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CANADIAN DRUGGIST.

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

VOL. 6. STRATHROY, OCTOBER, 1894. No. 10.

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.

EUROPEAN AGENCY:

Brock & Halifax Aldermary House, Watling St.

LONDON, E. C., ENGLAND.

CONTENTS.

Needless Cutting.

The cutting of prices by druggists in small towns where the trade is necessarily confined to two or three persons is a waste of profit which good judgment should not warrant. Cutting never should exist where it has not to, for the dealer cannot give his profit to his customer and have it himself. Assuming that the original or marked price is a proper one to charge, an effort to secure that price by combination or by mutual understanding is just and right. No wrong is done the public, and the effort to keep together will induce a feeling of good will between the dealers. The public are not likely to increase the volume of your annual trade should all get down to cut prices, yet all are sure to be out the discount if they do. It rarely seems to strike the druggist that ten dollars lost monthly by cutting is equivalent to a raise of his monthly rental by a similar amount. The result is the same, but we very much doubt if the same feelings are aroused. In many country towns and villages, where cutting is carried on, we are satisfied that the practice became general without any deliberate intention on the part of the druggists to make it so. They commenced by giving a reduction to a favored few, and, almost insensibly, the few swelled in number until the custom became general. A condition of this kind does a vast amount of harm apart from from the loss it entails on the cutter. The public become uncertain what they should pay, and very soon begin to doubt the quality of their supply. Tradition does not induce them to give the druggist credit for generosity in price making under any circumstances, and the natural conclusion they arrive at is that it is being taken from them in another way. The druggists themselves soon get at sixes and sevens and are equally uncertain what they should charge in order to be even with one another, as, under the circumstances, they are unlikely to consult together.

Cutting always has had a pernicious influence and is likely to continue to have it. It lessens profits, induces inferior supply, weakens public confidence and destroys harmony in trade circles. Where it has to exist, it should be modified by unanimity of action, and where it has no need to exist it should never be fostered. If it was good we would sanction it, but as it is bad we must condemn it.

Associations.

The peculiar conditions of trade and social customs in all highly civilized countries have induced a tendency to associate methods of effort, which is very marked at the present time in our own land. The individual of any prominence to-day who is not connected with some form of an association is a rare exception; in fact, in a strict sense, it would be practically an impossibility to find such a case, as all gradations of educational training are part of associate work, and parts which lay the foundation for future development in other branches. The need for Associations is the lever which calls them into being and action. They serve purposes in special ways which cannot be otherwise done, and wield an influence in accordance with their character and in proportion to their membership and the commanding influence of their executive head. From the day laborer to the prime minister all grades of society are govered by the sectional association which pertains to their line of toil or sphere in life, and in proportion to the support they give will they be likely to derive benefit from it. Associations are like men—if strong they make way for themselves, if weak they make way for others and become subservient to them. If none existed none would be needed, but when some exist their aggressive power calls others into being to oppose their monopolistic tendency. Operated for humanitarian purposes they are a benefit to all classes of the community, but directed for the interests of a limited number they are bound to clash with others. That they have a right to exist when their objects are law abiding no one can deny, and under present circumstances of life the necessity for their existence is as imperative as is the need for the branches of toil which they represent.

Things to Note.

That no business detail is too small to be unimportant.

That a clean and well kept store is a big advertisement.

That quality is a grand wearer.

That it rarely pays to enter into a business which you do not thoroughly understand.

That it never pays to take advantage of a customer's ignorance.

That it seldom pays a business man to run for office.

That friends forget you when you fail; therefore, never fail.

That a rich dress doesn't indicate riches nor insure good credit.

That a cash business is the only safe business.

That it is always much easier to collect at the time of sale than afterwards.

That it would, as a rule, pay better to take seventy-five cents on the dollar on goods being sold, than to give credit.

That the way to keep your credit good is to use it little.

That it is well to make but few promises, and to keep those made.

That it is easier to spoil a good reputation than to secure one.

That idlers in your store whether men or women are alike injurious to your trade and reputation.

That as a very large proportion of your customers are apt to be ladies, it is well to so conduct your business that you will retain and increase their patronage.

That it never pays to give a child anything but what they ask for.

That it is well to pass a kind word with a poor customer even though you may not be waiting on them.

That your clerk or apprentice can appreciate a deserved compliment occasionally.

That drug journals furnish your post graduate course, and that the subscription price is a cheap lecture fee.

That the writer of this wishes you to profit by what you have just read.

National Wholesale Druggists' Association.

The annual meeting of this Association was held in New York city, Oct. 1st to 6th. The number of delegates present together with their wives and daughters was about five hundred.

The following officers for the ensuing year were elected: Thomas F. Main, New York, president; vice-presidents, Theo. F. Meyers, St. Louis; W. J. Walker, Albany; D. D. Phillips, Fred. L. Carter, Boston; J. D. Price, Columbus; secretary, A. B. Merriam, (re-elected); treasurer, S. M. Strong (re-elected); Board of Control, C. E. Weller, Omaha, chairman; M. C. Peter, Louisville; F. A. Faxon, Kansas City; E. Waldo Cutter, Boston; B. F. Fairchild, New York.

The Canadian delegates present were the following: Henry Miles (of the firm of Lyman Sons & Co.), Montreal; Charles Lyman (of the firm of Lyman, Knox & Co.), Montreal; A. B. Evans (Evans & Sons, Limited), Montreal; Geo. T. Fulford, Brockville; Frank Simson (Simson Bros. & Co.), Halifax, N. S.; H. Barker (T. B. Barker & Sons), St. John, N. B.

The next meeting of the N. W. D. A. will be held at Denver, September, 1895.

Mineral waters tend to desiccate the mucous membrane of the intestinal canal; especially is this so with magnesium salts.

Drug Clerk's Column.

Movements of Graduates.

The Junior term at the Ontario College of Pharmacy commenced on Sept. 13th with 104 students' names on the roll. Judging from the way the boys are pitching into work they evidently mean business. The dean granted them a half-holiday on Friday, the fifth inst.—it being Convocation Day of the University of Toronto. The class attended the exercises at Massey Music Hall in a body.

Rob. W. McClung, Phm.B., Class of '94, O.C.P., is now located at Pilo Mound, Man., and is in business on his own account. The firm name is R. W. McClung & Co.

W. D. Simmons, Class of '93, O.C.P., is in business in Beatrice, Nebraska, with very rosy prospects in view. The firm's shingle reads Simmons & Farlow.

Harvey Brillinger, Phm.B., Class of '94, O.C.P., is dispensing in Cortland, N.Y., and R. P. Leslie, Phm.B., of the same class went to New York City on the 2nd inst. to accept a position in a New York pharmacy.

W. T. Liddell, O.C.P., Class 1893, was in Toronto a few days ago enjoying his holidays. He has an excellent position in a prominent establishment in Chicago.

Drug Clerks' Register.

The following drug clerks registered this month:

Name.	Employer.	Location.
H. G. Robertson,	J. A. Zimmerman,	Hamilton, Ont.
J. D. Henry,	F. Smith,	St. Stephen, N.B.
E. A. Rawlings,	W. H. Bartram,	Forest, Ont.
J. M. Gibson,	J. A. Zimmerman,	Hamilton, Ont.
H. Shoemaker,	J. E. Neville,	Berlin, Ont.

An Incomplete Prescription.

Editor CANADIAN DRUGGIST:

DEAR SIR,—I received the accompanying prescription a few days ago, of which I enclose you a copy, and would beg to ask your opinion of the same, and what you would do under the circumstances. The medicine was wanted at the time, and it was impossible to see the doctor who wrote it as he lived in another place. If I might be allowed to express an opinion about it, I should judge that he meant "ferri et ammon. *cit.*," and of the *proper dose*, and, of course, *in solution*. Kindly reply through the CANADIAN DRUGGIST:

℞ Ferri et ammon. acetatis.....℥ viij.

Sig.: Two teaspoonfuls three times a day.

Yours truly,

"DRUGGIST, C. B."

ANSWER.—A mere reading of the prescription should make it clear to the pharmacist's mind what the intention of the prescriber was in this case, at least there should be no hesitation as to what should be dispensed after a second glance at the *quantity* of the mixture *prescribed* and the *quantity* to be *taken* for a dose. The prescriber has simply omitted the word "Liquor" in the title of the preparation *wanted, which is Liquor Ferri et Ammonii Acetatis* of the U. S. P.—a mild chalybeate solution of pleasant taste, commonly known as "Basham's Mixture," (see Manual of Pharmacy and Pharmaceutical Chemistry, page 120).

The opinion held by you would scarcely obtain, even though there were no such preparation as the above, his reason for selecting citrate of iron and ammonium when another quite similar salt of iron, namely: tartrate of iron and ammonium is frequently prescribed, is scarcely apparent.

However, in this case there is no occasion for speculation, as the prescription very plainly affords a clue as to just what was desired.

The formula for preparing eight fluid ounces (the quantity designated in the prescription) of Liquor Ferri et Ammonii Acetatis, according to the U.S. Pharmacopœia of 1894 is submitted, with approximate Imperial equivalents substituted for the Metrical quantities indicated in the above mentioned work.

Take of

Solution ammonium acetate. 2 fl. drachms.
Diluted acetic acid .....13 fl. drachms.
Tincture ferric chloride ....75 minims.
Aromatic elixir .....6½ fl. drachms.
Glycerin ..... 1 fl. ounce.
Distilled water, enough to complete 8 fl. ozs.

Mix in the order mentioned.

The solution of ammonium acetate must not be alkaline, else there is a possibility of an unsightly mixture resulting, owing to the formation of ferric oxide. The preparation should be freshly made when wanted. Dose—Two to eight fluid drachms.

Montreal Notes.

The usual number continue to present themselves at the preliminary examinations for the study of pharmacy. At the recent examinations there were between thirty and forty. Of course the majority of them never expect to get through, at least one would suppose so judging by the result.

It is frequently remarked that the grocers have got the run for many articles which were at one time only sold by druggists. For instance, patent foods, pain-killer, nursing bottles, certain lines of cheap soaps, soothing syrups, and a few other patents. In conversation with a grocer, he told me it was entirely owing to the fact that nearly ever family has a monthly pass-book at the corner grocer's, and it is very convenient to run in there and get their things and have them charged.

The only stores open in the West End last Sunday evening were the drug stores, and these, with the exception of one or two, had only subdued lights burning on the dispensing counter. It might be added that when the writer passed there was not a purchaser to be seen. Per contra, in the East End, the drug stores were wide open, as were also soloons, cigars and fancy stores, etc.

Trade Notes.

G. P. Hall, druggist, Windsor, Ont., has assigned.

S. L. Taylor is opening a drug business at Minnedosa, Man.

E. W. Knowles, Brampton, Ont., has sold out his drug business.

Samuel Duncan, Montreal, Que., has registered as the Diamond Drug Co.

J. O. Wood & Co. have removed their drug business to 101 Bay st., Toronto, Ont.

The drug store of R. A. Kirkland, Dutton, Ont., was destroyed by fire Oct. 6th.

W. T. Martin has sold his drug business at Moosomin, N. W. T., to W. L. Clarey, of Souris.

Clement & Walton have opened a new drug store in the Opera House Block, Woodstock, Ont.

J. Ogden, druggist, Toronto, Ont., has made an assignment. He has been in business 15 years.

Dr. T. H. Scott, Estevan, Man., has sold his drug business to M. LaT. Thompson, formerly in Selkirk.

F. C. Vanbuskirk has purchased the Fort Saskatchewan, N. W. T., drug store from Bole, Wynne & Co.

William J. Burke, druggist, 796 Dorchester st., Montreal, Que., has assigned. Liabilities about $3,700.

E. Hovey has opened a new drug store in Clinton, Ont., in the building formerly occupied by Dr. Worthington.

Wm. Jackson, jr., & Co., druggists, Victoria, B. C., have discontinued their branch store, the B. C. Pharmacy.

H. J. Leslie, who has been in the office of the Lyman Bros. & Co., Ltd., is now representing them east of Toronto.

Stanley Jackson, who was for several years clerk in the late J. J. Hall's drug store, Woodstock, Ont., died Oct. 8th, from typhoid fever.

Felix Cornu, A. J. Richer and H. W. Reynolds, manufacturers of medicines, Montreal, Que., have registered as the Prunol Manufacturing Co.

H. C. Thomas is opening a new drug store in Norwich, Ont. He has purchased the book stock of Mr. Mills, and will combine the businesses.

Theodore Sweet, of Essex Centre, has bought the business of J. E. Sangster & Co., St. Catharines. Mr. Sangster is going prospecting in California.

C. H. Cranston, late with Martin & Co., Winnipeg, has made an engagement with the Lyman Bros. & Co., Ltd., Toronto, Ont., to represent them in Manitoba, Territories and British Columbia.

An epidemic has broken out amongst Ontario druggists, nothing very dangerous, 'tis true, but evidently very contagious. The victims of the matrimonial epidemic during the past month are F. A. Gayfer of Ingersoll, J. L. Luckham of Glencoe, W. H. Stepler of Strathroy, W. H. Bartram of Forest.

This winter's improvements at O. & W. Thum Co.'s Tanglefoot factory, Grand Rapids, Mich., will be a complete new box and case making plant, the business having outgrown the present facilities of this department. The new outfit will be equipped with the latest improved machinery, and will turn out boxes and cases in keeping with the other good qualities of Tanglefoot. It will be housed in the ground floor of a new annex, the upper floor of which will be utilized for much needed office room.

Pharmaceutical Examinations.

The preliminary Board of Examiners of the Pharmaceutical Association of the Province of Quebec held their quarterly examinations in Montreal and Quebec on Thursday, Oct. 4th, for students entering the study of pharmacy, when thirty-four candidates presented themselves in Montreal and two in Quebec. Of these, the following passed in order of merit, namely: Geo. H. Voss, E. A. Labonte, L. E. B. Browne, D. S. Ryan, Leopold L. Bernard, Anson C. Frost, Louis Fortin, Percy E. Jones and Eugene Jacotel. The following candidates passed on all subjects but one, namely: B. Rogalsky, E. W. Jacobs and Fred. K. Douglass, Geography; R. Grigon, Latin. These will be required to present themselves again at the next examination to be examined on the subject in which they have failed. The remainder of the candidates are referred back for further study.

The examiners were Professors A. Leblond de Brumath and Isaac Gammele.

The next examination will be held on January 3rd, 1895, and candidates are required to give the Registrar ten days previous notice of their intention to present themselves.

Manitoba Pharmaceutical Association.

