 and 20 Gallon Kegs.

HAS THE HIGHEST RECOMMENDATION.

SEND FOR SAMPLES.

STEWART MUNN & CO., = Board of Trade Building, = Montreal.

AGENTS FOR THE DOMINION.

MUNN'S

CELEBRATED NEWFOUNDLAND

Liquid Fish Glue

STRONGEST! BEST! CHEAPEST!
Ever offered on the market.

1 and 2 oz. Bottles.

TINS—Gallon, Quart & Pint. Also in Bulk in Barrels & Kegs

Soda Water Syrups.

Now that the "season" is on us in full blast, the pharmacist who has a soda fountain will be on the *qui vive* for the "very latest" in syrups and flavors in order to attract custom and to keep abreast of the times with his competitors. That a properly conducted soda fountain is a source of immediate profit as well as an attraction to many drug stores is not to be denied, but in order to make it profitable, two things especially must be remembered, perfect cleanliness and good syrups. It is not always the most costly apparatus that pays the largest profit, and the quality of the soda, together with the most scrupulous cleanliness in and about the fountain, are the most telling in the receipts from this source. The following receipts are all to be depended upon as reliable and many of them quite new. We are indebted for them to *Harrop's Monograph, Saxe's Guide* and other works besides some of our exchanges :

SIMPLE SYRUP.

- Granulated sugar 7 pounds.
- Gelatin ½ ounce.
- Water, sufficient to make ... 1 gallon.

Hydrate the gelatin in the usual manner and dissolve in the water with the aid of heat; add the sugar and dissolve by agitation without further heat.

ORANGE.

- Oranges No. vi.
- Tincture quillaja 4 drachms.
- Granulated sugar 6 pounds.
- Water, sufficient to make ... 1 gallon.

Grate the oranges lightly and macerate the gratings in 1 quart or more of water; throw on a filter, then pass enough water through, when added to the orange juice, to make four pints; in this dissolve the sugar without heat and strain. Lastly add the tincture of quillaja and sufficient water to make 1 gallon.

ROSE BUD.

- Strawberry juice 8 oz.
- Rose water 1½ oz.
- Albumen foam 2 oz.
- Cochineal coloring 20 gtt.
- Syrup 1 gal.

PEACH BLOW.

- Peach juice 8 oz.
- Raspberry juice 2 oz.
- Lemon juice 2 oz.
- Compound spirit juniper 4 oz.
- Albumen foam 1 oz.
- Cochineal coloring 40 gtt.
- Syrup 3 qts.

BLOOD ORANGE PHOSPHATE.

- Raspberry juice 6 oz.
- Extract orange 1½ oz.
- Fruit orange ¼ oz.
- Syrup 1 gal.
- Red coloring enough.

The addition of raspberry juice vastly improves the orange flavor. The acid phosphate (1 dram) is added when the drink is served.

CHERRY ORANGE PHOSPHATE.

- Blood-orange syrup (above) 1 oz.
- Wild cherry syrup ½ oz.
- Acid phosphate 1 dr.

Serve still, with plain soda, in a mineral glass.

VADARA CHOCOLATE.

- Sweet chocolate, vanilla 3 lbs.
- Boiling water 1 qt.
- Pure cream 1 gal.
- Granulated sugar 12 lbs.

Dissolve the chocolate in boiling water, add the cream, bring to a boil, then add the sugar, and stir with a wooden ladle until dissolved. When cool, place the syrup on ice, but not into the syrup can, as the syrup is too thick to draw nicely. This is too expensive for 5 cent soda.

RAZZLE DAZZLE.

- Pineapple syrup 1 dr.
- Lemon juice 1 dr.
- Raspberry vinegar 1 dr.

Place in ordinary thin soda glass and fill the glass two thirds full of fine cracked ice, put a mixing spoon in glass, and turn on the coarse stream of soda. When the glass is about three-fourths full with soda stir with the spoon; add more ice, heaping it on top of the glass; then top off with a teaspoonful of crushed strawberry, stick a slice of orange between the ice and glass, and serve with a straw.

CALISAYA TONIC.

- Brown calisaya 4 oz. av.
- Gentian 1 oz. av.
- Orange peel 1½ oz. av.
- Cinnamon 1 oz. av.
- Alcohol, 65 p. c., enough to make 32 fl. oz.

COFFEE SYRUP.

- Mocha and Java coffee, of each 8 ozs.
- Soap bark ½ oz.
- Mix and transfer to percolator and add boiling water 6 pint.

Let stand 12 to 20 hours, percolate and add enough hot water to make five pints.

LEMON.

- Lemons No. xii.
- Tincture curcuma 1 fl. dram.
- Tincture quillaja 4 fl. drams.
- Granulated sugar 6 pounds.
- Water, sufficient to make 1 gallon.

Grate 6 of the lemons and macerate the gratings in 1 quart or more of water; throw on a filter, then pass enough water through, when added to the orange juice, to make 4 pints; in this dissolve the sugar without heat and strain. Lastly, add the tincture of quillaja and colorag, and sufficient water to make 1 gallon.

EGG CREAM.

- Cream 4 oz.
- Egg yolk 4
- Extract vanilla 1 oz.
- Syrup 12 oz.

Triturate together the yolks of egg with the cream, incorporate with the sugar, and lastly add the vanilla.

CARBONATED CREAM.

- Glycerin 1 lbs.
- Powdered sugar 3½ lbs.
- Water 1 gal.
- White of eggs 6

Dissolve the sugar in the water, add the glycerin, beat the white of eggs to a froth and add to the foregoing. Then pour into a fountain containing 5 gallons of water, and charge at 125 pounds pressure.

Draw the flavoring syrup and carbonated cream in one glass, and put shaved

or cracked ice in another glass. On the ice draw the carbonated water, and mix with the contents of the first glass by pouring together. These directions must be closely followed.

EXTRACT OF SECCARINE.

- Oil bitter almonds 15 gtt.
- Oil rose 8 gtt.
- Oil neroli 8 gtt.
- Oil orange 6 fl. dr.
- Oil lemon 6 fl. dr.
- Tincture fresh lemon peel 1 fl. oz.
- Tincture fresh orange peel 1 fl. oz.
- Alcohol 10 fl. oz.

Color light red with cochineal.

IRON, MALT AND PHOSPHATE.

- Iron pyrophosphate 15 gr.
- Extract malt 1 fl. oz.
- Solution acid phosphates 1 fl. oz.
- Solution albumen 2 fl. oz.
- Solution caramel 2 fl. dr.
- Extract vanilla 1 fl. dr.
- Extract bitter almonds 30 m.
- Syrup enough to make 20 fl. oz.

MOXIE EXTRACT.

- Angostura bitters 12 dr.
- Tincture avertina sativa 9 dr.
- Tincture cinchona compound 6 dr.
- Tincture mix vomica 3 dr.
- Fld. ext. coca 3 dr.
- Oil wintergreen 22 gtt.
- Oil sassafras 22 gtt.
- Caramel coloring 8 oz.

Moxie syrup is prepared by mixing 12 ounces of the foregoing extract with 2 ounces of foam extract and 1 gallon of syrup.

ALBUMEN FOAM.

- White of egg 1
- Water 8 oz.
- Syrup 8 oz.

After stirring well together strain through muslin or cotton.

CHOCOLATE CREAM SYRUP.

- Po. chocolate 4 oz.
- Po. cocoa 2 oz.
- Cold water 11 oz.

And when evenly suspended, add

- Infusion of quillaja 5 oz.

Let stand until dissolved, or about 1 hour, then add

- Condensed milk 1 can.
- Powdered boric acid, about 2 to 3 spoonfuls.
- Simple syrup 1 gallon.

Stir well, boil 1 minute and use without straining.

To distinguish Catechu from Gambier or pale catechu, M. Gibson has recourse to a microscopical examination for the anatomical structures of the two drugs, gambier being prepared from the young twigs of *Uncaria gambir* bearing the leaves and flowers, while catechu is obtained from the central portion of the trunk of *Acacia catechu*. He dissolves the drug either in an alkali or in 30 per cent. acetic acid, and then examines the insoluble residue.

Zanon preserves ergot in jars in which there are alternate layers of perfectly dry sand and ergot. A layer of dry sand is put in the bottom of the jar, a layer of ergot on it, and so on. Keep the jar sealed.

Five to fifteen grains of menthol to an ounce of simple ointment will be found usefull in pruritis ani.

Examination Questions, New Brunswick Pharmaceutical Society.

Held in St. John, N. B., June 12th, 1894.

Preliminary. Time allowed—1½ hours.

1. Dictation.
2. Parse the following sentences:—
(a) Of two evils the less is always to be chosen.
(b) *Capiat cochlearia duo magna post prandium.*
3. Decline the following nouns and state the declension of each:—*Haustus, Dies, Calx, Charta, Cyathus.*
4. Conjugate:—*Decogno, Recipio, Signo.*
5. Define a fraction, a decimal fraction, and an improper fraction, and give an example of each.
6. (a) Multiply 457.61 by .527.
(b) Reduce to a vulgar fraction in its lowest terms:— $3.25 - 2.6$
$$\begin{array}{r} 3.12 \\ \underline{3.25} \\ -2.60 \\ \hline 91 \\ \underline{50} \\ 41 \end{array}$$

(c) Simplify:— $2\frac{1}{2} + \frac{1}{4}$ of $3\frac{1}{2}$ of $\frac{3}{4} - 2\frac{1}{2}$
$$\begin{array}{r} 9\frac{1}{2} \\ \underline{5} \end{array}$$

MATERIA MEDICA.

Time allowed—1½ hours.

1. Give B. P. name, geographical source, part used and preparations into which the following enter:—*Belladonna, Calumbo, Catechu, Bitter Apple, Calabar Bean.*
2. Name the drugs from which the following are obtained, stating the dose and medicinal properties of each:—*Eserine, Atropine, Cocaine, Caffeine, Sparteine.*
3. What is meant by the following terms and give an example of each:—*Anthelmintic, Antipyretic, Diuretic, Sialagogue, Astringent.*
4. Name the official preparations of *Cascara, Digitalis, Nux Vomica.*
5. Give antidote for poisoning by *Opium, Paris Green, Oxalic Acid, Nitrate of silver, Carbolic Acid.*
6. Distinguish between *Resins, Gum Resins, Gums, Balsams and Oleo Resins*, and give examples of each.
7. Name six roots of the B. P. giving habitat and medicinal properties of each.
8. *Camphor*. What is it? State habitat, mode of obtaining from tree, and of refining, properties, pharmaceutical uses and doses.
- 9 and 10. Orals.

PHARMACY.

Time—1½ hours.

1. Define *Distillation, Sublimation, Levigation, Percolation*. Sketch or describe the apparatus required to prepare 10 gals. distilled water.
2. Describe the B. P. method of preparing two of the following: *Liq. Ammon. Acet. Fort., Vin. Ipecac, Spt. Eth. Nitrosi.*
3. What would be the effect of exposing

the following to air? *Sodii Carb., Potass. Acet., Ferri Sulphus, Lime Water, Goulard's Extract.*

4. Give ingredients, dose and strength of the following: *Pulv. Kino Co., Liq. Strych. Hydrochlor., Liq. Hydrarg. Perchlor., Tinct. Benzoin Co., Pulv. Ipecac. Co.*
5. (a) What is the weight of a gallon of water, B. P. and U. S. P.
(b) How many grains in a troy pound and in an avoirdupois pound?
(c) How many grammes in a litre?
(d) How many grammes in a cubic centimetre?
(e) How many grammes in a drachm?
6. What is the difference between *Phosphoric Acid, B. P. and U. S. P.? Tinct. Iodine, B. P. and U. S. P.? Acid Sulph. Arom., B.P. and U.S.P.?*
7. How is solid extract of *Nux Vomica* prepared, and what is the per cent. of active ingredients?
8. How should the following be stored and why: *Cantharides, Ergot, Powdered Squill, Essential Oils and Ether?*
- 9 and 10. Orals.

CHEMISTRY.

Time—1½ hours.

1. $2NH_4 Cl + Ca(OH)_2 = 2NH_3 + Ca Cl_2 + 2H_2O$.
Write out the meaning of this equation in full; give the molecular weight of each of the bodies.
2. How would you prepare the following gases: *Hydrogen, Oxygen, Chlorine?* Give atomic weight of each.
3. An imperial pint of water weighs 1½ lbs. What will be the weight of an equal volume of glycerine, specific gravity 1.25? How take specific gravity of beeswax?
4. Give an example of an univalent, bivalent, and trivalent acid. Write out formula for each. Write an equation in which Sulphuric Acid is neutralised by Ammonium Hydrate.
5. State boiling and freezing point of water on Centigrade, Fahrenheit and Reaumur thermometers. What is the effect of a raised or lowered temperature on the specific gravity of liquids?
6. How would you distinguish chemically between the following acids: (a) Hydrochloric. (b) Nitric. (c) Sulphuric?
7. (a) What is the reaction when Calomel is mixed with Lime Water?
(b) Also when Mercuric Salts are mixed with Alkaline Solutions?
8. How would you prepare a small quantity of Hydrochloric Acid?
- 9 and 10. Orals.

DISPENSING.

1. Give the official names for *Spt. Mindereri, Pulv. Jacobi, Lunar Caustic, Salapine, Blue Vitriol, Tartar Emetic, Goulard Water, Elixir Vitriol, Spirits of Salts, Strengthening Plaster.*

2. What is an Emulsion? How prepared? An Infusion? A Decoction? Sketch shape of Breast Plaster, and give proper size. Sketch shape of Blister for behind the right ear. Draw it in proper size.

3. Give strength and dose of each of the following: *Liq. Atropia Sulph., Liq. Morph. Mur., Acid Hydrocyan. Dil., Tr. Verat. Verid., Liq. Hydrargyri et Arsen. Iod., Liq. Tritonitrina, Tinct. Digitalis, Tinct. Opii.*

4. State how the following prescriptions should be dispensed:

- 1—*Ac. sulph. dil. 5 i*
Bism. sub-nit. 5 ss
Syr. simp. 5 iii
Mist. creta ad 3 iv
- 2—*Phosphorus gr. i*
Excipient q. s.
Div. in pil. vi.
Sig. sum i post cib.
- 3—*Chloral hyd. } 5 i*
Camphor } ad 5 i
Syr. zingib. 5 ss
Aq. rosarum 3 iss
Sig.: a tablespoonful after meals.

- 5 to 10 were orals and two prescriptions to be dispensed.

India-Rubber Forests in Matto Grosso.

The *Diario Oficial* of the State of Sao Paulo contains the following article under the above caption:—

The number of rubber trees growing in the various parts of the State of Matto Grosso is estimated at thousands of millions. The discovery of rubber trees in that State dates back a very short time indeed, while their exploitation has but just begun. The obstacles which are being encountered by the pioneers are great; but in spite of such drawbacks as the lack of labor, the insufficiency of existing means of transportation, and others, the industry is growing constantly, and promises to entirely dislodge at no distant date such allied industries as the obtaining of *Keua-mate* (Paraguay Tee) and the *Paix* (*ipecauanha*). The last crop of rubber available for export is figured at 10,000 arrobas, and, according to the latest reports, an arroba was quoted at 50 milreis, and the market showed a rising tendency.

The municipality of *Diamantina*, like all the other municipalities into which the State of Matto Grosso is divided, covers a very extensive area. It embraces a flat region of about 12,000 square kilometers, and is traversed by rich streams which empty their waters into the *Xingu* and *Tapajos*, tributaries of the Amazon river, on one side, and on the other side, into the *Paraguay* river, tributary to the *Parana*, which flows into the *La Plata*. On the watershed, just between the numerous springs which flow into the basin of the Amazon river on the one side and into that of the *La Plata* on the other, stands the city of *Diamantina*, at a distance of about 36 leagues from *Guayaba*, the capital of *Matto Grosso*. This city, which was once of some importance, on account

of the discovery of diamonds in its vicinity, but which since the exhaustion of the diamond resources and the cessation of that industry has been steadily decaying, is now again rapidly rising into prominence through the rubber industry and the discovery of rubber forests in its vicinity.

The milk from the rubber trees of Matto Grosso can only be obtained from April to September, since the trees thrive only in such places as are moist, and so close to the streams as to be exposed to the periodical overflow of the waters,—places which are therefore uninhabitable during a greater part of the year.

In a letter addressed to the president of Matto Grosso, Senor Arthur Cavalcanti de Mello, in referring to the natural treasures and resources of the State, the process of gathering the rubber and disposing of it is described as follows:

"In April and May, the rubber-gatherers start out in troops for the forests, the water having fallen back by that time and the forests having become accessible. Their first work consists of clearing the old forest paths and laying out new walks each rubber-gatherer taking one or more of these paths, so that altogether he controls a piece of ground having eighty or a hundred trees. The trees do not always stand close together. They are frequently scattered, and some of the walks therefore must extend over large distances. Fortunately, however, this is only true of places around smaller streams,—in the places near the larger streams the rubber-trees are closer together. After the forests are thus opened and cleared, the next care is to get the material which is used to fasten the receptacles that are to receive the rubber to the trees. This process consists of cutting the bark of the *Bority-palm* into boards from which are made troughs with the requisite openings and outlets. These troughs are fastened to the trees with pegs of the same material, and, in order that the troughs may be closely attached to the trees, the joints are coated with clay. At the outlet of each of these troughs, which are fastened all around the tree, a cup is placed to receive the sap.

"When these preparations are finished—and they require from thirty to forty days,—the actual work of milk-gathering begins. For this purpose the rubber-gatherer must visit his trees at least daily. He taps them in a proper manner with a small axe, and out of these indentations the milk flows through the troughs into the cup. The milk is of a dazzling whiteness. As soon as the cups are filled, they are emptied into pails, the sap coming out in the shape of small, elongated right-angled troughs. To secure the coagulation of the milk, a little alum, dissolved in hot water, is added. Then the so-called 'bisquits' are formed; and as soon as they reach the desired consistence, they are pressed between boards so as to expel the superfluous liquid.

"This work keeps each gatherer busy, all by himself, till September, and then all return from the forests. While thus at

work, the rubber-gatherers get all their supplies from the contractors. They are provided with dried meats, black beans, rice, lard, salt. Besides these they get tobacco and hunting supplies, for there is plenty of game in the forests, and the rubber-gatherers prefer to live on the game they bring down.

"When the work is finished, the contractor gathers all the tools, utensils, as well as the rubber produced. The rubber, after being weighed, is carried by beasts of burden to the markets of San Luiz and Guayaba, where it is put on board steamers for export, with reshipment and payment of duties at Corumba. The transfer by land to San Luiz and Guayaba costs about 3 milreis per arroba, while the transfer by water thence to Corumba costs about 1 milreis per arroba. Of the above mentioned tools and utensils, every worker has for his outfit two zinc pails, one small axe, and one or two hundred tin cups, not to mention the other articles, all of which the contractor supplies."

Referring to the process of gathering the gum that has so far prevailed, the writer observes that it is highly desirable that the work should be done by better and more economical methods, and especially such as would be less damaging to the trees.—*India Rubber World*.

Dangerous Incompatibles.

In an article with this caption, published in the *Journal de Pharmacie de Liege*, Professor Jorissen discusses some formulae that have been under his observation. We abstract from the paper as follows.

The author cites, as a text, a formula that had been presented for compounding at a pharmacy, not only the preparation of which was attended with danger, but keeping it around the pharmacy was a constant source of menace. Potassium chlorate, sodic salicylate, quinine in powder, and powdered charcoal were among the ingredients. Where possible one should refuse to undertake the preparation of so manifestly dangerous a mixture, but sometimes (as in the case of a military pharmacist, in a military hospital, etc.) one cannot well refuse to undertake it. In such cases the professor (Mr. Jorissen) advises mixing the last three substances, powdering the chlorate by itself, and finally mixing the powders spread on a piece of paper, using a quill or a feather as a mixer. It is unnecessary to add—get the mixture out of the shop as soon as possible.

Passing from this class to the permanganates, Prof. Jorissen calls attention to the fact that the permanganate of zinc, now in use in therapeutics, possesses all the dangerous properties of potassium permanganate. In fact, he says, neither of them should ever be combined with organic matters. Above all things, avoid triturating this class of substances (i. e., the chlorates and permanganates) in the presence of reducible bodies, whether organic or otherwise.

It is necessary, he continues, to be on guard against attempting to dissolve these substances in certain inflammable liquids, among which he places glycerin, which will inflame in the presence of permanganates in powder. The danger is avoidable by first dissolving the permanganates or chlorate in water.

Pills of permanganate should be massed in white argilla (aluminum hydrate) and anhydrous lanolin.

Chromic acid and potassium dichromate may produce serious accidents, if brought into contact with organic substances, solid or liquid.

Nitroglycerin (glonoin) should not be kept in the pharmacy except in dilutions of not over 10 per cent. in strength. Alcohol, or the fatty oils, should be used as solvents, and such solutions should be kept in small containers, rigorously protected against the light. *Under no circumstances attempt to triturate this dangerous and treacherous substance.*

Continuing his study, in a subsequent article, Professor Jorissen recalls the prescription cited by Hager, to wit:

Nitric acid	5 gm.
Chloroform	5 gm.
Creosote	5 gm.

Mix. Sig. For cauterizing the interior of dental cavities.

If the three substances are mixed at once, a great heat, sufficient to volatilize the chloroform and explode the container is produced by the action of the acid on the creosote, if the container is corked, or even if it have a very narrow orifice. The remedy is to mix the acid and creosote in a capsule, and let the reaction cease before adding the chloroform.

Sulphuric acid is sometimes prescribed in connection with the oil of turpentine and a fatty oil. This occurs most frequently in veterinary practice. If mixed at once, a violent reaction between the acid and essential oil results. If, however, the acid and fatty oil are mixed first, and the reaction allowed to terminate before adding the essential oil (little by little), the danger is averted.

A veterinary prescription, as follows, is recalled by this example:

Sulphuric acid	.....	aa
Tar	.....	partes
Potassium dichromate	.....	Jequalas.

Mix.

In our first lesson in chemistry we are taught that sulphuric acid and permanganate, when brought into contact, evolve oxygen. Hence, we must take the following precautions: Pulverize the dichromate and mix the powder with the tar; then add the acid, a little at a time, agitating the mixture continually, with a glass spatula. This should be done in an open, well ventilated room. After all the acid is added, after further agitation, let stand until the reaction between the dichromate and acid has ceased.

M. Crequy writes that he recently had the following dentifrice to prepare:

Potassium chlorate	.....	5 gm.
Cal. med. magnesia	.....	10 gm.
Precipitated chalk	.....	10 gm.

Sodium-borate.....10 gm.
Essence of peppermint 2 drops.
Saccharin50 gm.

In attempting to rub up the saccharin and potassium chlorate an explosion occurred, which burned the hands and face of the apothecary and shattered the vessel. Saccharin, therefore, must be added to the list of those substances with which potassium chlorate explodes when brought into contact.—*National Druggist*.

On Essential Oils.

(Translated from Schimmel & Co.'s Report for April, 1894.)

In the present state of our knowledge there is no doubt that, besides those volatile oils whose smell is an inherent property, there are others whose characteristic aroma arises from the joint action of several odoriferous principles. In the latter case very minute quantities of an aromatic substance often suffice to produce very considerable changes in the smell. Just as a clever perfumer can, by skilful combination of several individual substances—of which none may alone possess a particularly agreeable smell—produce the most pleasing scents, so in plants, by that cellular activity which is a complete mystery to us at present, several aromatic principles are formed, the combined effect of which produces upon our olfactory nerves the sense of the characteristic odor of the flowers.

Among those essential oils whose perfume depends upon a single aromatic constituent, we may mention for example oil of caraway, aniseed oil and oil of linoloes. In all such oils the quantitative determination of the chief constituent, *e. g.* of carvol, anethol, linalool, suffices for a test of their value and purity, since the turpenes and sesquiterpenes present in addition are, on account of their faint smell, of quite subordinate importance. With the oils of cinnamon the case is not quite so simple. Cassia oil contains cinnamyl aldehyde as its most important constituent, but the pleasing odor of this depends upon the presence of cinnamyl acetate, which as it occurs in greater or lesser proportion acts to the prejudice of the perfume. In Ceylon oil of cinnamon, cinnamyl aldehyde forms as much as 80 per cent. of the oil, and associated with it are eugenol, phellandrene, and small quantities of other undetermined compounds which exert an influence upon the aroma of the aldehyde, which is pleasant to our sense of smell, so that the value of the Ceylon oil of cinnamon is greater than that of the cinnamyl aldehyde it contains.