The half yearly meeting of the Manitoba Pharmaceutical Association was held in Winnipeg on Tuesday, October 2nd. There were present: J. F. Howard, president, in the chair; W. R. Bartlett, Brandon; G. W. McLaren, Morden; E. D. Martin, C. Flexton, Dr. Hutton, and J. K. Strachan, registrar. The secretary was instructed to write to the secretary of the Ontario Association to ascertain particulars regarding the standing of certain persons practicing in the province under Ontario diplomas, about whose qualifications there is some question. The secretary was also instructed to take action against all members who are in arrears for fees. It was further decided to prosecute forthwith several people who are illegally carrying on business as druggists in the province. An important question was brought forward by a country member, viz.: that it had been represented that physicians had been applying for percentages on prescriptions. This evoked considerable discussion, the city members disclaiming that any such practice existed here, and stated that the physicians being all of high standing would consider it an insult to be offered a commission. Surprise was expressed that any man who had received sufficient education to entitle him to a physician's diploma would be so undignified as to accept a percentage on druggists' prescription's. It was thought that if the matter was brought to the notice of the College of Physicians and Surgeons the practice would be promptly and emphatically denounced as unprofessional.

In connection with the addition recently added to the Manitoba College, it may be of interest to the public to know that the Pharmaceutical Association of Manitoba have also built to the college structure, rooms for the accommodation of their own students. They have fully equipped these rooms with chemical and pharmacy appliances at considerable expense, and engaged a competent staff of lecturers. The lectures in the six months' course commence on Monday next, in the subjects of chemistry, pharmacy, materia medica, botany, and in the practical work of dispensing. The chemical room has been fitted up with the latest appliances for practical and analytical chemistry. The materia medica room is furnished with samples of all the known medical herbs, plants, etc., as well as charts.

British Columbia Notes.

The tide has turned; business which has been for so many months at a low ebb is slowly but surely on the mend throughout the Province, and the cities are all more or less benefitted thereby. A gradual return of confidence, as a result of the settling of the tariff, first felt in the east, is now making its way westward. Again, B. C. depends very largely upon her own industries, and, though she has but a few she knows how to take care of them. The fishing season which has just closed has not been a bad one, and the sealers have returned well satisfied with their season's work. Money has been put into circulation by the home-coming of these sealers and the much needed impulse to business generally has been given. Few give the Indian credit for refined tastes, but what do our eastern brethren think of an Indian purchasing Roger & Gallet's Pau d' Espagne by the $1.50 bottle?

There is a disposition among some of the medical men of to-day to prescribe ready-made preparations in preference to pharmacopœia preparations proper. Their weakness, if I may be allowed the term, is played upon by makers of nostrums to considerable extent. Now, the sooner doctors realize that they are not elevating themselves in the estimation of the people by such a line of prescribing the better for all of us. It is indeed poor satisfaction to a druggist to dispense (?) 4 ozs. of

so and so's elixir, and 3 ozs. of somebody else's syrup and 1 doz. of List No. 3659 pills. Dispensing! pshaw! a tyro, provided he can read, can dispense such prescriptions.

The B. C. *Gazette* of Sept. 20th, has a minute which is of interest to druggists. The Lieutenant-Governor-in-Council has approved of the resolution passed by the B. C. Pharmaceutical Association on 13th of June last, and declared Rough on Rats, Rat Poisons, Oil of Tansey, Preparations of Cantharides, and Chloral Hydrate on Schedule A. of Poison List, and also placed Carbolic Acid on Schedule B., where it has always been as far as B. C. druggists are concerned.

Mr. Cryderman is away for four or five weeks rusticating. The firm of Dean & Cryderman is presided over by the Dean in his absence.

F. W. Hall, of the Central Drug Store, has just returned from a much needed vacation.

The drug store of Messrs. Jackson, looks greatly improved by the general rearrangement and addition of store furniture.

Messrs. Lanley & Co. make an excellent display of their various specialties at the Annual Agricultural Exhibition now being held in Victoria.

North West Territories Pharmaceutical Association.

The annual meeting of the Council of the Pharmaceutical Association, N.W.T., was held in Moosejaw, Aug. 7th, 1894.

Present, W. W. Bole, President, Moosejaw; J. G. Templeton, Vice-President, Calgary; Robert Martin and W. G. Pettingell, Registrar-Treasurer, Regina.

The Examiners' report showed that two candidates presented themselves for examination during the year and were successful.

The annual report stated that there were 54 names on the register, an increase from last year of 10. Names removed on account of death, 2. The receipts during the year were $227.50; expenditure, $126,-00, leaving a balance in the bank of $426.73.

The Committee on Diplomas and Poison Books reported that same would be ready in a short time and sent to the members.

A. D. Fergusson, of Wolseley, was appointed Examiner in place of William Brydon, deceased.

A motion was passed, "That in the opinion of this Council a Canadian Pharmacopœia is not only premature but unnecessary."

John Dawson and Chas. H. Black were appointed Auditors.

The meeting adjourned to meet at the call of the President at Calgary.

W. G. PETTINGELL,
Reg.-Treas.

Perfumed air currents are now sent up in front of some Paris shop windows as a means of attracting the crowd.

Notes From England.

(*From our own Correspondent.*)

Now that the treatment of myxadema is considered rational and specific by exhibiting the thyroid glands of sheep in tablet pill, or extract, the pharmacist may at any time be called upon to prepare the remedy. For this purpose, Mr. Stuart's paper at the Conference will be useful. The credit for using an injection of the gland is due to Dr. George Murray, of Newcastle, whilst the late and more satisfactory method of administration *per os* belongs to Dr. Hector Mackenzie, of London. All physicians who have used the remedy are agreed that it is very powerful and must be given in small doses only, and the patient's temperature, at first, carefully watched. The analogy of this remedy to that of administering pepsin or trypsin to supply the lack of gastric or pancreatic secretion, which I pointed out in the early days of its use, is generally acknowledged, but the chances of obtaining the pure active principle still seems remote. The instant that the secretions of one gland are found of special benefit and therapeutical activity, many doctors are seized with the belief that other organs must possess similar properties. Hence the list of organic remedies prepared from ram's testicles, sheep's marrow and brains, etc. But so far the results have not proved promising, and they are already falling into disuse.

Another instance of a much belauded drug falling into discredit and finally having its worthlessness exposed is afforded by Dr. Gordon Sharp in this month's *Practitioner*. Some three years ago, in consequence of several complimentary notices in the medical press of the United States, a small demand sprang up for a preparation of Cactus grandiflorus. As the supply of flowers in this country was limited, the fluid extract as supplied by Messrs. Parke, Davis & Co., was employed. A considerable amount of evidence was then collected by one or two of the wholesale drug houses which appeared to show the superiority of Cactus grandiflorus to digitalis. The demand then steadily increased and some firms were selling a fluid extract or tincture at the rate of $8 per lb.! Now, Dr. Sharp affirms, after a systematic chemical and pharmacological examination of the drug, that it is entirely destitute of action upon the heart, but that it is a slight diruetic! Similar results were obtained with the Cactina fillets which have been advertised as a heart tonic, and stated to be prepared from Cactus Medicana.

Of recent years no two diseases have proved so fatal as diphtheria and tetanus. The new remedy, antitoxin, which is receiving considerable attention just now, is therefore worthy of some detailed description. The name, antitoxin, it should be understood, is a generic name given to toxalbumins stored up in the system after the toxins have been rendered harmless. The investigations of Buchner indicate that they are direct products of bacterial cells and confer immunity on animals in specific diseases. The particular antitoxin which is now being used to procure immunity in the members of a household where a diphtheria case may be, is that of Aronsohn. It is prepared from a cultivation of the diphtheric bacilli in dog's serum, precipitating by means of aluminum hydrate, filtering and shaking the precipitate with diluted alkali, again filtering and concentrating in vacuo. It is finally preserved in the concentrated liquid state by means of a few drops of carbolic acid. Some 2 to 5 c. c. are required for injection and it is charged for here at the rate of $1 per 5 c.c. tubes. Tizzoni's antitoxin, which has been employed in two cases of tetanus with wonderful success, costs $5 per gramme. When it is remembered that the mortality in tetanus is 40 per cent, any thing that will combat this terrible disease will be gladly welcomed. It should be distinguished from the diphtheric antitoxin both by the name of Profesor Tizzoni, and also as tetanus antitoxin. Some dozen injections, each of 20 minims, under the skin of the thigh and abdomen have recently cured lock-jaw that otherwise would most probably have proved fatal.

Although the announcement has been made in medical journals here that a representative from Canada has been having a personal interview with the pharmacopœial authorities with the view of placing Canadian requirements before them, no further results have transpired. Indeed, judging from some of the comments of Canadian journals of pharmacy there is a distinct tendency to repudiate him, whoever he may be. The Melbourne and Victoria branches of the British Medical Association have forwarded their suggestions, which may be briefly stated as follows:— As many medicinal plants grow out of England, the present restriction as to source should be removed. Duboisine is recommended for recoguition, its application in opthalmic practice in the proportion of 1 or 2 drops of a solution, 4 grains to an ounce. Metric system of weights and measures to be adopted. This, in view of Professor Attfield's statement, is rather superfluous. That official formulæ for eucalyptus be used. That lanoline and soft petrolanum or paraffin jelly be employed for ointments and that tests for chloroform, carbolic acid, &c., be improved. That standardization be extended to other drugs, as aconite, digitalis, etc. A list of remedies for deletion is added and the following are recommended as additions, chloral with camphor, some of the elixirs and compound syrups, *B*-naphthol, salicylate of bismuth, salol, resorcin, ichthyol, ethyl chloride, &c. The list of tabellæ for hypodermic use be increased, and also the lozenges. Inconsistencies in dosage are pointed out, and it is finally recommended that an excessive dose be not dispensed unless it has been initialled or the attention of the prescriber drawn to it. The above list is a very useful contribution to

READ THIS

Dear Sirs, St. Marys, August 3rd, 1893.
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 killed over A BUSHEL MEASURE OF FLIES." Yours truly,
F. G. SANDERSON.

IT WOULD TAKE OVER 500 SHEETS OF STICKY PAPER TO HOLD THIS BUSHEL OF FLIES

WILSON'S

FLY PADS

SOLD BY ALL DRUGGISTS

Merit always wins.

THE SALE OF

WILSON'S

FLY PADS

Has increased annually, and so far this year is much larger than ever before.

Nothing else kills

FLIES

in such quantities.

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

"Imitations come and go" And only increase the demand for

WILSON'S

FLY PADS

They afford Retail Druggists a very large profit, and give universal satisfaction to their customers.

FLY PADS

Are sold by all Wholesale Drug and Patent Medicine Houses.

the subject, although several of the suggestions are by no means new. It is to be hoped that further recommendations will soon follow and that expressions of opinion upon the Australian report will lead to a thorough thrashing out of the various subjects. The pharmaceutical part of the work cannot really be commenced until these preliminaries are settled.

The Inland Revenue authorities here are raiding the establishments of homœopathic chemists' under the Patent Medicine Stamp Act. It seems unreasonable to class these preparations as secret or proprietary medicines, but the official mind only looks at the fact that they are medicines recommended for internal use in certain cases. It is well known that the labels on these homœopathic goods are usually exempt, but frequently the proprietor sells a cheap homœopathic guide which recommends the medicines for various complaints. In the latest case, counsel for the chemist complained that if anyone recommended a man with a headache to put his head under a pump, the Inland Revenue would require a stamp put on the pump. The whole subject is irritating and vexatious and the Revenue returns altogether incomparable with the trouble given to traders. This has been admitted by politicians for years past—the Act dates back to George IV—but as long as Chancellors of the Exchequer have deficits they will not unloose the strings of this very small money-bag.

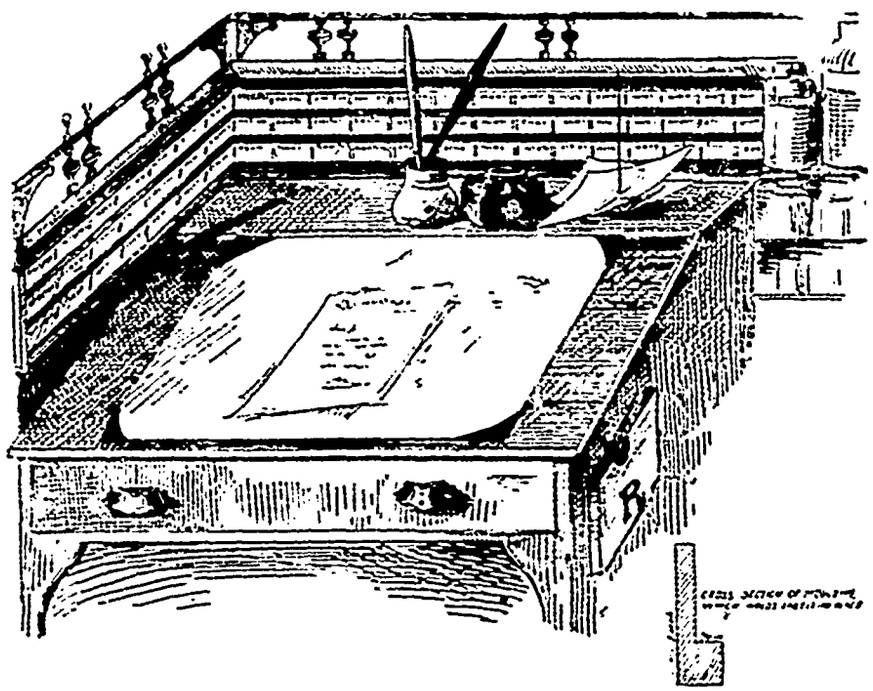
Messrs. Wright, Layman & Umney, the proprietors of Wright's Liquor Carbonis Detergens and Coal Tar Soap, have started a series of advertisements recommending druggists and medical men who pride themselves on the careful examination of the preparations they dispense, to compare their original article with its imitations. They also add the notice that the title, "Liquor Carbonis Detergens," is registered as a trade mark, and that they will institute proceedings against anyone using the name. They have made an alteration at the same time in the large packages, and it is now supplied in 2 pint, ½ gallon and 1 gallon bottles, at $1.50, $2.76, and $5.28 each.

The present state of the trade can be accurately guaged by the first and last verses of a dirge (See page 249-[Ed. C.D.) that recently appeared in the *British and Colonial Druggist*. The recent advent of company stores, coupled with increased dulness in trade, accounts fully for it.

The Care and Filing of Labels.

If there is one class of articles in use by the pharmacist that is continually on the increase, it is labels—and they are "so hard to find." Where to put them and how to store them so they can be conveniently reached are questions of importance. Plaster boxes are always in demand for storage purposes, the labels pasted on the covers or sides indicating the contents of each box. A series of flat drawers, partitioned off, has its advantages, but, from the tendency of gummed labels to curl up, arises an objection to that method. As for the patented label files in the market, their names are many, their needed space is great, and their cost is no slight matter.