Hence it follows that in practice the value of cassia oil is calculated from the percentage of cinnamyl aldehyde it contains, as determined by quantitative analysis, while this does not obtain with Ceylon oil of cinnamon. With the latter, it is true that the percentage of the aldehyde is of importance in evaluating the oil, but it is not, in itself, a measure of the value. A good example of the great influence which small quantities of aromatic constituents

exert upon the perfume, and therefore, upon the value of an essential oil is afforded by otto of roses. By investigations which have recently been carried on in our laboratory the result was established that the greater part of the volatile constituents of otto of rose consists of geraniol, the same geraniol which occurs in oils of geranium and in palmrose oil. All these oils contain 80 to 90 per cent. of geraniol. They possess also a certain family resemblance inasmuch as they all smell like roses, but nevertheless there is an enormous difference in the fineness of the perfume, which is strikingly brought out in the difference of their commercial value. This difference is produced exclusively by the other constituents which exist side by side with the geraniol.

According to our observation, German otto of roses contains at the most 5 per cent. of constituents smelling like honey, which, in combination with the geraniol, produce the splendid aroma of the oil. The value of these substances, whose chemical nature is as yet unknown, may therefore be calculated at rather over £1,000 sterling per kilo. Under these circumstances the amount of geraniol present is no criterion of the quality and purity of otto of roses, whilst on the other hand, the value of palmrose oil is measured by the proportion of this, the valuable constituent.

We have dwelt upon these relationships in order to show that a careful review of the points is necessary in order to arrive at a valuation of volatile oils, and also that it is not nearly sufficient, in the chemical investigation of such oils, to merely isolate those constituents which are found in the largest proportion, but that the collateral constituents must also be taken into account.

What has hitherto been assumed as self-evident, *viz.*, that freshly prepared oils possessed naturally an unpleasant secondary smell, must now be looked upon either as evidence of bad and crude work, or of want of knowledge. On the contrary, the fresher an oil, the purer must be its taste and smell. Freshly rectified oil of caraway for instance should smell as fresh and sweet as the newly crushed seeds. If once an oil has, by defective distillation, acquired a bitter or musty smell, it is never brought completely right even by long exposure to the air; on the other hand the oil suffers with all the greater rapidity the fate to which almost all essential oils are subject, that is of becoming resinous or otherwise decomposing, without ever attaining the desired purity of smell or taste.

Mineral Oil For Culinary Purposes.

Under date May 15, 1894, a patent (No 519,980) has been issued to Alexander W. Winter, of Chicago, for a compound edible fat, the base of which is mineral oil or paraffin oil. The patent does not cover any particular process, but is broadly for the idea of utilizing mineral oil for culinary purposes, rendered firm

and hard-like by the addition of tallow and other animal or vegetable fats and oils. The claim consists in the production of an edible compound fat composed of mineral oil with varying proportions of tallow, oleostearin, and vegetable oil, useful as substitutes for lard, butter, or other food articles. As the best proportions are given: 60 per cent. mineral oil, 15 per cent. oleostearin, 15 per cent. tallow, and 10 per cent. cottonseed oil.

The mineral oil used in this unique culinary compound is charcoal-refined, colorless, and of 33° B. gravity. After melting together the fats they are clarified by agitating with fuller's earth and filtering. After refining, the mixture is run over cooling cylinders, agitated, and drawn off into containers and allowed to congeal.

An interview with the parties interested in the patent elicited the fact that they do not claim for the mineral oil nutritious properties. They admit that most of it will probably pass the intestines unchanged, but also hold that it will act as a lubricant and healing agent if the mucous coat be inflamed. The mineral oil will serve as a fatty vehicle, and "shortening," and will supplant much of the true fat which, in the opinion of the inventor, is unwholesome, because in the stomach it decomposes into "putrid" acid. It is said that this stuff, which is intended for the poorer classes, can be sold to consumers for 6 cents or less per pound.

A Powerful Refrigerator.

There are few things which annoy chemists so much as the difficulty of getting low temperatures when ice is not obtainable, and it is not easy making ice either, but H. N. Warren, in a *Chemical News* note, states that it can be readily obtained as follows:—"Take a fractional-distillation flask, and place it in the desired quantity of water which it is intended to freeze, contained in a suitable receptacle. Through the neck of the flask insert a rubber tube terminating in a glass point, which should all but touch the surface of the liquid contained in the flask, which consists of about 20 c.c. of an equal mixture of ether and carbon disulphide. The further end of the rubber is now connected to a pair of constant bellows, and a brisk current of air continued for about three minutes; almost immediately the thermometer will sink to zero, the vapor of the mixture introduced escaping through the small tubular of the flask, whilst the outside vessel, containing the water, will be found to have become inseparable owing to the thickness of the ice formed. A litre of water can be frozen in half an hour.

A DELICATE TEST FOR COPPER, depending on the formation of a cuprous bromide, is given by Sabatier as follows:—Into 1 ccm. of concentrated hydrobromic acid allow to flow two drops of the liquid to be tested; if copper is present a purple to light violet coloration will instantly appear.—*Rip. Patr.*



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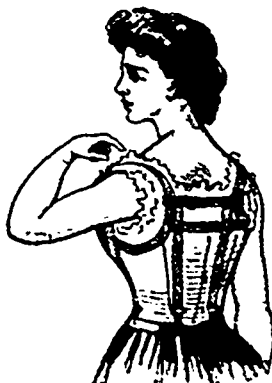
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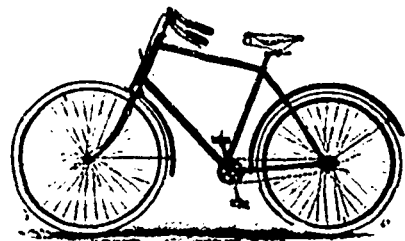
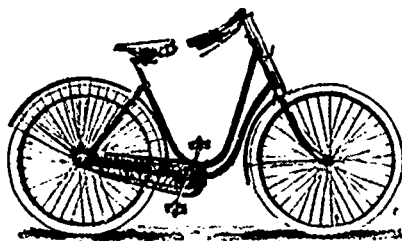
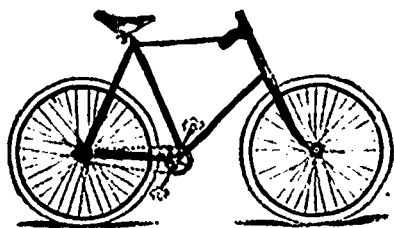
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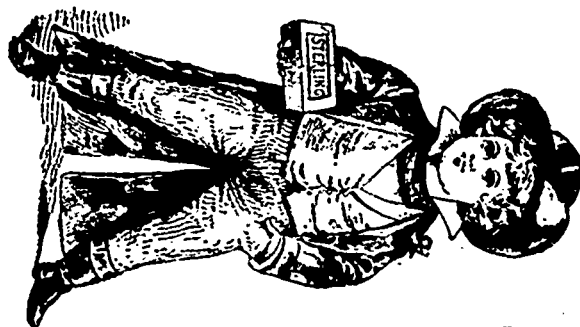
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Botany as a Pharmaceutical Subject—Useful or Otherwise?

ERNEST A. HODGE.

Read at a meeting of the Plymouth and District Chemists Assistants' Association.

To the average student aspiring to pharmaceutical honors the study of botany presents itself as being a dry and laborious task—a cramming into one's head of a mixture of lengthy Latin names and incomprehensible terms. Should the student not be in the least way interested in the subject, the effort to read, mark, learn and inwardly digest a chapter of "Bentley" or "Prantl" becomes somewhat difficult.

How or why this subject should be necessary to a pharmacist's training does not concern the candidates; it suffices that it is so. The "powers that be" at Bloomsbury Square have decreed it, and who shall question?

We often hear the query: Of what use is it? According to the individual views of the one questioned, so the answer will be. If the individual whose opinion is solicited on this question happens to be a devoted student of that portion of nature treated of in the science of botany, he will no doubt answer that it is most decidedly useful, in that it helps one to more freely understand and appreciate the work and progress of natural life in the vegetable kingdom, noting, by the way, how nearly it is allied to animal life. It enables one to watch with interest the changes of the seasons; the life of the plant is observed in the "budding" of spring, the "flowering" of summer, the "fading" of autumn, and the "deadness" of winter, all exemplified in our commonest trees and plants. These changes in plant life are apparent to everyone, but to the botanist they are doubly interesting, as in botany, as a science, he has a "peep behind the scenes," and the commonest herb has a history. To trace the opening of the buds, the expanding of the flowers, and the ripening of the fruit is no waste of time; even the cryptogamic mosses and lichens have their varied stages of life and development, and although by the casual observer they are regarded as useless and parasitic growths, yet the formation and development of these lower forms of vegetable life is a branch of study in itself.

Now, if the one questioned on the usefulness of botany happened to be one who took no interest in the "flowers that bloom in the spring," and for whom the change of nature's aspect has no charm, the answer would unhesitatingly be far from favorable. The subject would at once be voted as dry and uninteresting; one to be studied more from necessity than choice.

It has been called the "ladies' subject," and it is true that, on the whole, the majority of botanical students are ladies, owing no doubt to the fact that ladies generally have plenty of time and opportunities to the more thoroughly study it, and

therefore to the better appreciate and apply their knowledge.

The principle question before us just now, however, is: How botany stands with regard to "things pharmaceutical?"

To the pharmacist—to the business man behind the counter—is botany useful? To express the answer briefly, and to the point, it would be: Before exam., yes; after, no. To use it as a "means to an end," that of passing the necessary examinations, was all very well, but very few of our pharmacists of to-day have the time or the inclination to continue their studies after having reached that end.

It is not to be compared with analytical chemistry as regards usefulness. The chemist often has occasion to make analyses for physicians and others, and that branch of the business may be well included under the head of "profitable extras," but to dissect a flower or leaf and bring his botanical knowledge into play, how often! Even the once valued microscope now stands as an emblem of student days, and rests in peace in its case, waiting to be used again by the next generation.

To the pharmaceutical student who has not as yet attempted the examinations, botany comes as a useful aid to the more important study of *Materia Medica*, which, by the way, is a subject with which the chemist comes in contact every day. By a knowledge of botany we are able to locate the exact part or tissue of the plant from which the drug is extracted, and to trace the causes of its formation and the various processes which go on in the internal tissues, helping to build up and sustain its growth. The formation of starch and sugar in plants are interesting instances, and the extraction and purification of these substances alone form important branches of industry.

Botanical nomenclature is somewhat difficult to the beginner, but on a deeper knowledge the terms used are easily understood. It, no doubt, seems rather a mouthful to describe a common "buttercup" as a "ranunculaceousthalamifloral dicotyledon of the Angiospermous division of Phanerogamia," but it is merely a matter of botanical classification.

Theory without practice in botany is of little use. To see is to know. When studying the parts of the flower, to have a real flower before us materially helps the retaining of the knowledge gained. Botanical excursions are to be encouraged and a country walk, however short, may be made interesting and profitable to the student by collecting and preserving any specimens which may be worth the while. Herbaria and botanical specimens are always useful, and, as an incentive to study, the Pharmaceutical Society offer every year a prize to their "students" for the best herbarium.

Mention should also be made of the advantages obtained by joining the classes promoted by the South Kensington Science and Art Department; the cost is comparatively very low, and the benefit obtained very great, as it gives one a ground-

work on which to work for the Pharmaceutical Examinations, which are becoming harder each year. Therefore, every opportunity should be taken, and every offer accepted, which would at all tend towards making examinations less of a difficulty than they are at present.

Botany, as a science, is of great service in agriculture; the knowledge of what to sow and when to sow it is an important item to the farmer. The richness of the ground, with regard to the power of sustaining nourishment for a certain class of grain and produce, has to be considered, and by the "rotation of crops" all material in the ground is utilised for the particular plants for which it is suited. In this case we see how useful a little botanical knowledge is to the practical agriculturist. In pharmacy, we seldom if ever have occasion to put any of our botany to a practical use, whereas chemistry, dispensing and practical pharmacy are all ways with us in the every day routine of a chemist's business.

Therefore, it follows that it is in our preparation days that botany is most useful as a pharmaceutical subject. That being so, junior sections of our associations would do well to aid and encourage its members in this study, especially in provincial towns and districts, where better facilities are afforded for practical work. Each season has its own special feature, and the subject is one which can be kept up with but little effort all the year round. Evenings, during apprenticeship and as assistants, might be occasionally spent to some good by glancing over the syllabus and applying themselves to a little preparatory work. Were this done more whilst time is plentiful, and by degrees, there would be less of the necessary "cram" which is so apparent at the examinations just now, with the result that the percentage of failures is very great. A suggestion by one of the Pharmaceutical Council at a recent meeting to the effect that "no candidate should enter for the Minor examination unless he had been a period of not less than six months at a school" is a step in view of preventing the really unprepared from risking their money and success. Whether or not the embryo pharmacists will look at it in that light it is not for another to say, but in the words of Guicciardini, "Let us remember how easy it is to lose opportunities and how difficult to regain them, therefore, when they present themselves, it is the more necessary to make every effort to regain them."—*Brit. and Col. Druggist*.