In an earlier number of the *Pacific Druggist* the writer described a tin slip or pocket, to be put in each drawer. Its office was to hold labels for what the



drawer contained, whether it be salts or cascara, alum or sulphur. This device will take charge of fifty or more kinds, and in such a way as to be always convenient, besides being a check as to the contents of the package sold. By employing strips of wood, the cross-section of which is shown in the illustration, labels can be held in place above the desk, even when there are but three to five inches of running space to spare. They can be arranged alphabetically, and when one is needed it can be removed without disturbing its brothers or neighbors. As for curling up, that tendency is taken advantage of, that quality holding each little bunch in place.

The method as shown by the illustration has been employed for the past five years, and with satisfactory results, for the ordinary 2¼ by 1¼ inch labels which are used to designate the contents of bottles when sold direct over the counter. A drawer partitioned off is probably best for stock labels, such as are used to label the products of the laboratory which the druggist puts up at his leisure. The method as shown in the cut does not file the general stock of such labels (2¼ by 1¼ inch) In order to store these away handy and yet be well kept it needs but a few dozen pasteboard boxes 3¼ by 2¼ by 3 inches deep, such as the homœopathic tinctures and pellets, which we retail, come packed in.

Fill a drawer completely full of these same little boxes. Keep your labels in them, labeling the lid of the box with one, two, or three kinds, as needed in maintaining alphabetical order

The cost of this whole arrangement is nominal, and it is satisfactory. In placing this method before our readers it is to show one way, and not the only way. Any means taken to maintain order and system in a pharmacy serves to lighten the tasks of that man of careful detail the Pharmacist. Frank T. Green in the *Pacific Druggist*.

TANNIGENE A combination of tannic acid and acetic anhydride. It is a yellowish powder, without taste or odor, and slightly hygroscopic. It melts between 170° — 190° C., and resets to a friable mass. It is insoluble in cold water and dilute acids, slightly soluble in hot water or in ether, easily so in alkalies and alcohol. It is easily hydrolysed on boiling with either water or dilute acids. It is chemically pentacetyl tannin, and is obtained by treating warm tannic acid with glacial acetic acid and acetic anhydride, afterwards with a dilute solution of soda. It is prescribed in doses of 3 to 6 grains for diarrhœa in chronic cases.—*Repertoire de Pharmacie.*

ADULTERATION OF SPERMACETI. According to the Chemiker Zeitung spermaceti is frequently adulterated with stearic acid, which can be detected by the following method: A certain quantity of the suspected material is melted in a porcelain dish, ammonia is added, and the whole shaken together for a few seconds, after which it is allowed to cool. The spermaceti solidifies, but the stearate of ammonium can be separated, and by the addition of hydrochloric acid the stearic acid is recovered. The process is said to indicate the presence of 1 per cent. of the adulterant.

Some Truths.

By Thos. Knobel, Ph. G.

It is my candid opinion that the causes for poor paying business and poorly appreciated talents of the retail druggist are usually directly traceable to himself. This is a bold statement to make, but I will try to explain why and how I have arrived at this severe conclusion.

Of all classes of business men who do the most "resoluting" and accomplish the least, the druggist takes the lead. All other professions and business interests look out for themselves, while the poor, forlorn druggist is left in the cold.

Why is it thus? Simply because the druggists generally find it impossible to lay aside their petty jealousies and little personal differences long enough to come to some sensible understanding.

These are harsh words, but true nevertheless. I have known druggists in communities where bids were asked for, for furnishing medicines to paupers and city institutions, whose bids were so low that, taking into account time and labor, money was lost on each and every prescription, and each and every other transaction.

Why was this done? Simply to "get ahead" of the next neighbor. "Don't care if I do lose, must outbid him," that is the sentiment.

Take that statement right home with you and ask yourself if it is not true.

Here is where the main injury in these low bids come in: these bids are published in the papers all through the country. Newspaper readers, as a class, are keen, they see at what unusually low prices these institutions are getting medicines, while they rightly in the face of such conclusive evidence, consider the druggist exorbitant in his charges to them, and conclude with the old saying: "He is a robber."

Why should there be such unjust and uncalled for discrimination? I cannot see any further than, as I stated before, to "get even" with somebody.

"Every man is worthy of his hire," and, if you are so cheap as to be willing to work for nothing, that is your worth.

In any business or profession there is none so utterly despised by his brethren, and so little appreciated by the public, as a cheap man.

Here is another point,—physicians do not like to see their prescriptions go to a man who is afraid to charge a respectable price for his goods, in keeping with his calling and profession.

They have faith in a man who without fear fills their prescriptions as they want them, and charges a wholesome price for them; they feel that he will not substitute or cut down the prescription, because he is not afraid to charge; and they are rightly and justly entitled to that belief.

A druggist who is not afraid to charge respectably for his work, is not continually looking around for a substitute for some high-priced article frequently used at his place; on the contrary, he delights in being the first to have in stock *any* new preparation which is apt to be prescribed by the physicians of his city.

It is such things that good physicians appreciate far more than prescription blanks, cigars, etc.

Give them what they want in their prescriptions, and give it to them as they want it.

Do not try to see how you can save a penny in filling prescriptions by trying something just as good as what has been specified.

Give them exactly, precisely and positively what they want, they have a right to expect it, the patient is entitled to it, but charge accordingly, make your physician, friends and your patrons see and know that you are honest, upright and conscientious; but also let them know and it will be to your credit, that you are no cheap man.

How can you expect respect from your patrons when you acknowledge your weakness and unfitness to cope with your neighbors by announcing that you are willing to furnish a certain amount of material and labor for perhaps one-half the price demanded by him.

You are willing to do all this, not that you want to be a public benefactor, but that you could not command the same price as your neighbor and, in railroad parlance, are willing to "scab."

Should your neighbor be able to command better prices and more respect than yourself, it is a plain problem that he is better qualified practically as well as theoretically to do business than you are, and the sooner you put yourself to a self-catechism the better for your moral and financial standing in your community.

Do not claim that luck is against you, when you find that your business is not what it ought to be, but look around, no doubt some of your neighbors are to blame. Perhaps you fell into a community of hustlers, men with brains, men that are given to the luxury of reading, studying and thinking, and, after due deliberation, you find that you cannot hustle, better get out at once, far better that, than lose your self-respect and the respect of your friends; "honest failure is far better than the loss of conscientious scruples, far better than being a cheap man, and a thousand times better than that business pirate, that outcast and traitor, the "advertising cutter."—*Meyer Bros.' Druggist.*

Bougies Porte-Remede.

First prepare the inert core by treating in the same manner as above 20 parts of best white gelatin, 10 parts of water, and 30 parts of pure (30 p. c.) glycerin. Pour the liquefied mixture upon well-warmed, bright metal trays, placed perfectly level, letting the hardened gelatin layer be about $\frac{1}{16}$ inch in thickness. When hard cut the sheet in strips $\frac{1}{16}$ inch wide and 6 inches long, which lay aside for several days to lose part of their elasticity. Then prepare the active mass as follows: *Mix together* in a mortar 5 parts of acacia, 20 parts of milk sugar, $1\frac{1}{4}$ parts of glycerin, and 1 part of honey, adding a few drops of water, when necessary, to form a firm mass as for troches. Roll out on a slab covered with lycopodium to the thickness of parchment paper, and then with a sharp knife and ruler cut into as many strips as there are core-strips, making each $6\frac{3}{4}$ inches long. These strips *should measure* $\frac{1}{16}$ *inch in width* if the mass was rolled out the correct thickness. Then remove from a core and involucre the lycopodium with a moist sponge, place the core so that $\frac{3}{4}$ of an inch of the involucre shall project on one end, roll about dexterously and form the hollow end into an olive-shaped point. Preserve in lycopodium.

The drug store of George Hunter, Sault Ste. Marie, Ont., was destroyed by fire on Oct. 13th.

WANT ADVERTISEMENTS.

Advertisements under the heading of Business Wanted, Situations Wanted, Situations Vacant, Business For Sale, etc., will be inserted once *free of charge.* Answers must not be sent in care of this office unless postage stamps are forwarded to re-mail replies.

SITUATIONS WANTED.

AS MANAGER, Assistant or Traveller, by graduate of O. C. P. Live salesman, thoroughly posted. 12 years Toronto and New York experience. Moderate salary. W. J. Shaver, Stratford.

SITUATION WANTED as druggist's apprentice, three years' experience, good references. Address—W. Campbell, Box 34, Stayner, Ont.

DRUG CLERK, 6½ years' experience, best references, wants situation. Apply to—Oliver Flett, 131 Massey St., Toronto.

AS DRUGGIST'S APPRENTICE, three years' experience, strictly temperate and can furnish best of references. Address—"Druggist," Box 4, Brighton, Ont.

WANTED.

WANTED—A Hot-Soda Apparatus. Give full particulars and price. Address—R. B. Taylor, Grenfell, N. W. T., Canada.

FOR SALE.

DRUG BUSINESS in the principal town on the C. & E. Ry. in Alberta. No competition. Apply to—H. H. Gaetz, Red Deer, Alberta.

Wood Polishes and Polishing.

It might, with exact truth, be said that anything will do to polish with, provided you have plenty of elbow grease at your service, just as a most nutritious and palatable soup may be made from a cobble-stone and water, when such incidental adjuncts as a bit of meat and some vegetables, not to mention seasoning, are present and available. Bare wood may be polished by simply rubbing it with a cloth, and the same is true respecting a varnished surface. What is needed is friction to remove the loose fibers of wood or other material, and to solidify the remaining permanent structure. Continued rubbing induces this solidification, which is analagous to the filling up of the pores effected by the application of polishing mixtures or varnish compounds.

But, of course, we are never reduced to the extremity of securing a polished surface on wood or varnish by any such primitive means as this. There are a number of polishing mixtures at our command, several of which are here given. They all demand hard hand-rubbing to secure the best and most satisfactory results, and any slip-shod work will prove worse than none at all.

There is a method largely employed in France for producing a brilliant and lasting polish, which is known as French polishing. A solution of gum acacia and the whites of two eggs is made by beating these ingredients in a mortar until they amalgamate; then one-half a pint of raw linseed oil, and the same quantity of vinegar of the best quality, eight ounces methylated spirits of wine, one ounce hydrochloric acid, and two ounces muriate antimony are added. To French polish properly, only a small quantity must be used at a time, and this must be applied with a rubber made from a ball of wool, or cotton wool, covered with a soft cotton cloth or linen rag. A drop of linseed oil on the cloth will prevent it from sticking to the wood. Use the rubber gently, polish from a centre in a circular manner, and finish with a drop of spirits of wine on a clean rubber, which will extract the oil. If difficulty is found in inducing the polish to take, rub the work with some sweet oil on a rag.

To renovate old French polish, mix in four ounces of spirit of wine, two ounces of vinegar, and one ounce of raw linseed oil. Mix and rub on as a polish.

There are several so-called French polishes. This is one especially for hard-wood doors: Shellac, two pounds; powdered gum mastic and gum sandarac, one ounce each; copal varnish, one-half pint; spirits of wine, one gallon. Mix and shake together until dissolved.

Another "French polish" is made by mixing together three pounds shellac and three pints of wood naphtha. This is simply shellac varnish of an inferior quality.

Still another formula for "French polish" requires six ounces shellac, a pint of wood naphtha, or methylated spirit, and a quarter pint of linseed oil.

A fine bright polish is made from one pint spirits of wine, to ounces gum benzoin, and half an ounce gum sandarac, put in a glass bottle, corked, and placed in a sand-bath or hot water until all the gum is dissolved. It must be shaken from time to time, and when thoroughly dissolved, strained through a muslin sieve and bottled for use. This is a beautifully clear polish, especially useful for Tunbridge ware goods, tea caddies, etc.

Another very fine, lustrous polish, useful for delicate cabinet work especially, is made as follows: Half pint raw linseed oil, half pint well diluted vinegar, in which is put a pinch of sugar, the white of an egg, one ounce spirits of wine, one ounce spirits of salt. Shake well before using, and apply to the face of a soft linen pad, which rub over the article to be treated for a minute or two, rubbing lightly. First rub the article off with an old silk handkerchief. This will keep a long time, well corked.

For the carved parts of cabinet work, as in standards, pillars, claws, etc., use a stronger polish, made thus: Dissolve two ounces seed lac and two ounces white resin in one pint spirits of wine. This must be applied quite warm, and if the work can be warmed also, so much the better. Moisture is especially to be avoided.

To polish veneered wood, it is first necessary to scrape it up and give a coat of size for stopping the grain. Then color or stain is given, if required. The polishing is the same for all hard woods. The stopping differs, though, size being used for dark woods, and plaster or chrome for light. Putty-lime is a good stain for Honduras mahogany, chestnut and other woods.

For turners' work, a polish made as follows is used: Dissolve sandarac in spirits of wine, in the proportion of one ounce of sandarac to one-half pint of spirits; next shave one ounce of beeswax, and dissolve it in a sufficient quantity of spirits of turpentine to make it into a paste; add the first named ingredient by degrees. Then, with a woollen cloth, apply it to the work while it is in motion in the lathe, and with a soft linen rag polish it. The work will appear as if highly varnished when finished.

The beautiful polish so much admired on Italian cabinet work is effected by first saturating the wood with olive oil, rubbing the surface dry, and then applying a solution of gum arabic in alcohol, rubbing it on.

A polish for the inside of a car that hardly needs revarnishing is made from two ounces butter of antimony, two ounces spirits of wine, one quart vinegar, and one quart raw linseed oil. Shake well before using.

A polish for mahogany is made by dissolving beeswax by heating in spirits of turpentine. Apply warm and rub with a woollen rag.

The number of "furniture polishes" is almost beyond count. Many of them are simply varnish renewers, but all are useful for their especial purposes. Here are seven recipes:

I.—Beeswax, one-half pound; alkanet root, one quarter ounce, melt together in a pipkin until the wax is well colored. Then add a half gill each of raw linseed oil and spirits of turpentine. Strain through a piece of coarse muslin.

II.—One ounce white wax, one ounce yellow wax, half ounce white soap, and one pint boiling water. Melt all together in a saucepan over a fire, then pour into a bottle. Apply by rubbing a little on a small space with a cloth of any kind, rub with a second cloth, and polish with a third. This mixture will keep indefinitely and is excellent.

III.—Raw linseed oil, one pint; japan, six ounces; citric acid, one-half ounce; oxalic acid, one-quarter ounce; gum shellac, eighty-four grammes. Boil until all the gum is dissolved, then add the japan. Recommended by a painter as very "excellent."

IV.—One part, by measure, of olive oil and two parts best vinegar. Shake well together, and apply with a woollen cloth, after which take a dry woollen cloth and rub vigorously. This is really a renovator, rather than a polish, and as such is simple and effective. It is recommended highly by a housewife.

V.—Dissolve four ounce best shellac in two pints ninety-five per cent. alcohol; add to this two pints linseed oil and one pint spirits of turpentine; when mixed, add four ounces sulphuric ether and four ounces ammonia water; mix thoroughly. Shake when using, and apply lightly with a sponge. This is an excellent composition, especially as a renovator of tarnished varnish.

VI.—Linseed oil, raw, two pints; alcohol, one-half pint; vinegar, one half pint; butter of antimony, two ounces; spirits of turpentine, one-half pint. Shake well before using, and apply with a woollen rubber.

VII.—Rosin, two ounces; alcohol, ninety-eight per cent., twelve ounces; sulphuric ether, four ounces, balsam of fir, two ounces; boiled linseed oil, eight ounces. Mix well togher, and bottled if desired.

A preparation very useful for finishing up after any polishing process, adding luster and durability, as well as removing any defect of the polish, is made on the following formula: Take one-half pint best rectified spirits of wine, two drachms shellac, and same of gum benzoin. Put these ingredients into a bottle, and keep in a warm place until the gum is all dissolved, shaking frequently. When cold, add two teaspoonfuls of the best clear white poppy oil, and shake all well together. This preparation is to be used in the same manner as the polishes, but in order to remove all dull places, the pressure in rubbing must be increased.

Polishing paste is made with three ounces white wax, one-half ounce Castile soap, one gill turpentine; shave the wax and soap very fine, and put the wax to

the turpentine; let it stand twenty four hours; then boil the soap in one gill of water, and add to the wax and turpentine. This comes highly recommended from a practical source.

Another paste has the following composition: Turpentine spirits, one part; alkanet root, one-half ounce; digest until sufficiently colored, then add beeswax, *scraped fine, four ounces*; put into a vessel, which place into hot water, and stir until dissolved. If wanted pale, the alkanet may be omitted.

Wax finish, or polish, is made by mixing white wax and turpentine spirits by heat. Apply with a rag, rub on well, and remove surplus wax. Smooth with a bunch of soft cotton rags, rubbing hard and quick. This may be polished by mixing linseed oil and turpentine together, two parts of the former to one part of the latter, rubbing with a cotton pad.

A polish for marble and wood is made by dissolving, in a bottle placed in hot water, two drachms of gum and half an ounce of orange shellac in three ounces of spirits of wine.—A. ASHMUN KELLY, in *Painting and Decorating*.

Licorice.

In consequence of the large quantities of licorice root now exported from Asia Minor and other licorice-growing countries to America, where it is used in the preparation of tobacco for chewing purposes, and also in making a fancy drink, a considerable amount of attention has been given to the introduction of the plant in India, America, and other countries where it is at all likely to thrive.

The licorice plant (*Glycirrhiza glabra*, L.) is a native of North Africa, Southern Europe, Syria, Persia, and Afghanistan, and is cultivated in France, Russia, Germany, Spain and China, and also to a slight extent in England, where its growth is said to date from the middle of the sixteenth century. Some twenty or thirty years ago licorice was cultivated in the market gardens in the neighborhood of London, especially about Kew and Isleworth, and more recently at Mitcham. At the present time Yorkshire produces the larger quantity of English-grown root, and the principal seat of its culture is in and around Pontefract. Its cultivation in this particular neighborhood dates back several generations, the deep rich, loamy soil which occurs here being specially suited to the growth of the plant. The bulk of the licorice gardens are situated on the fertile slopes east and northeast of the town, the country between Pontefract and Knottingly being largely occupied by market gardens in which licorice forms an extensive crop. The following notes on the cultivation of the plant and harvesting the root are taken from an article on the "Culture and Preparation of Licorice," which appeared in the *Leisure Hour* for April, 1893:

"The plants are grown in rows, and they stand from three to four years before arriving at perfection. The three years' growth is thinner and scarcely so rich in juice as the four years' plants. Occasionally, if the market is flat, the plants are allowed to grow a fifth season, but the root becomes thicker, coarser and more woody. The long, straight root goes down to a great depth, averaging perhaps about four feet, but sometimes even to six feet, and as the soil has to be dug down to this depth by hand to extract the root, the labor of cropping or harvesting is considerable. During the first two years that the land is occupied by licorice, the plants themselves being small, allow of other crops being planted between the rows, and potatoes and different varieties af cabbage are mostly grown. The ground being earthed up around the licorice plants, the furrows thus made afford much protection to the vegetable crops, and, as the ground is always richly manured before planting licorice, favorable conditions are thus insured for the production of early and very superior vegetables; indeed, it is said that the vegetable crops from a licorice plantation always command high prices in the Leeds markets. After the second year, however, the licorice plants grow to such a height and spread their foliage so widely that other crops will not grow beneath them. On a visit to Pontefract, namely, in the early part of September, the writer saw some of these licorice gardens where the plants had attained the age of about five years and a height of about four feet, each plant sending up numerous straight, stout stems from the root-stock or crown, each stem bearing large spreading alternate leaves, composed of a number of opposite leaflets of a bright green color.

"The harvesting season is about the middle of September, and after the roots have been taken out of the ground by hand-digging, as before mentioned, they are stored in cool ventilated houses or cellars, usually in sand, until a favorable opportunity occurs for the process of dressing, which consists of trimming off all the fibrous rootlets, buds and runners, or stolons. The fibrous roots are ground into licorice powder, which is used as a medicine, and the buds and runners are carefully preserved in sand for planting, for it is from these alone that new plants are raised, and never from the seed. The plants never being allowed to flower, do not, of course, produce seed. Flowering would deteriorate the value of the plant from a commercial point of view, as the juices would be consumed in perfecting the flowers, and the roots thus become useless. The planting of buds and runners for a new crop is done in the early part of April."

In Bentley and Trimen's *Medicinal Plants*, Vol. II., under plate 74, it is stated that "both Spanish and Russian licorice roots are usually imported in bales or bundles, or, rarely, in the case of that portion of the Spanish variety which is derived from Alicante, loose in bags. The Spanish licorice root is in straight unpeeled pieces, several feet in length, and varying in thickness from a quarter of an inch to about one inch. That from Alicante is frequently untrimmed and dirty in appearance, but that from Tortosa is usually clean and brighter looking. The Russian licorice root, which is imported from Hamburg, is either peeled or unpeeled. It is in pieces varying from twelve to eighteen inches in length, and from a quarter of an inch to an inch or more in diameter. Combined with the usual sweetness of licorice root, this variety has a feebly bitter taste."—*Kew Bulletin*.

To Prevent Substitution.

We imagine that Mr. Frank A. Ruf lies awake nights studying how to get the best of counterfeiters. So many disasters have occurred by substituting other drugs for Antikamnia, that one would think druggists would fear to practise the substitution business. When an article has a large sale, then a lot of dispensers undertake to make an extra cent by defrauding their patrons. In order that the physician may be better assured that his patients are getting the genuine Antikamnia, Mr. Ruf has ordered in all old stock that is on the market and is replacing it with new. *Physicians are now all advised to* see to it that they procure, or their druggist procures, only that preparation which bears the seal. As now put on the market, *each tablet has imprinted on it a* monogram. The latest is the "Antikamnia and Codene Tablet" composed of 4¾ grs. Antikamnia and ¼ gr. Codene. All druggists having unbroken packages of the old style should send them at once to the Antikamnia Chemical Company, St. Louis, and exchange them for new goods free of charge.

Resorbine-A New Ointment Base

Ledermann reported to the Berlin Dermatological Society a base which is capable of traversing the skin after moderate rubbing in, and which leaves a slight covering layer. It is made with some difficulty after a patented method by emulsifying pure almond oil and a little wax with water and a small percentage of other innocent but necessary vehicles. Resorbine can be mixed with all vegetable and animal fats. It is especially advantageous to add a little lanolin. Its use is indicated in all the hyper- and para-keratoses, as *ichthyosis and pityriasis, and in* scleroderma, in artificial dermatites, ulcertions, rhagades, scabies. It combines well with Neapolitan ointment. The price is about the same as that of lanolin. —*British Journal of Dermatology*.

ACETONE RESORCIN is a body prepared by the action of fuming hydrochloric acid on a mixture of acetone and resorcin. An oily liquid separates, which is purified by solution in alcohol and subsequent crystallization. The crystals melt at 212 or 213° C., are insoluble in water, ether or chloroform, but soluble in alkaline fluids.

Abstracts.

THYROID PILLS.—The following process is much recommended in France for the administration of thyroid in cases of myxodœma. The fresh glands, freed as far as possible from fats, are dried on plates at from 40° to 50° C. The powdered mass is exhausted with ether to remove the remainder of the fat, and the residue made into pills with the aid of simple syrup. A thin coating of cacao is recommended in order to mask the odor. *Journal de Pharmacie.*

†‡†

ISOCAMPHOLIC ACID.—This acid corresponds to the formula $C_{10}H_{18}O_2$. It is non basic; it is a colorless liquid, of an oily consistence and an unpleasant odor. It is almost insoluble in water, but miscible with alcohol and ether. It does not fix bromine. It boils under the ordinary pressure at 256°—257°, with partial decomposition. Its specific gravity at 0° is 0.9941. Its rotary power is $\alpha_D = +24° 38'$. The properties of isocampholic acid and its derivatives show that it cannot be confounded with any acid of the same composition hitherto known.—*Chem. News.*

†‡†

THE THERMOGEN.—A new invention called the thermogen, the object of which is to maintain a uniform temperature around the body, is now being tried in several of the English hospitals with marked success. It consists of a light quilt containing a coil of wire bent in the form of a gridiron, inclosed in insulating and non-conducting material, and imbedded in cotton, wool, or other soft substance, with a silk or woollen covering. The heat is produced by the resistance of the coil to the flow through it of the electric current. A uniform temperature of about 150 degrees can be maintained for any length of time, the heat being prevented from going above that by the melting of a fuse, which instantly shuts off the current. In houses lighted by electricity the quilt can be connected with the ordinary incandescent terminals, but the principal use of the quilt would be confined mostly to hospitals, during lengthened operations, or in those attended with hemorrhage.—*Druggists' Circular.*

†‡†

PHOSPHORESCENCE.—It has been found by H. Jackson that many substances which are phosphorescent remain so when prepared in as pure a condition as possible, but the brilliancy of the phenomenon is influenced by the method of preparation of the compounds. Thus, lime prepared from pure precipitated calcium carbonate in the crystalline condition was strongly phosphorescent, but while the carbonate was rapidly treated when in the amorphous condition the lime from it hardly glowed at all. Similarly variable results were obtained in the case of barium carbonate, and it would, therefore, appear that, "according to the conditions of its preparation, an apparently pure substance may or may not phosphoresce, or the color of its glow may not always represent rays of the same range of wave-length.—*Jour. Chem. Soc.*

†‡†

POTASSIUM PERMANGANATE AS AN ANTIDOTE IN PHOSPHORUS POISONING.—Dr. Johann Antal, in the *Ungar. Arch. fun Med*, reports further experiments in the availability of potassium permanganate as an antidote to the organic poisons. He finds the substance available, not merely in such poisons as muscarin, strychnine, colchicin, oil of sabine, and oxalic acid, but its property of rapid oxidation makes it of the highest value in acute phosphorus poisoning. The author hopes and thinks that the permanganate will prove of great value in cases of intoxication from all the poisonous alkaloids and glucosides.

†‡†

CHROATOL is another new dermic. It presents itself as greenish-yellow crystals of a pronounced aromatic odor; insoluble in water, slightly soluble in ether and in chloroform, but more so in alcohol and in glycerin. Experiments instituted on guinea-pigs show that it can be taken in quantities up to 0.75 gramme per kilogramme of weight (6 grains to the pound), without producing any poisonous effects. In clinical medicine, it was applied to the skin suspended in collodion, in a case of refractory psoriasis in which pyrogallic acid and chrysophanic acid had failed, and produced, it is stated, rapid amelioration and finally a cure. It is further reported that it has also been used successfully in a number of cases of alopecia and porrigo decalvans, in a 10% pomade or dusting powder in the treatment of rebellious varicose ulcers. A curious fact in regard to chroatol is, that many patients upon whom it had been thus applied, complained of a bitter taste in the mouth and throat. This is probably due to the elimination of the remedy by the respiratory tract.—*Nat. Druggist.*

†‡†

OCULAR HEADACHES.—Dr. F. D. Green (*The Refractionist*) concludes an article on headaches as follows: 1. Many cases of headache are due to ametropia. 2. Many cases are due to heterophoria. 3. Never pronounce a case as due to ocular strain until the nose is examined. 4. Inquire into the condition of the stomach. 5. In females inquire concerning the condition of the genitals and whether there is constipation. 6. Migrane may be due to ametropia or heterohhoria, but frequently is not.—*Medical and Surgical Reporter.*

†‡†

AN IMPORTANT ANTIDOTE.—Dr. Antal recommends the use of nitrate of cobalt as a perfectly certain antidote for potassium cyanide. An insoluble double compound is formed in the stomach, and the author of the statement quotes 40 cases in which good effects have been produced. It may be mentioned that Dr. Antal was the man who first suggested the use of potassium permanganate for phosphorus poisoning.—*Repertoire de Pharmacie.*

Preservation of Sublimate Solutions.

L. Vignon, continuing his work on this subject, points out that the decomposition of sublimate solutions is principally due to alkaline substances in the water employed or the glass of which the recipients are formed, a limited quantity of such alkaline matter sufficing to cause the precipitation of a relatively considerable amount of mercury. On the other hand, hydrochloric acid and alkaline chlorides increase the stability of such solutions, the first by saturating the alkaline precipitants, and the chlorides by their solvent power. As the result of a series of experments he finds that ammonium chloride prevents precipitation by ammonia or albuminoid matter in the water, but fails to prevent the action of soda or sodium carbonate. Sodium chloride, on the other hand, fails in the case of ammonia and soda, but prevents precipitation by sodium carbonate and albumin. By combining the chlorides of ammonium and sodium, therefore, precipitation by any of the substances mentioned is prevented as well as by hydrochloric acid. The two formulæ recommended are as follows: 1. Mercuric chloride, 1 gm.; ammonium chloride, 20 gm., sodium chloride, 10 gm., distilled water, 1 litre. 2. Mercuric chloride, 1 gm.; hydrochloric acid (at 22° Baume), 1 C. c.; distilled water, 1 litre.—(*Journ. de Pharm. et de Chim.*) *Phar. Jl.*

Colored Fires for Parlor Theatricals.

Continuous colored lights for illuminating a scene or tableau, as at present used in theatres, are produced by throwing the light, by means of condensers or reflectors, through colored glass. However, very weird and beautiful effects may be produced by adding certain chemicals to alcohol, and burning the latter in ordinary spirit lamps. The lights most frequently used on occasions such as you speak of, are red, blue and green. For light red add strontian chloride to the alcohol; for *dark red*, lithium chloride; *blue*, 4 parts of salammoniac and 8 parts of sulphate of copper; *light green*, boric acid or barium sulphate; *dark green*, 4 parts verdigris, 2 parts copper sulphate and 1 part of boric acid. Other colors that may be useful are: *Orange*, add sodium nitrate; *yellow*, boric acid and cooking salt; *apple green*, sulphate of copper alone, or mixed with boric acid. Where definite proportions are not given, a little experimentation will give you the necessary amount of each ingredient. Instead of using a spirit lamp you can saturate a sponge, or a ball of cotton, with the alcohol and burn it in a metal plate or saucer.