ORANGES AS SOAP. - Housewives in Florida scrub their floors with oranges. In almost any town in the orange-growing districts women may be seen using fruit exactly as we use soap. They cut the orange in halves, and rub the flat exposed pulp on the floor. The acid in the oranges does the cleansing, and does it well, for the boards are as white as snow after the application.—*Scientific American Supplement*.

Forgotten Friends, or Good Remedies Out of Fashion Reintroduced to Pharmacy.

DR. J. R. BLACKHAM, IN BRITISH AND COLONIAL DRUGGIST.

(Continued from Page 178, June No., 1894.)

MENYANTHES.—Buckbean, or marsh trefoil, has been already referred to. It is interesting to note that it is used in Silesia as a substitute for hops in beer.

MUCUNA PRURIENS.—The hairs of the fruit of this member of the *Leguminosae* were formerly much prescribed as a mechanical anthelmintic against the round worm. Cowhage is now chiefly used by practical jokers on account of its intensely irritating effect on the epidermis. The dose of the drug is $\frac{1}{2}$ to 1 drachm.

OIL OF CADE.—The mystery which long surrounded the origin of this remedy has at last been cleared up. It is prepared by the peasantry of Var, in the South of France, by the destructive distillation of the wood of the *Juniperus oxycedrus*. It has long been used in eczema and psoriasis, but has lately been popularized for several skin affections by the illustrious and indefatigable Unna of Hamburg.

OLIBANUM.—The gum-resin of the *Boswellia thurifera*, natural order, *Amyridaceae*, better known as the frankincense of the Bible, constitutes the chief ingredient in a popular, patent plaster, and was formerly used for the same purposes as benzoin, to which it is infinitely inferior as a therapeutic agent.

ORIGANUM VULGARE.—Wild thyme, or wild marjoram, is an excellent aromatic carminative. On account of its cheapness the writer finds it an excellent thing for disguising simple liniments such as lin. ammoniac and lin. saponis in prescriptions. The best embrocation for chest affections in young children is the following modification of Roche's embrocation introduced by Dr. Blackham:—

Take of

Oil of amber..... $\bar{3}$ i.
Oil of origanum..... $\bar{3}$ ss.
Oil of rape..... $\bar{3}$ iss.

Mix. Infundandum bene.

PIPER LONGUM.—The dried spadicies of the *Charica Roxburghii* or *officinarium* (natural order, *Piperaceae*) were formerly ingredients of many pharmacopoeial preparations, but are now omitted. Long pepper is a much less irritating stimulating carminative than the official pepper.

PISTACHIO.—The oil of the kernel of the *Pistachio vera* (natural order, *Anacardiaceae*) is an excellent demulcent. Pistachio nuts are used as a desert all over the East.

PIX NIGRA.—Black pitch, the residue left after the distillation of the *Pinus sylvestris*, is used internally as a diuretic stimulant and alterative. The ointment (1 in 5) often succeeds when tar ointment fails.

PLANTAGO LANCEOLATA.—Plantain or ribbed grass is used by the peasantry of

Ireland as a hemostatic. It seems to be quite as useful as matico in this direction, but will probably never become popular as it is unfortunately cheap and indigenous.

PLUCARIA HELMENTHOCORTON.—Corsican moss is a favorite remedy among the natives of Corsica for the *Ascaris lumbricoles*, or round worm. The moss, which consists of a mixture of several alga and minute marine animals, is administered in wineglassful doses of an ounce to the pint decoction.

PRUNUS VIRGINIANA.—The wild cherry is official in the United States, and one of the most largely prescribed sedative expectorants of the modern *materia medica*. Its chief utility is in checking the cough and sweating of phthisis, but on account of the prussic acid which it contains, must be cautiously prescribed, as it depresses the action of the heart. It is indicated in atonic dyspepsia and general debility, as it increases the vascularity and secretion of the gastric mucous membrane.

PULSATILLA.—The meadow anemone has been recommended in so many different directions that one is likely to be sceptical of them all. It has been used in puerperal convulsions, difficult menstruation, and neuralgia by the writer with varying success. Its utility in acute epididymitis was demonstrated in two cases under my care, in which the inflammation rapidly subsided under two minim doses of the U.S.P. tincture every two hours.

RHINACANTHUS COMMUNIS.—The leaves of the well-known Hong-Pang-Chong are used in India as a specific for ring-worm and other parasitic skin diseases in the form of a paste made with lemon juice. I recommend the tincture (1 in 10) as a valuable addition to our armamentarium against eczema, psoriasis and favus.

RHODODENDRON CHRYSANTHEMUM.—The heath oleander or rosebay, from the snowy steppes of the Caucasus, is a valuable stimulant and alterative in rheumatism and gout, extensively used by the natives and exiles of Siberia. A fresh decoction of the leaves is prepared by boiling 3 ounces of the leaves in a pint of water and two wineglassfuls (5 ounces) of this is taken every morning.

RHUS AROMATICA.—The Fragrant Sumach is an empirical remedy for bladder inflammation, incontinence of urine, bleeding from uterus, and dysentery. It should be distinguished from another tree to which the name Sumach is given, namely the *Rhus cotinus*, or wild olive, which is only used as a yellow dye and for tanning leather; and from Shumach, the poison oak or poison ivy, which is a powerful irritant poison. The fresh leaves of this plant, botanically known as the *Rhus toxicodendron*, produce great cutaneous irritation, even on the slightest touch, followed by intense pain and swelling, resembling that produced by the sting of a wasp.

RUMEX CRISPIUS.—The common, or garden yellow dock, is a therapeutic agent of no mean value, closely resembling rhubarb in its stomachic and laxative properties. Like rhubarb it first acts as a stimulant to the intestines and then as an astringent, and is accordingly almost a specific for the irritative diarrhoea of children.

SAGAPENUM FERULA.—The gum resin exuding from the bark of this umbelliferous tree was introduced during the last century as a substitute for assafetida. I have obtained a small quantity with some difficulty from Persia, and am now experimenting with it as an antispasmodic and stimulating carminative.

SALEP.—The tubercles of the *Orchis mascula*, and other species of the *Orchidaceae* have been largely imported from the Levant and attributed with many medicinal properties. They are merely demulcent and emollient, and may be partaken of *ad libitum*.

SANGUIS DRACONIS.—Dragon's blood, the resinous exudation from the stem of the *Calamus Draco* and other palms, is highly esteemed by the natives of Java and Socotra in the treatment of malaria and dysentery. In this country it has somehow or other obtained a reputation among the laity as an ebolic or abortive, and I have at present in my case-book notes of a case in which a servant girl made herself seriously ill by taking large quantities of the drug to produce abortion. This supposed virtue of dragon's blood is referred to in an old book on the *materia medica*, published in Paris in the last century, but I can find no reference to it among the so called authorities on the subject.

SARRACENIA PURPUREA.—The purple pitcher plant, a member of the rare order of *Sarraceniaceae*, from the United States, has been used with excellent results in several epidemics as a prophylactic against, and remedy for, small-pox. The fresh infusion is the most reliable preparation. It is prepared by infusing one ounce of the leaves and rhizome in 10 ounces of water for one hour, and should be given in ounce doses every two or three hours. I would be very grateful if some of my readers abroad would experiment with the drug and report progress to the editor or to me.

SIMARUBA AMARA.—The bark of the mountain damson (natural order *Simarubaceae*) is largely used by the natives of Jamaica and other West Indian Islands, as a bitter tonic in dyspepsia and debility, and during convalescence from malarial and other fevers. One ounce of the fresh infusion, prepared by macerating half an ounce of the powdered bark in a pint of boiling water for one hour, is administered every four to six hours.

(To be continued.)

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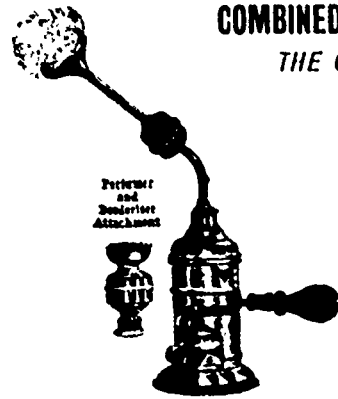
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Russian liquorice, coarsely powdered 3xxxii
 Alcohol, 90 per cent. 3xxxviii
 Water sufficient

Pour 10½ pints of cold water over the liquorice, allow to stand for four hours stirring frequently and then press out. Extract the press cake with 3½ pints of boiling water and again press out. Mix the two liquid extracts and at once evaporate to 16 ounces and add to the solution while hot 38 fluid ounces and allow to stand for 24 hours. Then filter through paper and from the filtrate distill off 20½ fluid ounces. Evaporate the residue to a medium thick extract consistence. The extract is completely soluble in water.—*E. Dieterich in American Druggist.*

ODOURLESS IODOFORM.

According to *Lucas Champomiere*, the penetrating odour of Iodoform can be successfully masked in the following combination:—

Iodoform	} Equal parts.
Powdered benzoïn	
“ cinchona	
Mag. Carbonas	

made up with a little eucalyptis oil.—*Women's Medical Journal.*

VIN DE VIOL.

This French preparation, which claims to be a “restorative tonic of quinine, meat juice and phosphate of lime,” has the following formula, according to the *Apotheker Zeitung*:

Calcium lactophosphate	10 parts
Iron-ammonium citrate	3 parts
Beef extract	3 parts
Extract of cinchona	10 parts
Sherry wine	250 parts
Malaga wine	250 parts

Mix.

A NEW DEPILETORY.

A paste of sulphide of barium is recommended as a depilatory by *Leistikow*. To prepare the sulphide, sulphate of barium, charcoal, linseed oil are made up into a thick paste and strongly heated; a dark blue mass consisting largely of BaS is obtained, and this is finely powdered. The sulphide is then mixed with oxide of zinc and starch, the following proportions being adopted:—

Barium Sulphide	10 parts
Zinc Oxide	5 parts
Starch	5 parts

The ingredients are made into a thin paste with water and spread by a spatula or other suitable means upon the face or where depilation is desired. When quite dry—which takes about ten minutes—the paste is washed off and the surface of the skin will then be found perfectly smooth and free from hairs.—*Monats fur prakt. Dermat.*

A POLISH FOR FINGER NAILS.

For this purpose oleate of tin coloured with carmine and perfumed with otto of

roses is recommended. To prepare the oleate of tin a ten per cent. solution of stannous chloride is decomposed by addition of a solution of olive oil soap, the precipitate well washed, and, after drying, coloured and perfumed.—*Pharm. Ztg.*

RUSSIAN FURNITURE VARNISH.

Shellac	200 grains
Rosin	13 grains
Absolute alcohol	500 grains
Turpentine	40 grains
Powdered tale	30 grains

Warm the shellac and rosin, add the absolute alcohol and finally the turpentine and tale. Shake for several minutes vigorously and stand in a cool place. After eight days filter through a filter which has been previously wetted with alcohol.—*Amer. Druggist.*

DENTIFRICE LEFOULON.

The *Eau dentifrice de Lefoulon*, has, according to the *Drogisten Zeitung*, the following formula:

Tincture of vanilla	15 parts
Tincture of pelitory	125 parts
Spirit of peppermint	30 parts
Spirit of rosemary	30 parts
Essence of rose	60 parts

Mix. Twenty to thirty drops to a glass of water makes a fragrant and elegant dentifrice.

MOSQUITO OIL FOR HORSES.

Carbolic acid (or better, cresol)	10.0
Oil camphor (volatile)	10.0
Oil pennyroyal	20.0
Glycerin	20.0
Oil tar	40.0
Lard oil	50.0

ANTI-MOSQUITO PASTILES.

Carbolic acid	40.0
Potassium nitrate	80.0
Insect powder	250.0
Charcoal	500.0

Make a paste with tragacanth and mold into pastiles.

MOSQUITOFOGUE.

1.—Carbolic acid	6.0
Oil peppermint	12.0
Oil camphor (volatile)	12.0
Glycerin	12.0
Oil tar	21.0
Oil olive	21.0
2.—Ammonia	10.0
Glycerin	20.0
Oil pennyroyal	40.0
Oil olive	60.0

This is a favorite with sportsmen.

ANTI-MOSQUITO AND FLEA-BITE SOLUTION.

(Meyer Bros., Drug.)

Menthol	15.0
Oil spearmint	30.0
Camphor	40.0
Oil wintergreen	75.0
Oil bergamot	75.0
Oil cinnamon	100.0
Oil origanum	125.0
Oil pennyroyal	125.0
Oil amber	125.0
Petroleum (Oleum petre)	1000.0

Let stand for one month and filter.

CHLOROFORM AND WATER.—Add a little saponine to the chloroform, agitate, and then agitate with a small quantity of water. The chloroform emulsifies, and the emulsion can forthwith be mixed with water in all proportions.

Selected Recipes.

TO POLISH PLATE GLASS.—Rub the surface gently with a clean pad of cotton wool, then cover the pad with cotton velvet, charged with fine rouge, and again rub the glass until it has acquired a beautiful bright polish, without scratches.

BLACK WALNUT STAIN.—An excellent black walnut stain is made as follows: One quart of asphaltum, one ounce of burnt umber in oil, mix with one quart of turpentine. If too strong, add more turps. Try it on whitewood.

TO CLEAN SEAFARING MARBLE.—Two ounces of carbonate of soda in one quart of cold water; brush the marble with a clean brush dipped in this solution, rinsing constantly with clean water.

TO WRITE ON GLASS.—To make an ink that will write on glass. Dissolve some ammonium fluoride in water, and then mix it well with three times its weight of barium sulphate.

CEMENT FOR GLASS.—To make cement for mending glass or china without leaving black marks: Mix up one and a half ounces gum sandrac, one and a half ounces white shellac and half gill methy-lated spirits.

A New Mercurial Soap, for Use in Venereal Diseases.

M. Monties, at the request of Dr. Audry, has prepared a new soft mercurial soap for use in venereal diseases, which is said to be wonderfully efficacious. The following, according to the *Revue internationale de Bibliographie*, is his method of procedure.

Liquor potassæ	100 gm.
Liquor sodæ	40 gm.
Oil of sweet almond	300 parts

Unite the liquors and add the mixture little by little to the oil, agitating after each addition. Put the mixture in a water bath, raise to a temperature of 90° to 100° C., and keep them there for three or four hours, agitating frequently. Pour into a large mortar and expose to the air at a temperature of from 20° to 25° C. (70°-80° F). Gradually the pomado assumes the consistency of lard. Into this soap incorporate the desired quantity of calomel, thus:

Soft soap, as above	100 parts
Calomel	60 parts
Oil of sweet almond	20 parts

Mix and incorporate.

Experiment shows that frictions with this preparation are rapidly absorbed, and that it answers as well as the ointment made with Neapolitan unguent of the Codex. It is readily washed off from the hands and implements with plain water, which is one great advantage.—*National Druggist.*

M. Hollandt says that spermaceti may be obtained in the shape of an impalpable powder by melting it at a very gentle heat, pouring it into a warm mortar, and agitating it until perfectly cold.

Photographic Notes

PACKING EXPOSED PLATES.—The following remedy is given for plates which have been damaged by the film having come in contact with printed paper, and have in consequence received an impression. They should be washed for some time in a from two to four per cent. solution of glacial acetic acid, then well washed, immersed in alcohol, and developed in a vigorous developer.—*Amer. St. Photo.*

* *

TO ENAMEL SILVER PRINTS.—Dr. Leo Backland commends the following process in the *Scientific American*.—Clean glass plates are rubbed in with talc as for the usual process, and afterwards the plates are collodionised with 1-per-cent. collodion. When the layer is perfectly dry the plate is coated a second time, with a 1-per-cent solution of Para rubber in benzole. When the indiarubber coating is dry the plate is ready for receiving the print. If the print is on albumen paper, it is soaked in a warm 10-per-cent. solution of good gelatine, after which it is applied with its surface on the prepared plate, softly squeegeed upon it, and then allowed to dry, and when strictly dry it is stripped off in the usual way. Prints on aristotype paper can be enamelled with much less trouble by squeegeeing them simply when wet on the glass plate coated with collodion and rubber and slipping them off when dry.

* *

DR. MERRUE has suggested the following as a substitute for aqueous mountants for gelatino-chloride prints which have a high gloss:—

Alcohol	100 parts.
Shellac	30 parts.
Mastic	5 parts.

* *

MOUNTING SILVER PRINTS ON THIN PAPER.—Dry the prints and damp the paper *slightly*. Then mount the dry prints with the following:—

Nelson's No. 1 soluble gelatine.....	2 parts
Water	9 parts
Methylated spirits	8 parts

Soak the gelatine in the water, and then heat to dissolve. Add the spirit gradually, stirring all the time. This mountant keeps well. Put a thin coating of the solution while hot on the back of the print, and place down on the paper. Cover the whole with blotting paper, and keep under pressure until dry.—*The Photogram.*

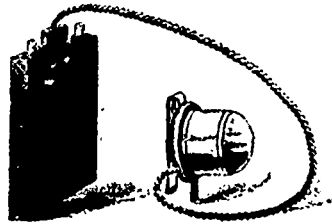
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AN EXTEMPORIZED FLASH LAMP.—*Photographic Work* says: "The smoker and spirit drinker may readily extemporize a magnesium flash lamp. All that is necessary is to take the tobacco pipe, to wrap a wisp of rag round the outer edge of the bowl, and to put a few grains of magnesium powder in the bowl of the pipe; the wisp of rag is saturated with strong spirit and, this latter lighted, all that is necessary is to send a sudden stream of air

through the stem of the pipe. Whether the operator uses a compression bulb for this air supply, or whether he supplies the air by blowing, must remain a question of expediency; but if the latter course is ventured upon, it is very advisable to shut the eyes, especially if the pipe is short.

Portable Electric Safety Lamp.

The accompanying cut shows a new electric safety lamp which is especially suitable for use by photographers in the dark room. It consists of a three-cell battery with lamp attached, as given



in the illustration. This lamp is also admirably adapted to the use of surgeons' and dentists' work, and also for bicyclists. It is manufactured by the Galvanic Battery Works, of Toronto.

Micro-Photography.

WILLIAM WOLSTENHOLME.

The following simple process has been found to answer well for obtaining micro-photographs, and it may be useful to pharmacists possessing an ordinary quarter or half plate camera and a microscope.

Remove from the camera the lens and the cross front; cut a thin piece of hard and well seasoned wood to the exact size of the cross front, and make it to accurately slide in its place. In the centre of this wood cut a hole a little larger than the eyepiece of the microscope. To fit this hole carefully make a short tube, about three inches long, from a piece of black cloth sewn together, and if necessary made double to render light tight. It may be fixed to the wood by means of glue, but must not pass so far through the hole as to prevent the arrangement sliding into the camera. If preferred the tube may have a few short slits cut in it and be glued on outside the whole, then another piece of wood be made with a hole just large enough to slip over the cloth tube, and the whole firmly secured by means of glue and a few small rivets.

To use the arrangement, slide it into the front of the camera, slip the cloth tube over the eye-piece of the microscope, and firmly tie a piece of tape round, or use an elastic band to secure it. If the microscope can be placed horizontally, all that is necessary is to place it and the camera on a table, raising either the camera or microscope as required.

Get a good light on the object, and focus till sharp on the ground glass, then put in the plate with very great caution to prevent movement of the apparatus. With ordinary slow plates expose from

one to ten minutes, according to subject and light. Hydroquinone development answers well. To produce a clear negative, the space between the object glass and the object should be so shaded as to prevent any light entering the tube excepting that which passes through the object.—*Phar. Jour. and Trans.*

Some Recent Advances in Photographic Chemistry.

CHAPMAN JONES.

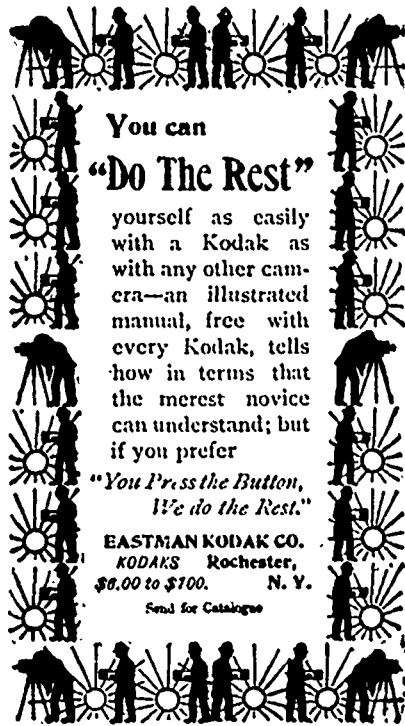
Read at a meeting of the Society of Arts.

Photography, as ordinarily practised, is an empirical art. Although it is founded upon, and intimately connected with, certain branches of chemistry and optics, very few photographers know anything of these sciences. The ordinary practitioner, whether amateur or professional, works entirely by rule of thumb, and is guided by tradition rather than by reason. It is natural, and perhaps necessary, that this should have been so at first, but it must be allowed that the sooner the art is put upon a sure foundation the better, though doubtless there will always remain some who will prefer the old ways.

There is now a larger amount of scientific work being done in connection with photography than heretofore, and I would suggest that the time has come when we should make a determined effort to get rid of uncertain and obscure processes in serious work. When one's only aim is amusement, then, of course, there must remain free liberty to follow any fancy, but for the production of valuable records of any sort, whether pictorial or otherwise, I think the time has come when photographers ought to avail themselves to the fullest extent of all the scientific knowledge at their disposal. Any who are unable to guide themselves should, as is usual in other industries, seek the advice of those who are able to give them assistance.

As an example of the disastrous effects of working in the dark, I may say that I have heard of photographers, both amateur and professional, who have many large and valuable negatives intensified by the mercury and silver cyanide process that has so much changed from their original condition as to cause grave anxiety. It would have been wise, though perhaps hardly possible, if photographers had declined to use this process until it had been properly investigated by a chemist. Then no trouble would have ensued.

We may for convenience sake, with reference to the majority of photographic operations, divide the photographer's work into two parts, namely, the making of the negative and the making of the print. If we except those cases in which, for scientific purposes, the negative itself is preserved as the record, as, for example, in spectrum work, then the end and aim of the photographer is the preparation of the print, and the negative is nothing more than the tool used in its production. In this sense, therefore, the print is of



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much more importance than the negative. It should be of a permanent character, while the tool used in the making of it may perfectly serve its purpose, though it were so short-lived as to fade away immediately after it had yielded the print. But it is convenient, and often of great importance from an industrial point of view, that the negative shall be stable. And if the negative is not right the print must be wrong, and if the negative is produced by uncertain processes, we never can tell what the print will be. The science of negative-making becomes therefore, I think, of as much importance as the science of printing processes. As the chemistry of these latter has received enough attention to enable anyone to make prints that are perfect from a chemical point of view, while the chemistry of negative-making has been very largely neglected, I have spent a good deal of time during the last few years in examining some of the operations in common use, and propose to look at one of two matters in connection with the chemistry of negative-making on gelatin plates.

The silver bromide particles held in the gelatine film are so changed by suitable exposure to light, that the developer is able to take away the bromine from them. In a chemically perfect negative, after fixing and washing, the image will consist of pure metallic silver, and it does not matter at all where the bromine has gone or what changes it has produced in the developer so long as no trace of it, or what it leads to, remains behind. But when bromine is added to an alkaline solution of pyrogallie acid, it produces a brown color, and as there is most bromine removed where there is most silver deposited, the brown coloring matter will be, roughly speaking, proportional in quantity to the density of the negative, unless some of it is removed. There is, perhaps, no *prima facie* reason why an image of this composite character should be objected to. Indeed, the presence of this brown stuff may improve the negative if the film has too little silver in it to give proper density alone, or if the exposure has been too short to change a sufficient amount of the silver bromide into the developable condition, or if the development has been unduly curtailed. It is easy to see, therefore, that a cheap manufacturer, and an incompetent, rule-of-thumb photographer, may have definite reason for advocating the use of stain-producing developers. But to rely upon staining matter in the making of negatives is to lean upon a broken reed. The residues obtained by the partial destruction of some complex organic substances are almost pitchy in character, and seem to be very unalterable by ordinary atmospheric influences. But the staining matter produced by the oxidation of developers, so far as I have yet discovered, is never of this kind. Pyrogallie acid generally yields brown products, inclining sometimes to red and sometimes to yellow; but twice I have obtained solutions of so fine a deep blue color, that it might have been mistaken for Prussian

blue. These blue colors, on standing for a few hours, faded to a yellowish-brown. The deep reddish-brown color obtained by simple aerial oxidation of a solution of pyrogallie acid and sodium carbonate, becomes perceptibly lighter in a day or two when bottled up, and in a week or so may have lost perhaps half the depth of its color. I think one is quite justified in saying that neither the quantity nor the quality of these staining matters can be controlled, and that, therefore, they ought to be rigorously excluded, or perfectly removed, from every negative of value.