If the light be required for a brief period only, you might use pulverized shellac as a basis, adding about five times its weight of strontian (or more definitely, strontian 72 parts, to 15 parts of shellac) for red, baryta for green, and sodium for yellow.—*Nat. Druggist.*

Canadian Druggist

WM. J. DYAS, EDITOR AND PUBLISHER.

OCTOBER 15TH, 1894.

Overcrowding of the Professions

The system of education in vogue in Canada to-day has a tendency, we fear, to foster a desire on the part of a large number of our young men to crowd into the professions and neglect in a great measure those pursuits which require less mental and more bodily exertion. The continual "cram" to which they are subjected from the time of their entering on the "higher courses" seems to unfit many students for any other line of work, and the consequence is a steady increase in the number of those, who, very frequently unadvisedly, enter on some profession as a means of livelihood. The large addition to the number of druggists launching out into business, the steady increase in the number of students attending our colleges of pharmacy and the large quota of applicants for apprenticeship in spite of the lengthening of the term and the elevation of the standard of requirement necessary, is an indication of the tendency we have mentioned and is one that must receive careful attention at the hands of our pharmaceutical legislators. We believe that it will be found necessary before long not only to still further advance the qualification required for the intending apprentice but also to lengthen the term of such apprenticeship, not to provide merely against the overcrowding which must result if matters remain as at present, but also in order to insure a still higher state of efficiency and secure a position for the craft where there can be no question as to who shall be the rightful dispenser and vendor of drugs by bringing in only the best educated and most capable students.

The Medical profession also feel the undesirability of the large additions to their ranks, and argue that there are already sufficient physicians in active practice to attend to the wants of the community. The *Dominion Medical Monthly*, in its issue of September, treats of this matter and shows the great mistake many young men are making in choosing that profession for their life work. It says: "On former occasions we have referred to the fearfully over-crowded condition of the medical profession. When one considers that it takes about six years to qualify one's self for the practice of medicine, and that at least the first three or four years of practice yields very little income, it is very doubtful whether many active young men, who may be thinking of studying medicine, would not be acting much more wisely to turn their thoughts in some other direction. The numbers who study and graduate in medicine and do not succeed well are much larger than many are inclined to believe. Throughout Canada, Great Britain, the United States, and even in Australia and New Zealand the field is thoroughly occupied. You cannot find a small village or rural district where there is not a doctor or two. With a doctor to every 500 or 600 of the population the income, on the average, must be small. Chance with chance for the same outlay of money, time and work we think that a young man can do better than enter the medical profession at the present rate of crowding."

The Ontario College of Pharmacy.

The phenomenal popularity of the Ontario College of Pharmacy has again been evidenced by an attendance of over one hundred students at the Junior course. While American Colleges of all kinds are suffering in attendance, presumably on account of hard times, our Provincial Institution is taxed to an unusual degree and at a period when the reason given for non-attendance elsewhere should effect us. We are sure that every well-wisher that she possesses will rejoice that her affairs are so prosperous under present circumstances, and will argue from it a continuance of her present prosperity. The thoroughly practical nature of the instruction given; the extensive equipment of the different departments; the tried capability of the members of the staff, and their retention of their various positions for so long a period, have all contributed to give the College a reputation which is bound to keep her in the front rank of Colleges of this character on the continent. The recent recommendation to increase the length of the course is, we believe, in harmony with the best interest of the school and even should such have to be done at the expense of the apprenticeship period we are convinced the graduates turned out would be more capable men. Our sympathies have always been with the system so happily carried out here—that of making the teaching as thoroughly practical as possible. The practical knowledge imparted is ever after retained while the theoretical becomes, in the lapse of a few years, a phantom of the memory only.

There is only one feature of the College management we are inclined to find fault with, and that is the failure on the part of the Council to make the opening exercises as momentous as possible. When other educational institutions make such occasions important and secure widespread expressions of interest in the work they are doing, we should not fail to emulate their example or to bring prominent pharmacists from this and other Provinces to unite in stimulating by speech and praise the progress of work which is so vital to the future of Canadian pharmacy.

Needed Pharmacy Legislation.

It should be determined specifically who may dispense poisons and medicinal compounds.

No druggist's apprentice should be allowed to dispense prescriptions until he should have at least two years' experience.

Increased safeguards should be put around the sale of poisons unless where such are supplied by order of a physician.

Medical graduates who desire to practise as pharmacists should be obliged to qualify for the pharmacy degree.

The term of apprenticeship should be extended, making it five years.

Counter-prescribing should be defined, and the limit named to which a druggist may go in recommending a medicine to a purchaser.

These are some of the suggestions which have been given us as to legislation required in order to make our Pharmacy Acts what they should be. We ask our readers to give us their opinions on these proposition. Our columns are at all times open to suggestions and we trust to hear from many of our pharmacists giving the benefit of their advice, not only to the whole constituency of druggists in this country, but also particularly to those representatives at our Council boards, who, we are quite sure, would prefer to have the opinions of as many as possible on all points connected with the trade.

Wholesale Druggists Swindled.

A small swindle was attempted on some of our wholesale drug houses a few days ago. A telephone message was received by the Lyman Bros. & Co., Ltd, Toronto, from J. R. Lee for about ten dollars' worth of goods to be sent down immediately; a boy was despatched at once, he had hardly left the warehouse when a messenger came in and said he came for the goods ordered by telephone for J. R. Lee. When told the goods had been sent he hastily left. When L. B. & Co.'s messenger arrived at J. R. Lee's he was told that the goods had not been ordered by him. About the same time Evans & Sons, af 23 Front St. West, received a similar message ordering a bill of goods to be sent to the Canadian Pacific Railway offices where they would be called for. The goods were sent and duly called for, but, on investigation, this was found also to be a swindle. It is said other wholesale houses have been victimized in the same manner.

Reqests for Mailing Lists.

We are very frequently in receipt of requests for lists of the druggists in Canada. As the list now is a large one and its first preparation and subsequent revisions make it a costly piece of property we are sure our correspondents will scarcely expect us to present it to them. We would suggest that instead of procuring a costly list, and mailing circulars, etc., a card be placed in the CANADIAN DRUGGIST, which will reach the constituency desired more thoroughly and at a comparatively less cost.

Mosquitoes are said to be repelled by oil of clove applied to the skin.

The Proposed Imperial Pharmacopœia.

The sub-committee of the Melbourne and Victoria branch appointed, in accordance with the request of the General Medical Council to make suggestions with a view of assisting the Pharmacopœia Committee of the General Medical Council have now presented their report. Our Melbourne correspondent writes that the report has been conscientiously and carefully compiled, and contains a good deal of information which is bound to be of service to the Home Committee. The recommendations consist:

1. In enumerating a large number of medicinal plants in the B.P. which grow in this colony equally as well as in the regions recognised as official, and in suggesting that, as far as Victoria is concerned, the present restriction as to growth and preparation should be removed.

2. To introduce the preparation of duboisina as officinal. The dose of duboisina would be $\frac{1}{100}$ to $\frac{1}{30}$ of a grain internally. In opthalmic application one or two drops of a solution four grains to an ounce.

3. To adopt the metric system of weights and measures, and failing this, that the strength of the liquors of the alkaloids revert to gr. j. in ℥ij.

4. That certain official formulæ for for eucalyptus alone be used.

5. That a number of preparations and drugs at present unused in practice and unnecessary in therapeusis be omitted from the new pharmacopœia.

6. That adeps lanæ and paraffinum moile be altogether used as the bases for ointments, and that cacao butter be recognised as the sole basis for suppositories.

7. That the tests for chloroform, carbolic acid, and other drugs be improved, and that there be mentioned with the test the specific impurity of which it is destined to show the presence or absence.

8. That the standardisation of drugs, such as opium, be extended to other powerful drugs, such as aconite, digitalis, etc.

9. That a number of new drugs and preparations be made official, such as chloral cum camphora, some of the elixirs and syrup compounds, *B* napthol, salicylate of bismuth, salol, resorcin, ichthyol, ethyl chloride, malt extract, a solution of copaiba, cubebs, and buchu, and others.

10. That the list of tabellæ for hypodermic use and the trochisci be increased.

11. That, like the decoctions, all the infusions be made up to definite quantity.

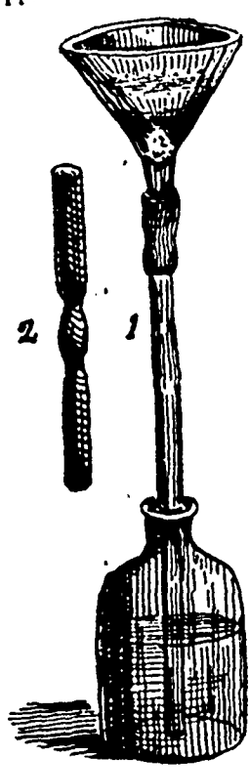
12. That in certain drugs (tabulated) the maximal dosed should be increased, and in others the minimum dose lessened, and other inconsistencies rectified.

13. That an excessive dose be not dispensed unless it has been initialled or attention otherwise drawn to it by the prescriber.—*British Medical Journal.*

The gold mines of California are in metamorphosed Jurassic rock.

Rapid Filtering Apparatus.

The following very simple and effective filtering apparatus has been designed by Mr. George A. James, chemist, of Selby, Cal. A glass tube of any convenient length, having a contraction near its upper end is connected with the small end of the funnel by a short piece of rubber tube. The lower end of the glass tube is inserted in the bottle or other vessel which receives the liquid, and the funnel is supported by a filter stand (not shown).



Rapid Filtering Apparatus.

The contraction in this case is made by flattening the tube so that its sides approach each other to within a very short distance, say $\frac{1}{100}$ of an inch. This contraction prevents air from entering the part of the tube below the contraction, and thus a solid column of liquid is maintained below the contraction. The liquid by its weight produces a partial vacuum in the tube, and thus allows the air pressure on the liquid in the funnel to force the liquid through the filtering medium. The rapidity with which the filtering is accomplished depends upon the length of the tube, other things being equal.

In Fig. 2 is shown a modification of the apparatus, in which the tube is contracted evenly all around in two places, leaving a small circular opening instead of a flat one. Experience shows the flattened tube to be preferable.—*Scientific American.*

Advice to Beginners in the Retail Drug Business.

By Thos. A. C. Kephart, Pittsburg, Pa.

"The heights, by great men gained and kept,
Were not attained in a single night;
But they, while their companions slept,
Were toiling upward in their flight."

The young man making a start in the pharmaceutical profession should strive to acquire sufficient will power to enable him to *persist* in the attack on any problem or task—whether large or small—that may present itself, until he has mastered it.

Many items that may subsequently prove to be of the utmost importance, are apt to be passed by, with this idea in mind: "I will learn that *later-on*." This sort of procrastination is liable to occur *too often*,—to your own injury as well as to your employer's.

The value of your services depends primarily upon the amount of knowledge you possess. Therefore, make it a point to be as inquisitive as you can, about any subject with which you are not well acquainted. There are, very likely, persons about the store who can enlighten you; if not, probably you can find a book there that will serve your inquiry.

Make *a good start*, and stand by it! Everything has a start, but few things have a finish. Our profession is one that might be classed as unlimitable. *New* subjects are constantly presenting themselves. To be "alive," you must acquaint yourself with them.

New items do not always present themselves by *observation*. You must gain the greater portion of your knowledge by *study*; that is, by scanning the records of what others have observed. Observation, however, is in itself a good teacher. Always keep your eyes open, and be a close examiner of objects, occurrences and statements.

Whenever you have spare moments, devote them to study. Make it a rule to learn something new on *each and every day*. It matters not how trifling it may appear to be. It will surely serve as a useful mark of reference at *some* future time.

Try always to base your knowledge on good *authority*. Discard any information or conclusion that may be uncertain, until you have satisfactory evidence that it is correct. Guess-work may prove fatal to your progress.

Many pharmacists may, on finding that they made a slight mistake in compounding a prescription, conclude to let it pass. Do not allow *yourselves* to become victims of this habit. It is an insidious and dangerous vice, and inclined plane leading down-hill.

There is only one way to do a thing; and that is the *right* way. The maxim, "Withhold not correction from thine son," may as well be rendered, "Withhold *not* correction from thine apprentice;" with this addition. "for a stitch in time saves nine." Learn *early* to be accurate in your pharmaceutical work; likewise, in any business transaction.

Pharmacy is by no means a simple science. No man, however great, can claim to be a complete master of the subject, be he even a Remington or an Oldberg. Strive to become, however, like them, a benefactor to your race and profession, even though on a small scale. Take up *some* subject, and handle it *in writing* to the best of your ability. If you cannot thoroughly master the subject without assistance, there are pharmaceutical *journals* that will lend a helping hand. When you have thus written on some topic, send your writing to a journal. Your contribution may seem trifling to yourself; but *one* practical suggestion of yours may prove of great value to some reader.

The many and famous modern products from coal tar, which have been the source of numerous additions to the materia medica, were largely discovered by men who, like yourself, made their first start in science at some small pharmacy. The discovery of a single new chemical might gain for you great renown, and be the crowning success of your life.

An *overabundance* of self-consciousness is, on the other hand, possessed by many apprentices. To clean a mortar or polish a show case is in no wise a degrading task. In many cases it may require as much ingenuity or skill to clean a mortar or a graduate properly, as it would to compound some difficult prescription.

Cleanliness is a very important essential It is a beginner's first step, and should be observed at all times and on all occasions. Do not think you are being persecuted if you are asked to clean the show-windows or the soda-apparatus. These things have to be *learned*, and their mastery will be useful to you when you come to have apprentices of your own. Take pride in having your shelf-bottles clean, well-filled, and highly polished. It is your *duty*, and its scrupulous performance may often make you the recipient of favorable comment.

Make, also, special endeavors to have your show-cases and windows neatly and tastefully *arranged*. In your window-display, strive to present *some new article* to the public each and every week. It is a "drawing card" and sells goods. No advertisement is so good or sells so many articles as the one mentioned.

Avoid the frowns of the proprietor or manager, by having your prescription-bottle drawers well filled; and carefully observe that the bottles contain no straws or dust. Nothing will sting your superior into desperation quicker than a straw, especially when he finds it in a bottle *after* he has filled it with a prescription.

See that the prescription-scales are clean, and always observe that the *balance is true*. Life or death oftentimes depend upon the accuracy of the prescription-balance.

Learn to be economical as well as accurate. How often are the profits of a sale lost by the overweight you carelessly give your customer! You can be obliging and pleasing in your ways, and thereby hold your trade. It is not necessary to sell goods at less than cost.

If you have an empty fluid-extract bottle, or one that contained a proprietary drug of some sort, do not throw it away simply because it requires a few minutes to clean it. Your employer *pays* for these minutes, and you should try and form a "rebate plan" on a small scale. You often have a call for a pint of turpentine, alcohol, castor-oil, etc. Here your opportunity presents itself. Instead of using a first-class prescription vial, a bottle of the above-described sort will serve the purpose nicely; but do not forget to *charge* ten cents extra for the bottle.

You can be economical in a hundred ways. One way will suggest or draw forth another. These ways may often save incidental expenses. A standing annoyance to a pharmacist, or in fact to any business man, are those very "incidentals." By avoiding such, you will be doing the very thing your employer expects of you: that is,—create a *profit* on your services.

It requires years of hard work and study to acquire a proper knowledge of the profession. Therefore, act so as *always to uphold the value* of your service. Do not ever fall into comparing the same with those of a tonsorial artist or an ordinary laborer. The average drug-clerk's salary is a meagre affair. Conduct yourself so as to get *above* the average.

Do not be too hasty in waiting on your customers. They do not *all* wish to catch a railroad train. When they do, their actions will denote it. They may wish, however, to "catch their breath."

Always meet your customer half-way with a pleasant "Good morning," or as the time of the day may indicate. A smile is a good souvenir to present to your customers, and always pays good "interest."

Make your customers feel "at home." Be careful, however, *not to tarry too long* in conversation with them. They may desire to place your valuable counter-space on a "democratic basis," that is,—to see "the next man" have as good a right as they.

Punctuality is *another* item that should always be observed. Do not allow pleasure to conflict in any way with business. On witnessing a football-game or a horse-race, do not allow your fascination by the sport to retard you from returning to your work, on time. You should exercise fully as much care in this respect as you would in catching the last night-car. By your neglecting this point, your employer will lose confidence as to your reliability, which otherwise you could retain. Show me a man who is ever *punctual*, and I will show you a successful bussiness man!—*Merck's Market Report.*

First Steps in Botany.

In commencing the study of botany, the student must remember at the outset that he is about to deal with living organisms, and all the details of form and structure which they present must be considered in their bearing upon the mode of life which characterizes the vegetable world. Everything that can be seen in a plant with the naked eye, or with the aid of a microscope, has some definite relation to the way it reacts to its environment, and can be explained accordingly. The first requisite for a successful student of botany is a power of careful and exact observation, and details which, to the novice, seem to have no particular purpose, are found on more extended acquaintance to play some part or other in the life of the plant on which they are found. Nor should a student be at all discouraged because the purpose of any particular part is not at once obvious. There are many mysteries about which nothing or next to nothing is yet known, but daily these grow less.

It is obvious from this that a student should not attempt to learn botany from books alone. The living organism itself should be his first object of examination. In the absence of a teacher to explain his difficulties, some book should be used side by side with the plant itself, but he must not fall into the error of thinking that even the most complete acquaintance with the book can supercede actual observation and study of the plant.

In his first studies, such a book as Oliver's 'Lessons in Elementary Botany' (Macmillan) should be the first one used. Here he will find set forth what are the principal features which plants exhibit. Armed with such a companion, he should procure some simple wild plant and learn to identify its parts. Its outward form will first engage his attention, and the peculiarities of its root, its stem, and the appendages which spring therefrom should be carefully compared with the author's descriptions till he is familiar with the several parts. Then other plants should be taken and compared carefully with the first one and with the text-book descriptions. Thus he will form a good idea of the variety which each part of the plant is capable of showing. This variety will gradually lead him up to the idea of classification and natural relationship. The division of plants into groups and the sub-divisions of such groups can thus be grasped.

When this study of outward form and relationship has been carried on for a time, and only then, acquaintance should be made with the internal structure of the plant. It will be found that a close relationship between structure and habit of life is very easy to recognize. A water plant, or alga, whose life is spent under the surface of a stream or lake, has a very different amount of rigidity to one which lives on land, such as a herb or a tree. The sub-divisions of its body are different in the two cases, and its general consistency is not at all the same. The internal structure will be found to correspond to such differences—a tree will be hard and woody, difficult to cut or to tear, while a seaweed will be succulent, and its interior delicate and soft.

Soon a microscope will be advantageously employed, and the minute details of structure can by its assistance be studied. Here another kind of text-book will be wanted, and no better can be placed in the hands of the student than Dr. Scott's little 'Introduction to Structural Botany' (A. and C. Black). A very simple plant, the wall-flower, is the first one to be taken. It is a very common plant, and easily accessible everywhere. Again, *no effort* should be made to learn the contents of the book apart from the actual examination of the plant.

These two having been carefully studied, the student can turn to some more

advanced text-book. By this time he will have formed a habit of working on the right lines, and can be trusted to pursue his studies more independently.

The work done so far will enable him then to take up the study of the vital processes which are carried on. The way plants absorb their food, what their food consists of, what changes are the result of such absorption, and so on, will be easily understood, and will at once illustrate and explain much of the detail already familiar to him. He will learn why the plant has assumed the form it has, and what is the meaning of the detail of its anatomy.—*Phar. Jl. and Transactions.*

Successful Buying.

It is an old saying that "goods well bought are half sold," and from the importance given by most business men to this department of their business, there seems to be considerable faith in the truth of it. A careful study of the science of buying must reveal the fact that while a buyer must to a very large extent be governed by condictions, there are still certain rules that seem to govern all transactions, and prominent among them may be named the following, which will find a connection with almost every purchase in one form or another:

Study your wants, and buy only such goods as will move.

Don't buy a new article unless there is a profit that will pay you to introduce it.

Keep close track of stock on hand.

Know what sells and how much is sold. Keep a record.

Do not allow smooth tongued travellers to sell you more than you want. When the goods come they are yours and you must pay the bill.

If you do not carry a certain article in stock and it is in your line, know where to buy it.

Keep your catalogues and price lists in good order. Have them complete and easy of access.

Keep a quotation book and use it. Know when you want anything, where you can buy it and at what price.

Study the cost of producing the goods purchased.

Take good trade papers and read them. Keep posted on the changes in tariff, expiration of patents, fluctuations in values.

Solicit prices; you command a large field at small cost.

Use neat stationery. It makes a good impression.

Always find time to be courteous to the travelling salesmen. It costs nothing and always pays.

Be clear and concise in the statement of your wants.

Look upon all quotations as being subject to change, if not in base price, then in discounts, length of time, freights, etc.

Consider all quotations strictly confidential. Never give one man's price to another.

Make price, quality and terms be the basis of a purchase. Friendship is good in its place, but in business, justice only should rule

Let dollars and cents be the first point considered in changing firms.

Keep posted on new firms. Their prices are generally good. Use them, don't overlook quality, credit, etc.

If you want good prices and quick service, telegraph. It costs something to be sure, but generally pays when done with discretion.

Calculate ahead. Ordering at poor prices, expensive telegrams and annoying delays will thus be avoided.

Work for quantity discounts. If you are not entitled to it unite with another or find a jobber who is, and is willing to divide up.

Work discounts, freights, packages, etc., for all they are worth. Don't forget that 1 per cent. of $100,000 is $1,000.

If your purchases are large let the fact be known. Competition for your trade will be all the sharper.

Work for an inside track for articles controlled by combination, syndicates, etc. Use quantity, quality, treatment, time, style of packages, etc., for all they are worth.

Buy goods, prices guaranteed, then you are always on sure ground.

Contract when prices are low. To know when to contract, understand the supply and demand, condition of patents, changes in tariff and other points peculiar to each article.

Adopt an order blank. Embrace in the printing all the points desirable in regular order; omissions will then be avoided.

Patronize home industry as much as possible. By so doing you contribute indirectly to your own business.

Be clear and concise in ordering. Mistakes are less liable to occur.

Keep a copy of all orders. Responsibility for errors can then be easily and surely located.

If you pay freight be sure you get all the benefits there is in water freights—low classification, quantity, method of packing, etc.

Be sure that goods received are as ordered in both quantity and quality.

Pay bills promptly. A firm can afford to sell at a less margin to good pay than to one who consumes part of his profits by collection expenses.

Never forget that a small and well-assorted stock is better than a large stock. On the one hand the stock is clean and new, and money is turned oftener. On the other, stock deteriorates and cost increases by interest and insurance or money invested.—*Iron Age.*

A Confession.

ATRA CURA.

1.

The pharmacists' profession,
Far and near,
Sinks under trade depression
Most severe.
Our high and learned calling
Finds its profits all are falling
At a rate that's most appalling
Year by year.

2.

We pass examinations
By the score,
The newest preparations
Keep in store.
We've drugs of all descriptions,
From Kamschatkans and Egyptians,
And the most abstruse prescriptions
We can floor.

3.

We stick a Latin label,
As you know,
On everything we're able,
Just for show.
Our speech is antiquated,
And our sentences inflated,
Like a much exaggerated
Medico.

4.

Diplomas gained at College,
We were told,
Our claim to special knowledge
Would uphold,
But though for cash we're yearning,
Still we find our store of learning
Is very slow at turning
Into gold.

5.

We talk of our profession
As is right,
Think "tradesman" an expression
Not polite,
But the draper and the grocer
Try to cut the profits closer
On each poor unhappy "doser"
With delight.

6.

Each year our trade is smaller
Than the last,
Our profits, too, were taller.
In the past.
To own the truth we're shrinking,
But the fact will not stand blinking.
To bankruptcy we're sinking
Very fast.

7.

But the cutting drug store fellow
'Cross the way
Rakes in the sovereigns yellow
Every day.
He points with smile seraphic
At his sundries photographic,
E'en patent medicine traffic
He makes pay.

8.

Although of your derision
I'm afraid,
I'll tell you my decision
Has been made,
To pharmacy 'tis treason,
But 'tis common sense and reason,
So I'll run the show next season
As a trade.

—*British & Colonial Druggist.*

Bacterias are not destroyed by a temperature as low as 213° C. even, according to Pictet.

Kola—A Contribution to its History.

F. A. Fluckiger.

The grains of *Cola acuminata*, generally, but very improperly, termed kola nuts, enjoy a high class reputation in tropical Africa, which apparently dates back some long time. An Arabian doctor, El-Ghafeky, or Gafiki, seems to have discovered them in the first half of the twelfth century. So, at least, we may infer from a work of his mentioned in the "Djami el Mufridat," of Ibn Bailar of Malaga. In this work, which recalls that of Pliny in its characters, the author unites a dozen drugs under the name of "Dijouz," which means "nuts" (Eedit Leclerc A. 383, No. 533). One of these, Dijouz-ez-zendj, is, according to Ghafeky, enclosed in a fruit with a rough bark, about the size of an apple, but somewhat longer. The shape of the nut is comparable to that of the cardamom, of a reddish color, aromatic, and recalling galanga root, It is possible that the kola nut is referred to here. Ghafeky says that it comes from the desert of Berber, which possibly merely signifies that it is imported into Spain by the north of Africa. The remainder of the description informs us that the nut is used in the form of a powder for colic, stomach-ache, and possesses warming properties. The same element of doubt exists in the case of the little cardamom. According to Ghafeky, however, the description is of a larger seed than this, although he uses the term "Hil" for them, which is suggestive of *Korarima-kardamom*, which is not, of course, so small. So that the evidence of the Arabian physician's knowledge of kola nuts is not by any means certain. The first absolutely definite mention of the drug occurred in the sixteenth century. In the rare and curious work of Odoard Lopez, "Relatione del Reame di Congo," edited by Filippo Pigafetta (Rome, 1591) we find the following lines: "Vi sono altri arbori che producono frutti nominati Cola; i quali sono grandi come una pigna, e hanno dentro altri frutti a guisa di castagne, in cui sono quattro polpe separate di rosso colore, e incarnato; li tengono in bocca, e masticano per is pignese la sete e far saporita l'acqua." This description of kola leaves absolutely no doubt, and brings us to the date 1578 or 1587, when Portugal was making very strong efforts to colonize tropical Africa. Shortly after 1566, Guinea was visited by Andre Alvarez, of Almada, who wrote, in 1594, in his "Tratado breve dos rios de Guine" (edit. 1841) that on the borders of Gambia, and on the banks of the rivers of Guinea, kola nuts were an important commercial article. The tree which produced them resembled the chestnut, except that the fruit was not spiny, Alvarez speaks also of the uses to which the nut was put, which recalls the chewing of the betel nut. Towards the end of the sixteenth century the Portuguese did much business with Senegambia and Sierra Leone. They carried thither kola nuts, which were then taken to the interior of the continent. The extraordinary value attached to them is testified by Coelho. The black population would scarcely undertake any enterprise without the aid of kola, and it was supposed to protect from the pangs of thirst. The annals of the Jesuits (1604-1605) also mention the importation of kola nuts into Sierra Leone by the Portuguese, where, according to Alamada, they were one of the most valuable articles of exchange. Ficalho, from whom these details are borrowed, quotes two lines which show the value of the nut in the country bordering on Angola: "Qui goute au kola reste a Angola."

At the end of the sixteenth century, kola nuts arrived in London. Apothecary James Garet, an amateur collector of foreign curios, who translated into English Acosta's "Traite des drogues des Indes" (Burgos, 1578), brought the nuts under the notice of Clusius, when this celebrated botanist paid a visit to London (either in 1591 or 1571). who at the same time received samples of them from Tobias Roels, a Dutch dotor. Abundance of information was forthcoming in the early part of the seventeenth century. Palisot, of Beauvair, had seen the nut on his voyages (Benin and the Niger), and presented an illustration of it in his celebrated work published in 1804, under the name of *Sterculia acuminati*. In modern times no attention was paid to these nuts until very recently, not even when Attfield had announced that they contained 2.13 per cent. of caffeine. In 1882 Heckel and Schlagdenhauffen confirmed this statement, and said that, in addition to 2.35 per cent. of caffeine, they han discovered .02 per cent. of theobromine. It is to these two French savants that the honor of having studied in detail the chemical composition and medicinal properties of kola, belongs. In 1884 they published a monograph, "African Kolas." If we embrace the different varieties of kolas, under the name *Cola acuminata*, its area of occurrence stretches over the enormous region included by 10° north and 5° south. Karsten, who has done good service to botanical studies of the northeast of South America from 1844 to 1856, says he met with the kola tree upon the borders of Venezuela. When the sun and the climate are favorable, there is not much difficulty in cultivating the tree. Fruit is obtained by the end of either the third or fourth year. It reaches its maximum, however, about the tenth year, and a single tree then yields about 100 kilos of nuts. The same tree gives both white and red grains. The latter variety yields the glucoside kolanine, discovered by Hilger. Heckel, in his monograph, borrows largely from the statements of travellers, but many of the statements are, doubtless, exaggerated, and require controlling by scientific inquiry. Many varieties of the *Sterculiacie* are called kola, as their generic names, such as *Kola heterophylla*, *Kola cordifolia*, etc., show. These species are easily distinguished by their external form and histological characters, and by the absence of caffeine and kolanine. *Kola ballayi*, however, does contain 1 per cent. of caffeine. Garcinia kola is distinguished by the yellow color of the grains, and also by their bitterness. They are rich in resin, but contain no caffeine. It appears then that the occurrence of caffeine is a characteristic of the genuine nuts, and can be used as a means to detect fraud. Further researches, however, should be directed on the part played by the glucoside kolanine.—*British and Colonial Druggist.*

Essential Oils.