And these are far from being all the reasons why the presence of staining matter in negatives should be avoided. A silver image is reliable, and can be chemically worked upon with perfect certainty as may be desired. But staining matter cannot form a foundation for after work, and it will suffer change with almost every operation upon the negative. Its color will change and re-change, and by washing it will, under some circumstances, be partly removed. We know very well that when a part of the image is removed by applications to the surface of the film, the shadows lose a greater proportion of density than the lights, because the dark detail is in the upper or outer service of the film only, and so is more easily attacked. Therefore, granting for the moment that a negative with an image that consists partly of staining matter has correct gradation, if a part of the staining matter is removed the gradation will be falsified, and this alone would be sufficient reason for condemning the use of staining matter in negative-making.

There is another source of staining matter, namely, the oxidation of the developer by its exposure to the air during development. The coloring matters so produced may or may not be the same as those resulting from the action of bromine, but, so far as my experiments go, they behave in a similar manner with reference to those changes that are of practical interest to photographers. The darkened solution will soak into the gelatin and color it more or less uniformly, and it appears that it may perhaps also intensify the image by deposition upon it, if we take into account recently published experiments. Mr. A. W. Dolland* has shown how by the use of glycerin gold may be deposited upon the metal in a platinum print, the platinum apparently remaining quite unaffected, and merely determining by "contact action" the precipitation of the gold from a solution that is ready to deposit it upon the least disturbance. Mr. E. J. Wall† has confirmed the result of earlier workers, who found that silver might be similarly deposited. And, coming still more closely to the point under discussion, Dr. R. E. Liesegang‡ has recently observed that substances of the na-

ture of pigments may be deposited upon a metallic basis in an analogous manner. He found that the staining matter produced by the aerial oxidation of pyrogallie acid, hydroquinone, and similar substances in alkaline solution, would deposit upon and intensify the image of a silver print. A solution of amidol with carbonate of soda he found would deposit coloured oxidation products upon the image of a platinum print. It is, therefore, but natural to suppose that probably some times the staining matters produced by aerial oxidation in developers will deposit upon the image in negatives, and add to the oxidation products that are already there, produced by the action of the bromine, as before described. I have made one experiment in this direction by soaking part of a negative in an alkaline solution of pyrogallie acid, allowing it to remain until the solution and the negative were both well coloured, and then washing for a short time. The colour, of course, retarded printing, but I could not discover any intensification effect. It is possible that the staining matter produced by aerial oxidation may attach itself more readily to the image when the image is freshly formed, or it may be that it does not attach itself to the image at all under the conditions which hold during development.

Every photographer knows how to set to work to avoid the production of staining matter, but I think that very few know how to get rid of it when it is in a negative. The usual method is to apply an acid solution a so-called "clearing solution." The stain may disappear, and then the photographer imagines that it has gone. The error of this empirical and rule-of-thumb method can be easily demonstrated. If hydrochloric acid, sulphuric acid, sulphurous acid, or alum is added to an oxidised alkaline solution of pyrogallie acid, the brown color is changed to a lighter brown, and immediately a yellowish insoluble matter begins to fall out of solution, and continues to increase in quantity for some considerable time. In a negative where there is not much stain this change of color may cause it to disappear, and the superficial observer would then think that he had got rid of it, while really he had made it, or a large part of it, more permanent than before by rendering it insoluble. It is easily shown that this precipitated matter generally constitutes a very important part of the staining material, by dissolving it in sodium carbonate and comparing the color so obtained with that of the original, or of the part not precipitated. Citric acid differs from the acids mentioned above, in that it gives no precipitate, but citric acid and alum together give a copious precipitate even when the quantity added is many times more than sufficient to render the solution strongly acid.

It appears, however, to be possible in aggravated cases to get a small residuum of stain from the use of pyrogallie acid, and rather more from the use of hydroquinone, which it is very difficult indeed,

*Journal of the Photographic Society, N. S., xviii., 189.

†Journal of the Photographic Society, N. S., xviii., 184.

‡Photographic Work, iii., 121.

if not impossible, to remove. This residual stain I find to be quite unaffected in appearance by any of the usual clearing solutions, unless they contain iron, and then the color is somewhat changed in tint, and, if anything, a little darkened. It may be remarked also that staining matters vary somewhat, and that exceptions may be found to the results that I have described, but I believe that such exceptions, if any exist, will be found so rarely that it will be practically impossible to take cognizance of them in framing rules for general work. Ferrrous oxalate has often been recommended as the most perfect developer when stainless negatives are desired, but although ferrrous oxalate is a very useful reagent, I cannot confirm the superiority that is claimed for it. Every developer in use will give clean, grayish-black negatives if properly employed, but by making a careful comparison of ferrrous oxalate with eikonogen on a plain gelatin film, I find the iron developer to leave a slight color, which is very difficult, if at all possible, to remove, while the eikonogen leaves none. I have no doubt whatever that metol, amidol, and rodinal would all show a like, if not a more marked, superiority. It may be observed that in making such comparisons it is necessary to use a simple gelatin film, because the stain left by ferrrous oxalate, when it is applied in the same manner as is usual in development, is easily masked; and it should be understood, too, that the difference is slight. Still, what difference there is, is in favor of the alkaline developer.

The rules for practical work that I have deduced from my experiments I have followed for some years with uniform success, nor have I ever heard of dissatisfaction from those who have accepted my suggestions in this matter. I believe that the greatest freedom from stains due to the developer is secured by the use of an alkaline developer with sufficient sulphite, and fixing in a solution of hyposulphite to which sodium sulphite and sodium carbonate have been added. A very few minutes' washing between development and fixing is sufficient, but the fixing solution should not be used after it gets dirty and discolored. After thorough fixing should follow a thorough washing, and with a well-coated plate this will be a matter of two or three hours or more. By this method any staining matter is kept in its most conspicuous form, and in its soluble, and therefore most readily removable, condition; and it must surely be allowed that this is the right principle to work upon. Alum should never be used until the washing is finished, because it retards the washing; so called "clearing solutions" should not be used, both because they tend to make the stain less obvious, and they make its removal impossible; acid fixing baths should be avoided for the same reasons, and if they harden the film their use is still more detrimental, because in doing so they render the washing more tedious or less perfect.

Having obtained a pure silver image, it

may be found that its density is not suitable. It is well that the density should never be too great, because there is no practically useful method of reducing it that does not alter the gradation. On the other hand, intensification is certain and easy, and does not falsify the gradation when done in a suitable manner. In papers read before the Photographic Society and the Society of Chemical Industry, I have detailed the chemistry of mercurial intensification, and shown that ferrous oxalate is the only reagent that can be relied upon to follow mercuric chloride. Potassium silver cyanide is not suitable, because the image it gives is not of constant composition, and is not permanent; ammonia is unreliable, because it gives images of complex and varying composition which cannot reasonably be expected to be permanent; all simple alkalis are out of the question; sodium sulphite gives a pure metallic image, but in smaller quantity than the original image, and often, therefore, gives no intensification effect; sodium hyposulphite also gives an image containing a less weight of metal than the original, and, besides, is likely to give very complicated unstable images if used sparingly. Ferrrous oxalate, on the other hand, is a perfect reagent, leaving every atom of silver in the original image with an atom of mercury added to it.

The most excellent point of this method of intensification is that, so far as I can discover, there is absolutely no loss of even the faintest detail, but a perfect and proportional action throughout. But this very excellence has proved a drawback in the hands of dirty workers, and workers with unclean plates. A silver stain will be intensified as well as the silver image, and must be so if the action is perfect. I know of no failure by this method not due to imperfect washing or other faulty work. But some photographers say they have found alkaline developers, or alkaline developers without the alkali (if the expression will pass), better than ferrrous oxalate, and they have recommended these reagents, I am sorry to say, without a knowledge of their action. If they work, as they are stated to do, "cleaner" than ferrrous oxalate, that is a pretty sure indication that they are less perfect, unless the only difference is due to the precipitation of the lime in the water when oxalate is used. I have tried many of these solutions, and none of them are reliable. By the use of them, mercury that out to be in the image is lost, and one cannot tell how much mercury will be so lost, nor from what part of the image it will come. It is hardly conceivable that the mercury lost can come proportionately from every part of the image, and if the loss is not proportional throughout, the density gradation of the negative is upset.

Sodium sulphite, when applied alone, removes both silver and mercury from the bleached image, but with a developing agent, whether with or without alkali, I have never found any silver in the solution.

Eikonogen alone I found to act very

slightly. With sulphite a great deal of mercury was lost. Eikonogen, 12 grains, sodium carbonate, 25 grains, and sodium sulphite, 25 grains, to water, 1 ounce, acted well, but 19 per cent. of the mercury was lost. Metol alone gave no perceptible action. Metol, 2 grains, sodium sulphite, 4 grains, to 1 ounce, acted well, but very much mercury was lost. Metol, 4 grains, sulphite and carbonate, 24 grains each, to 1 ounce, acted well, but 32 per cent. of the mercury was lost. Amidol, 2 grains, and sulphite, 20 grains to the ounce, worked well, and 10 per cent. of the mercury was lost. This appeared hopeful, so I tried amidol, 8, and sulphite, 20, but this was useless, as its effect was very slight indeed within a reasonable time. So I diminished the amidol instead of increasing it, and tried amidol, 1, and sulphite, 20. This worked well, but 42 per cent. of the mercury was lost. On mixing the amidol and sulphite, sulphurous acid is set free. By adding ammonia to the mixture a blue color appears when the alkali is in a little excess, and by adding ammonia in quantity, just insufficient to produce this color, a solution may be prepared that will remain slightly alkaline throughout the reaction. Such a solution acts very energetically, but a very large quantity of mercury was dissolved by it. Pyrogallie acid, 3 grains, sodium sulphite, 8 grains, ammonia, 3 minims to the ounce, gave a loss of 29 per cent. of the mercury, and the solution was much more colored than in any other case. Pyrogallie acid with sulphite slightly acidified was no better.

In some cases, as stated above, I have estimated the actual proportion of mercury in the solution, and therefore lost from the image, but these numbers must be taken as only giving a general idea of the amount. In some cases, by prolonging the action a little it would have been increased, and probably in no case would the same loss occur by repeating the experiment.

Thus I am obliged to come to the same conclusion now that I did when I first drew attention to the chemistry of mercurial intensification, namely, that ferrous oxalate is the only satisfactory reagent to follow the application of mercuric chloride. I show an example in which this method of intensification has been carried out on various parts of the same negative, once, twice, three times, and four times, without a suggestion of stain or trouble of any sort. It should be noted that this repeated application of process is a very severe test of its cleanness when properly carried out. If there had been the slightest false deposit of mercury at any stage, this would have been doubled by the next treatment, and increased to 4 times and to 8 times by successive treatments. Silver would have increased similarly, but to a still greater degree. I could show many negatives intensified by this process, but they are similar in appearance to unintensified negatives, and therefore would not be instructive.

(Concluded Next Month.)

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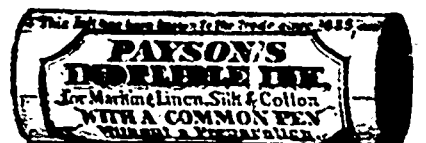
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Text Book of Medical and Pharmaceutical Chemistry. Third Edition by Elms H. Bartley, B. S., M. D., Dean and Professor of Organic Chemistry in the Brooklyn College of Pharmacy, etc., etc. The present edition of this work has of necessity been enlarged and the greater part rewritten, on account of the extended course of study in our pharmaceutical colleges and of the number of additions which it has been deemed advisable to make to the contents. A description is here given for the first time of a large number of synthetic compounds which makes the book more modern in its teaching and more useful for references. A chapter on Physiological and Clinical Chemistry has also been added, dealing with the chemistry of nutrition, foods, digestion and the urine. As a text-book for medical and pharmaceutical students during attendance at college and as a ready reference after graduation, it will be found especially valuable. The present edition is a work of 684 pages with 84 illustrations, containing also a glossary and complete index. Published by P. Blakiston, Son & Co., Philadelphia. Cloth, \$3.00.

Analyses of Twelve Thousand Prescriptions, by W. Martindale, F. C. S., joint author of the Extra Pharmacopœia. P. Cap. quarto. Two shillings and sixpence net. Published by H. K. Lewis, B. C., Gower-st., London, W. C., England.—(Notice of this work appears elsewhere.)

Ross & Co.'s Abridged Price List and Catalogue for 1894 is to hand, descriptive of the Photographic and Optical instrument supplied by them. Copies may be had by enclosing business card to Ross & Co., 111 New Bond-st., London W., England.

The Canadian Office and School Furniture Co.'s Catalogue just received, contains illustrations of the various lines manufactured by this well-known firm. Amongst those of special interest to our readers we would mention office furniture in desks, chairs, etc., shop fittings and furnishings, also the standard letter file, a useful and convenient addition to the business man's outfit.

We are in receipt of College Announcements from the Brooklyn College of Pharmacy, Brooklyn, N. Y., University of Minnesota, College of Pharmacy, Minneapolis, Minn., Philadelphia College of Pharmacy, Philadelphia, Pa., and Massachusetts College of Pharmacy, Boston, Mass.

Magazines.

An Attractive Magazine.

"What Constitutes a Good Husband" is discussed by a lot of clever women, among whom are Mary Hallock Foote, Elizabeth Stuart Phelps Ward, "The

Duchess," "Grace Greenwood" and Amelia E. Barr, in the July *Ladies' Home Journal*. "The Thirty and One" is the clever title of a delightful short story by Charles D. Lanier. Will N. Harben contributes "The Heresy of Abner Calihan," a strong study of life in the Tennessee mountains, which Alice Barber Stephens has illustrated most successfully. The biography of the number consists of sketches, with portraits, of Mrs. Wayland Hoyt and Mary Hartwell Catherwood. Frank R. Stockton gives two more of "Pomona's" characteristic letters to her old "Rudder Grango" mistress, and Mr. Howells' literary reminiscences under the title "My Literary Passions" grow in interest and charm. Robert J. Burdette is particularly happy in his "Making a Suburban Home." The editor gives a most interesting review of a new and unique Southern story and the Rev. T. De Witt Talmage writes of "When Things are Against Us." Miss Scovill's paper on "Feeding a Baby in Summer" will be found especially valuable to mothers. It is worth many times its price of ten cents. Published by The Curtis Publishing Company, of Philadelphia, for ten cents per number and one dollar per year.

What is Beauty? "Question of a Blind Man?"

Replied Aristotle. But Mrs. Sherwood says that it is "dynamite" in her article which opens the interesting pages of the July *Cosmopolitan*. Beauty is always a fascinating subject, and Mrs. Sherwood's discussion is an especially interesting one. That the July *Cosmopolitan* is a midsummer number is shown in many directions. Three short stories, including one of sport and adventure, two travel articles, and other light matter, make up 128 pages of charming summer reading.

Review of Reviews.

Among the topics of international interest in "The Progress of the World" department of the July *Review of Reviews* are the following. The Miners' Conference at Berlin, the fall of the Casimir-Perier Ministry in France, the Anglo-Belgian Agreement and the objections of France, the resignation of Stambuloff in Bulgaria, the problem of the British House of Lords, Ministerial changes in England, and the Inter Colonial Conference at Ottawa.

Frank Leslie's Popular Monthly for July, 1894.

"The Environs of Boston," is the attractive subject of an elaborate and picturesque paper by the Rev. Peter MacQueen, illustrated with over a score of views in the July number of *Frank Leslie's Popular Monthly*. Among the seasonable outdoor articles are Lee J. Vance's "Salmon Fishing in Canada," and an account of Alfred de Cordova's trained Carrier Pigeons. Edward Porritt writes interestingly of "Rural Life in England," Mary Titcomb tells "Something about Siam," and Christian M. Waage pleasantly recalls, with some illustrative sketches, "An Afternoon with Joaquin Miller."

Among the short stories is a characteristic one by Beatrice Harraden, author of "Ships that Pass in the Night."

Foreign Pharmaceutical Notes.

CODEINE SALTS. Phosphate of codeine contains 76 per cent. of alkaloid, and is soluble in four parts of water. Hydrochlorate contains 80 per cent., and is soluble in 20 parts of cold water, and sulphate contains 76 per cent. of alkaloid, and dissolves in 35 to 40 parts of cold water. The phosphate appears, then, to be most suitable for hypodermic use. *Repertoir de Pharmacie.*

SOLID PARAFFIN. The following information is given about the variety of this substance known as "ceresin." It occurs as a white, inodorous, tasteless, microcrystalline mass of specific gravity .920 to .910; melts at 74 to 80 C. It is soluble in 35 parts absolute alcohol, soluble in ether, amyl alcohol, sulphide of carbon, chloroform, and benzene. At ordinary temperatures it is unaffected by alkalis, H_2SO_4 , and HNO_3 . Warmed with HNO_3 it yields fatty acids. It consists essentially of the hydrocarbons nonacosane $C_{29}H_{60}$, cerosane $C_{30}H_{62}$, entriacontane $C_{31}H_{64}$, dotriacontane $C_{32}H_{66}$ and pentriacontane $C_{35}H_{72}$. *Repertoir de Pharmacie.*

THE DETECTION OF ATROPINE. In a paper on observations of the toxicological research for atropine, Dr. Fabris comes to the following conclusions. Strychnine in the presence of atropine marks the reactions of this latter, unless the proportion of atropine to strychnine be very large. When the quantities of these two alkaloids present together is very small, chemical evidence will give a negative result, whereas physiological tests will show the presence of both. Thus the necessity of a physiological test is shown again clearly. *Bulletin de la Societe Royale de Pharmacie.*

WATER ANALYSIS. Buchner, in a paper published in the *Chemiker Zeitung* some time back, urges that for the correct estimation of the hardness of water, whether due to magnesia or to lime, it should be taken at a temperature not exceeding 15 C. For at higher temperatures the latter, which is permanent at 15 will quickly disappear one which lasted for eight minutes at 15°, for example, disappearing in less than a minute at 25 C.—*Bulletin de la Societe Royale de Pharmacie.*

AN ADULTERATED PIGMENT. Rochefontaine had cause to examine a sample of rhodamine, one of the coal tar colors, and found it was adulterated with 71 per cent. of dextrine. The advanced price of many of these colors renders them very liable to adulteration, and we hope before long to publish some notes on them, as found in commerce.

VASELINE IN MICROSCOPY.—Gawaldowski proposes to replace cedar oil and other liquids used for oil immersion for objectives by vaseline, whose refractive index is 1.40.—*Rundschau.*

ATROPINE AND STRYCHNINE.—*Appropos* of our note on this subject above, it is worthy of note that Vitali's reaction for atropine (a violet color on treating the alkaloid at a warm temperature with HNO_3 , and then adding alcoholic potash) gives an almost identical result with strychnine and its salts. The color is almost identical.—*Repertoire de Pharmacie.*

Chinese Native Remedies.

"Native Medicines" generally figure as one of the leading departments of trade in the Custom House statistics of the Chinese ports. Very few European investigators have as yet tried to probe thoroughly and systematically the drugs that compose the extraordinary medley of Chinese materia medica, but occasionally we get a glimpse of certain of its ingredients in some consular report written by an official whose interests are sufficiently broad to cause him to look beyond the articles in which he, as a European, is specially interested. Consular Frascati, of Pakhoi, in Southern China, for instance, mentions dry lizards as a regular export article from that port. The European, he says, scampering over the Pakhoi plain on a native pony, finds his pastime sadly marred by the holes dug by the natives to catch lizards. The numerical importance of these little saurians (101,510 last year) in the list of exports may well cause surprise. The greater quantity exported

comes from the neighborhood of Wuchow, in Kwangsi. The lizards are used for making medicine called "lizard wine," which is said to be a tonic, and also to cure eye-diseases.

Independently of lizards, however, there is in Pakhoi a large import and export of native medicines, and amongst many valueless articles there must be some good ones. It is much more in surgery than in medicine that the European doctors surpass the Chinese, who have a respectable array of learned, though lamentably out of date, authors on materia medica. Able European specialists are taking up the important question of the vast native materia medica with increasing interest; and, as the foreign doctor is constantly winning his way to native favor, we may expect increasing benefits from their researches.

Bromoform in Mixtures.

Bromoform is a somewhat difficult medicine to dispense with other ingredients on account of its high specific gravity, and consequent rapid sinking to the bottom of the bottle after being shaken by the patient. It is recommended that it should be emulsified by adding twice its weight of olive oil and a little gum, and then mixed with the other ingredients. By this means a mixture which can be safely employed is produced.—*Apotheker Zeitung.*

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- POWDERED HELLEBORE, in bbls.
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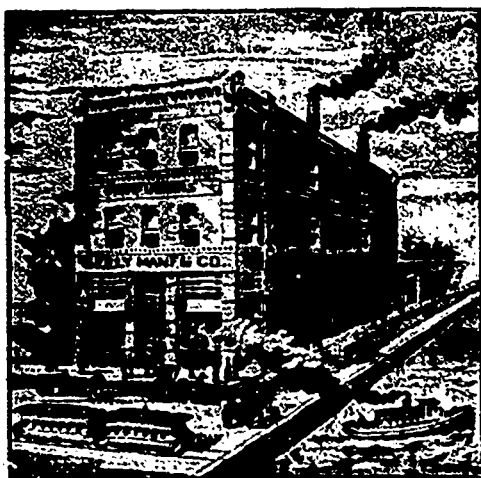
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Canadian Druggist Prices Current:

CORRECTED TO JULY 10th, 1894.

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 00	17 00	Bleached, lb.....	15	50
Methyl, gal.....	1 90	2 00	CHALK, French, powdered, lb..	10	12	Spice, true, lb.....	30	35
ALLSPICE, lb.....	13	15	Precip., see Calcium, lb.....	10	12	Tragacanth, flake, 1st, lb....	75	80
Powdered, lb.....	15	17	Prepared, lb.....	5	6	Powdered, lb.....	1 10	1 15
ALON, oz.....	40	45	CHARCOAL, Animal, powd., lb...	4	5	Sorts, lb.....	45	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	HERR, Althca, lb.....	27	30
St. Vincent, lb.....	15	18	Powdered, lb.....	30	35	Bitterwort, lb.....	27	30
ALSAM, Fir, lb.....	45	50	COCHINKAL, Honduras, lb.....	40	45	Burdock, lb.....	16	18
Copaiba, lb.....	65	75	COLLOIDION, 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	CONFECTION, Senna, lb.....	25	30	Chiretta, lb.....	25	30
BARK, Barberry, lb.....	22	25	Crossote, Wood, lb.....	2 00	2 50	Coltsfoot, lb.....	20	33
Bayberry, lb.....	15	18	CUTTLEFISH ROSE, lb.....	35	40	Feverfew, ozs, lb.....	55	55
Buckthorn, lb.....	15	17	DEXTRENE, lb.....	10	12	Gnidellia robusta, lb.....	45	50
Canella, lb.....	15	17	DOVER'S POWDER, lb.....	1 50	1 60	Houndhound, ozs, lb.....	17	20
Cascara Sagrada.....	25	30	ENCOT, Spanish, lb.....	1 00	1 10	Jaborandi, lb.....	45	50
Cascarella, select, lb.....	18	20	Powdered, lb.....	1 15	1 30	Lemon Balm, lb.....	38	40
Cassia, in mats, lb.....	18	20	ERGOTIN, 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	23	Elder, lb.....	20	22	Sage, Ozs, lb.....	18	20
Hemlock, crushed, lb.....	18	20	Lavender, lb.....	12	15	Spearmint, 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, oz.....	20	22
Sassafras, lb.....	15	16	Spanish, VaPa, oz.....	1 00	1 25	Yerba Santa, lb.....	38	44
Soap (quillaya), lb.....	13	15	GELATINE, Cooper's lb.....	1 20	1 25	HORRY, lb.....	13	15
Wild cherry, lb.....	13	15	French, white, lb.....	40	50	Hops, fresh, lb.....	20	25
BEANS, Calabar, lb.....	45	50	GLYCERINE, lb.....	16	18	Indigo, Madras, lb.....	75	80
Tonka, lb.....	1 50	2 75	GUARANA.....	3 00	3 25	ISSER POWDER, lb.....	25	28
Vanilla, lb.....	7 50	8 50	Powdered, lb.....	3 25	3 50	ISTRICLASS, Brazil, lb.....	2 00	2 10
BERRIES, Cubeb, sifted, lb.....	75	80	GUM ALOES, Cape, lb.....	18	20	Russian, true, lb.....	6 00	6 50
powdered, lb.....	85	90	Barbadoes, lb.....	30	50	LEAF, Acouite, lb.....	25	30
Juniper, lb.....	10	12	Scootrine, 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
BUDS, 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, Cocoa, lb.....	75	80	Sorts, lb.....	25	30	Digitidis, lb.....	25	30
CAMPHOR, lb.....	60	65	Benzoïn, lb.....	50	1 00	Eucalyptus, lb.....	18	20
CANTHARIDES, Russian, lb.....	2 00	2 10	Catechu, Black, lb.....	9	20	Hyoeyannus.....	25	30
Powdered, lb.....	2 10	2 20	Gamboge, powdered, lb.....	1 30	1 35	Matico, lb.....	70	75
CASSIUM, lb.....	25	30	Guaiac, 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	50	Uva Ursi, lb.....	15	18
			Powdered, lb.....	55	60	LUCIUS, Swedish, doz.....	1 00	1 10
			Opium, lb.....	4 25	4 50	Licouer, Solazzi.....	45	50
			Powdered, lb.....	6 00	6 50	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