The essential oil industry has derived considerable advantages from the progress in the chemical investigation of essential oils which has taken place during the last few years. The terms which used often to be applied to the supposed workmanlike manufacture of an essential oil, that it had been turned out according to the rules of the art ("lege artis") is now no longer suitable.

A mode of manufacture based upon intelligent principles has replaced rule-of-thumb work; craftmanship has been ousted by science, which, in teaching us the physical and chemical properties of an oil, indicates at the same time ways and means of improving its manufacture. Nowadays each raw material requires its own method of distillation, every crude oil its own special mode of rectification. The processes of preparing similar oils are sometimes altogether different in principle, while in other cases slight deviations in method are sufficient to bring about important improvements in the manufacture.

The fact that freshly distilled oils have a disagreeable subsidiary odour, the so-called "still-smell," was formerly looked upon as quite a matter of course, but is now known to indicate either want of knowledge in the process of distillation or gross carelessness. The fresher the oil, purer should be its odour and taste. Freshly rectified oil of caraway should smell just as aromatically and agreeably as the freshly crushed seed. If, as a result of defective distillation, an oil has once acquired the well-known mouldy sharp odour no amount of exposure of the oil to the air will remove this entirely; but on the other hand the oil, if kept in this condition, all the more rapidly falls a victim to the fate of almost all essential oils, viz., resinification or other decomposition, without having ever been really pure in odour or taste.—*Schimmel's & Co.'s Report.*

Terebene Emulsion.—Clement B. Lowe recommends (Penn. Phar. Asso. Proc.) that this emulsion be made by the addition of one dram of powered gum arabic for each fluidram of terebene. The primary emulsion, consisting of gum and water, should first be carefully prepared, and then the terebene should be slowly and carefully added. The emulsion will be found quite a difficult one to make, the terebene being easily thrown out of solution.

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On and after SEPT. 10th, the prices of T. A. Slocum & Co.'s Remedies will be as follows:

	THREE DOZEN.	ONE DOZEN.	SOLD AT.
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Dr. Taft's White Pine Syrup, 4.00 per dozen.

Microscopy and Colleges of Pharmacy.

H. M. Whelpley, Ph.G., M.D.

Read at the Asheville, N. C., meeting of the American Pharmaceutical Association.

A person who has been graduated in pharmacy from an American college is generally and very justly considered a competent party to conduct a retail drug store in any section of the United States. He, or she, is looked upon as one possessing the maximum amount of professional knowledge that we have a right to expect of a person discharging the responsible duties of a pharmacist. The trend of the times is for us to seek among the graduates for the examples of higher pharmaceutical education and exceptional technical skill.

Those interested in the progressive colleges of pharmacy, managed by earnest educators and wide-awake business directors, will realize the proper purview of the work before them, and see that the students are taught all that is consistent with the demands and conditions of pharmacy as it exists to-day. The pertinent question is not how little instruction can we give our students and have them pass muster as "Ph. G.'s." Those who are ready to sponsor the education of college of pharmacy students must give a practical answer to the interrogative, "What is the limit of requirements to which we can extend our curriculum of study?"

With such an understanding of the intent and purpose of modern pharmaceutical education the query, "What should be the minimum limit of knowledge in microscopy before being permitted to graduate?" might be resolved into the following: "How much information in microscopy should be made obligatory in a college of pharmacy to enable the graduate to utilize the microscope in his business?"

Before considering an answer to the above query, allow me to say that by microscopy in this connection I understand a study of the instrument and a practical knowledge of the application in pharmacy. The value of the microscope to the pharmacist depends upon its use in studying drugs for the purpose of indentification or determination of purity. To this must be added the microscopical examination of urine, sputum, and other work for physicians.

In order to become proficient in the above subject, the student must be taught the principles of optics and shown their application to the microscope. This instruction can be followed bp a study of the mechanism of the various styles of microscopes and a practical drill in the manipulation of the instrument. Such instruction will prove of great value when the student desires to select a microscope from the many kinds on the market.

The preliminary preparation of substances for examination should be so thoroughly taught that the student will, after graduation, experience no difficulty in deciding how to treat a substance for examination as soon as as he determines its nature. As an example, he should learn why some objects are examined dry, others moistened with water, glycerin, oil, or some other mounting medium. The work of sectioning vegetable, animal and mineral specimens requires study and experience. The principles, at least, should be given the student. The use of stains is of sufficient importance to demand special instruction and numerous demonstrations. The recognition of the more common urinary sediments and a demonstration of the bacillus tuberculosis demand a place in the pharmacist's course in microscopy.

The study of vegetable histology should be carried on to such an extent that all tissues and the more characteristic of the common drugs are readily recognized by the student.

The teaching of microscopy in a college of pharmacy may be confined to laboratory instruction or divided between a series of lectures and a course in manual work. In either event the students must receive didactic information. I prefer to separate the lectures and the laboratory drill.

The amount of time which a college of pharmacy student should devote to the subject of microscopy as a special branch depends upon the extent to which he is drilled in the application of microscopy in the study of botany, chemistry and pharmacy by those in charge of these respective departments. I find so little uniformity in the division of labor among the teachers in the various colleges of pharmacy that I hesitate to affirm a rule for this work.

As a short and succinct response to the interrogation made by the Committee, I should say: "Require of every applicant for graduation a thorough knowledge of microscopical technology, and sufficient learning in the application of microscopy to pharmacy that he may be able to test all medicines suitable for microscopical examination, inspect food stuffs, etc., for the public, and perform such microscopical work as the physician may request of him.

Anent this subject I must refer to a detailed exposition of the home study of microscopy by pharmacists, which will be found in the paper entitled "A Synopsis of a course in Microscopy for Pharmacists," which I contributed to the 1890 meeting of this Association. The article appears on page 252 of volume xxxviii, of the annual proceedings for that year.

Unfortunately, the pharmaceutical profession is not supplied with a suitable text book for students in microscopy, but no doubt the demands of the times will soon call forth literary efforts in this direction. As a guide for the student of microscopical technology, either at college or for home study, I can heartily recommend "Microscopical Methods," by Gage.

Metals may occur in rocks of any formation. Gold usually occurs in quartz veins in metamorphosed slate associated with iron pyrites.

A Rainbow Show Bottle.

To prepare this, first ascertain the capacity of the bottle and divide by 7, to find the volume of liquid required for each layer. Then take sulphuric acid to begin with, and tint it blue by the addition of indigo sulphate. For the next layer use chloroform; for the third use glycerine tinted with caramel; for the fourth castor oil colored with alkanet root; for the fifth, proof spirit tinted with green aniline; sixth, cod liver oil, containing 1 part of oil of turpentine to 99 of the fish oil; seventh, rectified spirit tinted with violet aniline. Each of these should be poured in through a tube, the lower point of which should be directed against the side of the bottle, so that the liquid may trickle gently over the surface of the layer below it.—*National Druggist.*

Milk and Cheese as Brain Food.

Is skim milk or cheese brain food? A paper by M. Becamp, which M. Friedel has read to the Paris Academy of Medicine, gives an affirmative answer. M. Becamp, apparently, has for some time past been devoting himself to the study of casein. He has found that it chemically differs from all other albuminoids with which he is acquainted. One of its properties is, when burnt pure, to make no ashes. He experimented on burnt casein, not with the view of coming to the conclusion he now enunciates, but to an opposite one, mainly, that there is no phosphorus in casein. In a number of experiments he found that absolutely pure casein contains 753 parts out of 1,000 of organic phosphorous. He has also demonstrated the presence in casein of sulphur, and therefore that this substance is made up of carbon, hydrogen, nitrogen, phosphorus, sulphur and oxygen. Milk and cheese are, accordingly, brain restorers.—*Ex.*

Syrup and Mucilage of Acacia.—C. Lowe considers it strange (*Penn. Phar. Asso. Proc.*) that the Pharmacopœia should have continued unchanged the formula for syrup of acacia. In the Pharmacopœia of 1870 the syrup was made directly from the gum, and we had a fairly stable preparation. In the last two pharmacopœias it is ordered to be prepared from the mucilage which spoils quickly, and the syrup thus made would ferment in a few hours, unless the mucilage was freshly prepared. The formula of mucilage of acacia can be improved upon by the use of chloroform water of the strength given in the British pharmacopœia. If the chloroform is objectionable from a therapeutical stand point, a few minutes' exposure to heat will thoroughly dissipate it. The most convenient way of dissolving the gum is by means of a dialyzer.

Leeches are said to be proof against prussic acid. They may also be fed cantharides without being inconvenienced.

Pharmacy Abroad.

PHARMACY IN JAPAN.—Professor Ogata, of Tokio, in a communication to the *Pharmaceutische Zeitung*, says that in Japan, as a rule, the offices of physician and pharmacist are combined in the same person. Nearly all medical men do their own dispensing, and are paid, not for their professional visits, but for the medicine supplied by them. The average charge for medicaments is about 2d. per day. The Japanese medico-pharmacist usually keeps two or three assistants, who prepare the medicines for him. Efforts have lately been made to separate the medical and the pharmaceutical professions, but so far without much result, most of the medical men opposing the change.

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MALTA.—There are in all about twenty chemists in Valetta, the little peninsula which constitutes the Malta of the globe-trotter. Pharmacy law is much more in evidence here than in Gibraltar. No one may practise as an apothecary in the island of Malta without a municipal or Board of Health warrant, and the candidate must show a certificate of having attended a course of medical instruction at a university and three years' practice in a pharmacy. The simplest poisons—salt of sorrel, sugar of lead, &c.—are not sold without a register of the name of the purchaser—not in a perfunctory fashion, but under the direct jurisdiction of the police authorities, who examine the books at stated intervals. Laudanum is not sold without a medical certificate, and opium is seldom or never sold. The same wholesome authority is exercised by the police over the stock, which is inspected periodically. There is plenty of good dispensing, especially in the winter, and doctors do not dispense—they are not allowed. Many will think there is something Utopian about these laws—and there is no pharmaceutical society in Malta. Mizzi's was the handsomest dispensary I visited. It is very prettily fitted, and the stock is mostly English, although French and German houses are evidently finding good markets here. Kinston's pharmacy in the Strada Reale, is a spacious, handsome shop, where an excellent business is done with the large European community. It is closed from 1 to 3 p. m. during the summer months, in common with many of the more independent businesses here. Among others of the more important chemists' businesses are Messrs. Collis & Williams, the Economical British Dispensary, the British Dispensary, Dr. Fab Borg's, the English Dispensary, Speranza's, and others. There are several good appointments for English chemists in the best of the establishments named. —*Chemist and Druggist.*

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IMPORTATION OF OPIUM.—From statistics recently published we find that 80,000 lbs. of opium is imported into Australia every year. 79,000 lbs. of this is consumed by opium smokers; the other 1000 is used principally as medicine, and is described as "Turkish Opium." The opium consumed by smokers is "Indian Opium."—*Australian Jl. Pharmacy.*

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PHARMACY IN COREA.—A *Pall Mall Budget* correspondent, in an article entitled "A Peep at Soul" (Soul, or Seoul, is the capital of the "Hermit Kingdom," in which the contending Japanese and Chinese are now achieving their Munchhausian victories), gives some interesting particulars of the condition of pharmacy in Corea. "The Coreans," says the writer, "take a great deal of medicine (those who can afford it), and it never seems to do them any harm. For the rich pills of incredible size are thickly gilded and placed in elaborate boxes. The poor take smaller pills, ungilded, and omit the boxes altogether. Very many Coreans take medicine at stated intervals without the slightest reference to their state of health at the time. These systematic persons do not take medicine when they are ill, unless the illness has the good taste to fall upon their duly-appointed medicine-day. This is how an old Corean explained to me the philosophy of the medicine-regularly-taken theory: 'On every seventh day you rest whether you are tired or not; and on all the other days you work whether you are tired or not. So do we take our medicine once in so many moons, because it is well to observe system—to be regular.' The old man's eye twinkled finely as he spoke, as who should say, 'What, are you answered now?' and I rather felt that he had me on the hip." Mr. Percival Lowell, from whose interesting book, "Chosen, the Land of the Morning Calm" (published by Messrs. Houghton, Mifflin & Co., of Boston), says on the same subject: "In Corea medicine is an heirloom from hoary antiquity. An apothecary's shop there needs not to adorn itself with external and irrelevant charms like the beautiful purple jar that so deceived poor little Rosamond. Upon eminent respectability alone it basis its claim to custom; and its traditions are certainly convincing. Painted upon suitable spots along the front of the building runs the legend, 'SIN NONG YU OP'—that is, 'The profession left behind by Sin Nong.' This eminent person was a 'spiritual agriculturist,' the discoverer of both agriculture and medicine; and the pills sold in the shops to-day are supposed to be the counterparts of those invented by him. Worthily to render the legend we ought to translate it, 'Jones, successor to Æsculapius.'" Surgery is more advanced in Corea than in China, less advanced than in Japan. Both surgery and medicine are very much in awe of royalty. Indeed, the person of His Majesty is so sacred that surgery itself cannot approach him, and its very name may scarcely be spoken in his presence. It is high treason to touch with any sharp instrument the person of the king, and not so very many years ago a Corean king died rather than undergo a trifling operation, not because he feared the knife, but because he would not suffer it at the hand of a subject— a subject who happened to be his favorite physician. And within the palace gates even medicine itself is a very perfumed, gilded thing indeed.—*Chemist and Druggist.*

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EGYPTIAN PHARMACY.—F. J. Denham, Cairo, writes to the *Chemist and Druggist* as follows: "Cairo has become one of the most cosmopolite cities in existence, and high-class English, French, German, and Italian pharmacies abound. The new English Dispensary—a fine shop fitted in Maw's best style—is, however, the only establishment with an English *personnel*, it being managed by two qualified pharmaceutical chemists. Of course, the greater portion of the trade is done during the winter or tourist season; but a constant source of business is the esteem in which the European doctors are held by all classes of natives, also the presence of the army of occupation and the numerous Englishmen in the Government service. Cairo possesses schools of medicine and pharmacy, neither in a very flourishing condition from lack of students, caused by the superior attractions of European centres. Mr. Mair says there is no Egyptian pharmacy law. On the contrary, there are admirably-framed pharmacy and poison Acts, based on the French system, which is much in advance of the English. European diplomas are recognized on application to the Minister of the Interior, on the recommendation of one's Consul and the Director of the Sanitary Department. We have no vexatious medicine-stamp Act, no spirit, wine, sweets, or other licenses to bother us, and doctors are not allowed to dispense. Fair prices are obtained, and nothing sold under one piastre (2½d.). The hours are long, 8 to 8 and 8 to 11, alternate days, with two or three hours off in the afternoon. It rarely rains here—two or three showers in the winter; the summer shade temperature is generally from 90° to 100° F., although we have had it as high as 115° F. for three or four days together."