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.	1 80	1 90	
“ 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	
MADE, lb.	1 20	1 20	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.	5	6	Iodide, oz.	95	1 00	
MUSK, Tongutu, 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	6	
Powdered, lb.	25	30	Celery	30	35	CERIUM, Oxalate, oz.	10	12	
NUTMEGS, lb.	1 00	1 10	Colchicum	75	80	CINCHONINE, 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	
Citrine, lb.	45	50	Flax, cleaned, lb.	3	4	CINCHONINE, Sulph., oz.	15	20	
PARALDEHYDE, oz.	15	18	Ground, lb.	4	5	COCAINE, Mur., oz.	7 00	8 50	
PEPPER, black, lb.	22	25	Hemp, lb.	5	6	COFFEE, 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	
Bergundy, true, lb.	10	12	Pumpkin	25	30	ETHER, Acetic, lb.	75	80	
PLASTER, Calcined, bbl. 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	HYOSCYAMINE, Sulp., crystals, gr.	25	30	
Gallbanum Comp., lb.	80	85	Worm, lb.	22	25	IODINE, lb.	5 00	5 50	
Lead, lb.	25	30	SEIDITZ 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	IODOL, oz.	1 30	1 40	
ROSIN, Common, lb.	2	3	White, Conti's, lb.	15	16	IRON, by Hydrogen	1 00	1 10	
White, lb.	3	4	Powdered, lb.	25	35	Carbonate, Precip., lb.	15	16	
RESORCIN, White, oz.	25	30	Green (Sapo Viridis), lb.	15	25	Sacch., lb.	35	40	
ROCHELLE SALT, lb.	25	28	SPERMACELE, lb.	50	55	Chloride, lb.	45	55	
ROOT, Aconite, lb.	22	25	TURPENTINE, Chian, oz.	75	80	Sol., lb.	13	16	
Atheca, 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	CHEMICALS.				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.	18	25	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	
Elicampane, lb.	15	18	Citric, lb.	65	70	And Ammon. Tartrate, lb.	85	90	
Galangal, lb.	15	18	Gallic, oz.	10	12	LEAD, Acetate, white, lb.	13	15	
Gelsenium, lb.	22	25	Hydrobromic, diluted, lb.	30	35	Carbonate, lb.	7	8	
Genian or Genitan, lb.	9	10	Hydrocyanic, diluted, oz. bot-	1 50	1 60	Iodide, oz.	35	40	
Ground, lb.	10	12	tles doz	5	6	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	
Pa., lb.	20	22	Chem, pure, lb.	18	20	LITHIUM, Bromide, oz.	40	45	
Jamaica, blechl., lb.	27	30	Nitric, lb.	10	13	Carbonate, oz.	30	35	
Pa., 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 60	1 80	Sulph. (Epsom salt), lb.	1	3	
Powdered, lb.	2 80	3 00	Sulphuric, carboy, lb.	2	2	MANGANESE, Black Oxide, lb.	5	7	
Jalap, lb.	55	60	Bottles, lb.	5	6	MENTHOL, oz.	45	50	
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	ACKERLIH, 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.	1	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. S80	8	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.	35	45	
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 00	2 00	
Queen of the Meadow, lb.	18	20	Valerianate, oz.	55	60	PRUSIN, Saccharated, oz.	35	40	
Rhatany, lb.	20	30	AMYL, Nitrite, oz.	16	18	PHENACTINE, oz.	40	45	
Rhubarb, lb.	75	2 50	ANTINEVIN, oz.	85	90	PILOCARPINE, 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	ARSENIC, Donovan's sol., lb.	25	30	POTASSA, Caustic, white, lb.	55	60	
Squill, lb.	13	15	Powder'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 $\frac{1}{2}$ ozs., oz.	7 00	8 00	Bitrat (Cream Tart.), lb.	25	30	

Cream of Tartar Troos.

Until within the past few years, it was thought that only one species could rightly claim the title of the cream of tartar tree—the *Adansonia Gregorii*, the gouty-stem tree of Northern Australia. Recent researches have, however, proved that the Baobab (*Adansonia digitata*) of Senegal contains nearly 2 per cent. of free tartaric acid, and nearly 12 per cent. of bitartrate of potassium. The acid is found in the farinaceous pulp surrounding the seed, and has at all times been highly esteemed by travelers, who mix it with a little water in order to make a refreshing beverage.

Until the discovery of the Mammoth tree of California and the Eucalypts, the *Adansonia* was considered the largest tree in the world. Its height is from 40 to 70 feet, and its diameter near the base is very often 30 feet, while the top is over 180 feet across. A Venetian who left us the most ancient description of the tree, tells us that in 1451 he found one at the mouth of the Senegal with a circumference of 112 feet. The tree is very disproportionate, as may be gathered from the fact that Gregory—after whom the Australian species is named—saw one 85 feet in circumference at a height of two feet from the ground. A missionary in Madagascar, writing some years back, speaks of the *Adansonia Madagascariensis*, an allied species, as the ugliest specimen of a tree he had ever beheld, and likened it to a fat two-gallon bottle the neck of which had been knocked off, and a few birch twigs placed there instead.

Not the least curious feature about these trees is the age some of them are supposed to have attained. From inscriptions Adanson discovered cut into the trunks of some trees in the fifteenth and sixteenth centuries, he computed—judging from the depths of the cuts, which were covered with new layers of wood, and from the comparison of the thickness of the trunks whose various ages were known—that the trees having a diameter of 32 feet were 5,150 years old.—*Rocky Mountain Druggist.*

Home-made Celluloid.

The *Scientific American* recommends the following method for making a substance as transparent as pure glass, at the same time very pliable and strong:

Dissolve four to eight parts of gun cotton in a mixture of alcohol and ether, in proportion of one of gun cotton to 100 of combined liquid, after which add 2 to 10 per cent. of castor oil, or any other oil unsiccative, and 4 to 11 per cent. of Canada Balsam. Flow this mixture onto a glass plate, and dry in a current of air at 50° F. The result is a leaf of hard substance as transparent as glass and very nearly unbreakable, resisting perfectly the action of all salts, acid, and alkalis.

Advertise in the CANADIAN DRUGGIST.

HOW IS THIS ?

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Nitrate, gran., lb.....	8	10	Sulphate, lb.....	9	11	Pepperyol, lb.....	3	00	3	25
Permanganate, lb.....	50	55	Valerianate, oz.....	25	30	Peppermint, lb.....	4	25	4	50
Prussiate, Red, lb.....	50	55	ESSENTIAL OILS.			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	10	00
Sulphuret, lb.....	25	30	Amber, crude, lb.....	40	45	Rosemary, lb.....	70	75		
PROPYLEAMINE, oz.....	35	40	Rect., lb.....	65	70	Rue, oz.....	25	30		
QUININE, Sulph., bulk.....	30	32	Anise, lb.....	2	75	Sandalwood, lb.....	5	50	9	00
Ozs., oz.....	35	38	Bay, oz.....	50	60	Sassafras, lb.....	75	80		
QUINIDINE, 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	Capsicum, oz.....	60	65	Tansy, lb.....	4	25	4	50
Fused, oz.....	1	00	Caraway, lb.....	3	50	Thyme, white, lb.....	1	80	1	90
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	FIXED OILS.				
Hypophosphite, oz.....	10	12	Copaiba, lb.....	1	60	CASTOR, lb.....	9	11		
Hyposulphite, lb.....	3	6	Croton, lb.....	1	50	COD LIVER, N. F., gal.....	1	15	1	25
Iodide, oz.....	40	45	Cubeb, lb.....	5	00	Norwegian, gal.....	1	50	1	60
Salicylate, lb.....	1	60	Cumin, lb.....	5	50	CORROSIVE, gal.....	1	10	1	20
Sulphate, lb.....	2	3	Erigeron, oz.....	20	25	LARD, gal.....	90	1	00	
Sulphite, lb.....	10	12	Eucalyptus, lb.....	1	50	LINSSEED, boiled, gal.....	65	67		
SOMNOL, oz.....	85	00	Fennel, lb.....	1	60	Raw, gal.....	63	65		
SPIRIT NITRE, lb.....	30	69	Geranium, oz.....	1	75	NEATSFOOT, gal.....	1	00	1	10
STROANTUM, 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.....	34	35	Wood, lb.....	70	75	PALM, lb.....	12	13		
SULPHUR, Flowers of, lb.....	2 1/2	4	Lavender, Chiris. Fleur, lb.....	3	00	SPEARMINT, gal.....	1	75	1	80
Pure precipitated, lb.....	13	20	Garden, lb.....	1	50	TURPENTINE, gal.....	60	65		

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Drug Reports.

Canada.

Business is fair; quite a number of orders given, but quantities as a rule are small. Retailers complain of the large amount of credit they are compelled to give, but the outlook for money in the fall is encouraging.

Carbolic Acid is easier.

Paris Green—becoming scarce.

Iodine preparations will likely be higher.

Blue Vitrol is dearer, caused by large demand.

Saltpetre—easier.

Norway Cod-Liver Oil, firm at advance and higher prices may prevail.

England.

London, June 27th, 1894.

Business has been remarkably dull for the time of the year, both in chemicals and drugs. The consequence is that prices have in many cases given way owing to the absence of demand. The collapse of two such important "rings" as the Bismuth Syndicate and Salicylic Convention, is also significant. As the im-

mediate result of the above, all Bismuth Salts dropped 24 to 30 cents a pound in value; whilst the reduction in price of Salicylic Acid and Salicylates was fully 25 per cent.

Quinine is distinctly lower.

Sulphate of Ammonia has dropped.

Recent importations of Jaborandi Leaves have realized full prices and Pilocarpine remains dear.

Caustic Soda has been forced lower owing to the continued depression in trade.

Mercurials remain unaltered.

The drug auctions last week were very quiet and dull.

Canella is scarce and dear.

Aloes in fair demand, also Ipecacuanha, but without improvement in prices.

Jalap is unsaleable.

The new Cascara Bark is just arriving, and prices are low.

The new season's Essence of Lemons and Essence of Bergamot has just arrived, but most of it has been previously disposed of. Prices are, however, exceptionally low, and favorable to buyers in quantity.

Ten grains of bicarbonate of potassium, administered hourly, will speedily remove the poisonous effects of iodoform.

A New Mercurial Pill-Mass.

The *Städtische Apotheker Zeitung* gives the following directions for preparing pills of oleate of mercury:

Dissolve 30 gm. of medicinal soap in water, precipitate by the addition of salt, wash and re-dissolve, repeating the operation several times. Finally wash and dissolve in a large quantity of water. To the solution add 27 gm. of bi-chloride of mercury, dissolved in plenty of water. Gather the precipitated oleate of mercury and malaxate until free from liquid. Add to the mass a sufficient amount of pulverized licorice root, and divide into 100 pills. Each pill will contain 15 cgm. oleate of mercury, which answers to 4 cgm. metallic mercury. The pills can be covered with salol without the least interference with their action, and will keep indefinitely without decomposition.—*National Druggist*.

INCOMPATIBILITY OF POTASSIUM BROMIDE AND CALOMEL.—Thompson calls attention to the fact that potassium bromide and calomel are incompatible (a fact not unknown, but not sufficiently kept in mind, however,) and that when brought together a double decomposition takes place, with mercury bromide and metallic bromide as the result.