WHERE SNOW IS RED.—Snow is sometimes found in polar and alpine regions, where it lies unmelted from year to year, and the annual fall is small, colored red by the presence of innumerable small red plants. In its native state the plant consists of brilliant red globules on a gelatinous mass. Red snow was observed by the ancients, a passage is in Aristotle referring to it, but it attracted little or no attention until 1760, when Sanssure observed it in the Alps, and concluded that it was due to the pollen of a plant. It was also noticed by the arctic expedition under Captain Ross on Baffin's bay shore on a range of cliffs, the red color penetrating to a depth of twelve feet. Less frequent is a green growth on snow.—*Ladies' Home Journal.*

Newspapers make good wrappers for ice.

Formulary.

CREASOTED TINCTURE.

To have creasote in a dilute form of a definite strength, the Berlin Formulary gives the following:

Creasote	6 parts
Tincture of gentian	24 parts

Mix and dissolve. Five minims of the tincture contains 5 centigrams of creasote.

COCA WINE.

Fld. ext. coca	fl ℥ ij.
Fuller's earth	½ ounce or q. s.

Shake well, then add:

Claret wine	fl. ℥ xxiv.
Port wine	fl. ℥ iv.
Simple syrup	℥ iij.

Mix well, let stand one week and filter.

IMPROVED COLD CREAM.

Spermaceti	℥ ij.
White wax	℥ i.
Oil sweet almond	℥ iv.
Glycerin	℥ ij.
Albolene or white vaseline	℥ vj.
Boric acid	℥ ij.
Oil rose geranium, Oil lemon (āā)	m l.
Oil bergamot	℥ j.
Oil cassia	m xx.
Oil neroli	gtt. xij.
Oil rose	gtt. iv.

Melt all together at a low heat except the flavoring oils, stirring well; when nearly cool add the oils.

FRECKLE LOTION.

Borax	dr. 1
Potassium chlorate	dr. 4
Alcohol	fl. dr. 1
Glycerin	dr. 2
Rose water enough to make	fl. oz. 3

Label—Apply with a soft sponge several times a day.

This forms a mild, harmless lotion and frequently will answer completely in mild cases.

ASTRINGENT TINCTURE FOR THE TEETH AND GUMS.

Myrrhæ	℥ xij.
Rad. Iridis	℥ xij.
Benzoini	℥ vj.
Cort. cinchonæ	℥ viij.
Ext. Krameriæ	℥ j.
Capsici	℥ j.
Spt. rectificat	cong. ij.

Macerate for seven days, and filter; to the filtrate add 30 oz. of simple syrup.

PRESCRIPTION FOR OFFENSIVE BREATH

Tinct. myrrhæ	12 parts
Tinct. lavandulæ	12 parts
Glycerin	30 parts
Liq. sodæ chloratæ	30 parts
Infus. salviæ	250 parts

M. Sig.: Use as a gargle.

VARNISH FOR TIN.

Common turpentine	8 parts
Boiled linseed oil, Amber (āā)	4 parts
Shellac	1 part

Melt together and color with curcuma, or with aniline dyes.

ARISTOL AND IODOL IN OINTMENTS.

When aristol and iodol are prescribed in ointments the best way to get them well reduced is to rub with an equal weight of the ointment basis and a little ether. So says C. van Wisselingh.

CLEANING MIXTURE.

To remove grease, paint, etc.:

Castile soap in shavings	4 ozs.
Alcohol	8 fl. ozs.
Chloroform	4 fl. ozs.
Ammonia	8 fl. ozs.
Water to make	1 gallon

Dissolve soap in water and then add other ingredients.

SOLID PERFUMES.

These are composed of a basis paraffin wax to which the various mixed essential oils are added when first melted on the water bath. The wax is then run into moulds and cooled into small cakes. The following are a few good mixtures which may be added in about the proportion of 1 drachm to each ounce of paraffin:

I.

Take of

Oil of lavender	2 drms.
Oil of cloves	1 drm.
Oil of rose geranium	20 minims
Oil of bergamot	2 drms.
Vanillin	10 grs.
Glycerine	1 drm.

This is sufficient for four ounces of paraffin.

II.

Take of

Oil of neroli	1 drm.
Oil of rose geranium	1 drm.
Oil of lavender	1 drm.
Oil of bergamot	2 drms.
Oil of cloves	4 minims
Heliotropine	20 grs.
Glycerine	1 drm.

This is sufficient for half a pound of paraffin.

III.

Take of

Oil of ligu aloe	2 drms.
Heliotropine	20 grs.
Oil bergamot	20 minims
Oil lemon	20 minims
Glycerine	1 drm.

Sufficient for four ounces of paraffin.

IV.

Take of

Oil of ylang-ylang	2 drms.
Coumarin	20 grs.
Ess. musk	20 minims
Oil neroli	1 drm.
Oil of sandal wood	30 minims
Glycerine	1 drm.

Sufficient for four ounces of paraffin.

V.

Take of

Oil of bergamot	4 drms.
Oil of rose geranium	20 minims
Oil of neroli	30 minims
Oil of lemon	1 drm.
Oil of orange	1 drm.
Oil of rosemary	20 minims
Oil of lavender	20 minims

Sufficient for four ounces of paraffin.—*British and Colonial Druggist.*

Extemporaneous Syrup of Iodide of Iron.

Miss Austa Worthrup at the last meeting of the Kansas Pharmaceutical Association presented the following method for making this preparation quickly and satisfactorily:

Iodine	480 gms.
Distilled water	2½ fl. oz.
Iron by hydrogen	150 gms.
Citric acid	10 gms.
Syrup sufficient to make	10 fl. oz.

Place the iodine in a flask, add the distilled water and reduced iron in small quantities by degrees. Care should be taken not to add too much iron at a time after the reaction has begun, which can be perceived by the violent color of the liquid; also by the increase of temperature. The reaction is to be continued until the violet color has changed to a green. A slight excess of iron may be added after the reaction has ceased, as it serves to prevent oxidation during filtration. The syrup should be heated to near the boiling point, and the solution of ferrous iodide filtered into the hot syrup. Then make a 50 per cent. solution of citric acid and add to the finished product. The citric acid tends to prevent the liberation of free iodine. The advantages of this formula are the rapidity in preparation, which requires from fifteen to twenty minutes; the ease of manipulation; besides the additional advantage that it can be kept in pint or quart bottles, from which a part can be dispensed without injury to the remainder of the preparation. Of course this method would cost a little more, but the additional cost is not great. The reduced iron is worth about 80 cents to $1 a pound, and it requires only about one ounce to make one quart of the syrup.

The Estimation of Glycerine in Fluid Extracts.

The estimation of glycerine is at all times a fairly difficult process, unless the glycerine be practically free from any other organic matter; hence any work on the subject is very welcome. Lindo recommends the following: Ten grammes of the extract are concentrated to 5 grammes. The residue is dissolved in 50 grammes of distilled water; subacetate of lead solution is added drop by drop, until no further precipitate is formed. This is filtered off and washed, to the filtrate a few drops of weak H_2SO_4 are added, and then phosphotungstic acid in strong solution. The liquid is again filtered, and the filtrate is neutralised with weak soda solution. It is now evaporated to the consistency of a thick syrup, which is treated with 30 cc. of a mixture of equal volumes of ether and alcohol. The residue after separation is now filtered and the filtrate is washed with the ethereal mixture and then evaporated till of constant weight. The residue is almost pure glycerine, with traces of coloring matter. A correction of 5 per cent. may be added for loss during evaporation.—*Pharm. Central.*

A means for mixing water with vaselin appeared in *Rep. de Phar.*, and is recommended by Mr. Zoole. If a small quantity of castor oil is added to the vaselin, water can easily be incorporated.

Photographic Notes

CORRECTING DISTORTION.

—In portrait-taking everything must be in line if we are to have a perfect reproduction of the image. But that is never obtained in practice. Anything in front of the line, be it hand or foot, comes out larger, and anything behind the line comes out smaller than it should be. The difference may be slight, as it generally is in photos taken with good apparatus, but it is there, and is irritating to the true artist. Van der Weyde has invented a "photo-corrector" which annihilates the distortion. The result is said to be admirable.—*Chemist and Druggist.*

ONE SOLUTION HYDROKINONE DEVELOPER

Carbonate of soda	4½ ozs.
Sulphite	2½ ozs.
Hydrokinone	150 grs.
Water	36 ozs.

When new this is too strong; add ½ water. Afterwards each time of using a certain quantity of new solution should be added. The solution is not filtered, but decanted off.

TOTAL LOCAL REDUCTION.

The author suggests painting negatives and bromide prints where lines or spots are required to be totally removed with

Potassium iodide	2 parts
Water	2 parts

To which sufficient iodine in crystals has been added to make the solution dark brown. The parts painted with this are converted into silver iodide, which is dissolved by subsequent fixing.—A. LAINER.

FLASH-LIGHT FOR PHOTOGRAPHS.

Either of the following mixtures gives a powerful light which is suitable for flash-light photography:

I.

Chlorate of potash	16 parts
Aluminum powder	5.46 parts
Black antimony	3.4 parts

II.

Chlorate of potash	6 parts
Magnesium powder	3 parts
Black antimony	1 part

—*Chemist and Druggist.*

TO SECURE PERMANENT PICTURES.

Sig. A. Corsi, in *Bullettino della Societa Fotografica Italiano*, lays down the following rules for those who wish to secure permanent pictures. 1. The prints should be fixed in a fresh 10 per cent. solution of hyposulphite of soda, in a subdued light; care being taken that fixation is complete. 2. They must then be transferred to a second bath of hypo, exactly similar to the first, and left there for a similar period. 3. They must then be washed in water for not less than ten minutes.

Modern Photographic Developers

BY A PHARMACIST.

A difficulty frequently crops up when an enterprising customer wants to know about some of the new developers, as all pharmacists have not the time or opportunity for testing their relative merits, and, curiously enough, dry-plate makers are, as a rule, very conservative in publishing suitable formulæ adapted to their plates, whilst the mixtures of mystery and mathematics given as recipes with the developers by the German makers only make the confusion worse.

The favorite developer after pyrogallol is, without doubt, hydroquinone or quinol. It is a dihydroxybenzene, isomeric with catechol and resorcinol. Quinol, as showing its analogy and relation to phenol, is the preferable name. It occurs as small whitish crystals soluble in 3 parts of cold water. Negatives produced by this developer are of a black and white character, with somewhat harsh contrasts, but, on account of the ease in obtaining density, it is much used by a large section of amateurs. The formula given with Ilford plates works splendidly:

A.

Quinol	80 grs.
Sod. sulphite	160 grs.
Water to	10 oz.

Mix equal parts just before use.

B.

Sodium hydrate	40 grs.
Potas. bromide	20 grs.
Water to	10 ozs.

Softer results are obtained if a little water (say ½ part) is added to the mixture; development is slowed, and more under control.

Eikonogen, the sodium salt of amidonaphthol sulphonic acid is a developer introduced by Dr. Andresen. It is sent out in minute yellowish crystals, resembling in appearance tannic acid. Solubility, 1 in 33 of cold water. By its aid very soft negatives are produced, frequently of insufficient printing density. It has only about a third of the developing power of quinol. A mixture of quinol and eikonogen gives a good result, the quinol correcting the faults of the eikonogen. In the formula above substitute for half the quinol 50 grs. of eikonogen.

Amidol, or diamidophenol, is a patented developer, acting without the addition of alkalies, in the presence of sodium sulphate. There are two rival brands—Amidol-Hauff and Amidol-Andresen—although there does not seem to be any appreciable difference between them in use. Amidol is a crystalline substance of a light brown color, fairly soluble in water; but it does not keep well when in solution. It is best added to the solution of sodium sulphite just before use. The makers recommend a little horn or bone spoon in which to guess the quantity. For a half-plate, 10 or 12 grs. of amidol are added to a solution of 50 grs. of sodium sulphite in 4 ozs. of water, and 2 grs. of potassium bromide to give contrast and prevent fog. The sulphite is conveniently kept in a 10 gr. to ℥j. solution, the potassium bromide as a 10-per-cent. solution. The sodium sulphite of commerce is generally contaminated with carbonate and sulphate, the former due to imperfect saturation with sulphurous anhydride, and the latter to the oxidising action of the air, or the use of an impure carbonate or hydrate. In making the solution any carbonate present should be neutralised with sulphurous acid, or, better still, with sodium bisulphite ($NaHSO_3$).

Amidol developer acts very quickly, the image appearing in 20 to 30 seconds, and if the exposure is right there is no difficulty in getting a good negative in three or four minutes. Under-exposure is corrected by increasing the sodium sulphite and adding a little potassium carbonate solution, or, if this fails, after-intensification is resorted to. Too much sulphite causes fog. For over-exposure a weak solution with a considerable portion of potassium bromide gives best results.

Metol vies with amidol at present for popularity, giving very similar results. It is a grayish powder soluble in water, with the advantage of keeping well. The formula of Mr. Andrew Pringle works admirably:

A.

Metol	50 grs.
Sodium sulphite	1 oz.
Water to	10 ozs.

Dissolve the metol first, then the sulphite.

B.

Potassium carbonate	1 oz.
Water to	10 oz.

C.

Potassium bromide	½ oz.
Water to	10 oz.

For normal exposures 3 parts of A. to 1 part of B., adding to each ounce 20 m. of C. For snap-shots omit C.

A good one-solution developer is made as follows:

Metol	75 grs.
Sodium sulphite	1 oz.
Potassium carbonate	1 oz.
Water to	10 ozs.

To develop add an equal part of water, with a little potassium bromide if desired.

This is a good "special" developer to sell. Its full chemical name—methylparamidometacresolsulphonic acid — might serve to fill up the label.

Glycin, or parahydroxyphenyl glycin, is a slow-working developer, giving clear negatives of a gray-black color, mainly used for copying and process work. It keeps well in solution, and with it plates of all manner of exposures may be developed in batches. Some workers claim it to be the best developer for lantern slides.

All the above developers are also much used for bromide papers and opals, and have the advantage over ferrous oxalate in not requiring a clearing bath, thus making one operation the less and reducing risk of failure.—*Chemist and Druggist.*

The Transference of Negative Films.

BY J. PIKE.

The majority of chemists are now familiar with the more important operation of photography. There is one, however, not so much practised nor understood as it might be—an operation mechanical, perhaps, but extremely interesting, viz., the removal of the negative

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PRICE LISTS SENT ON APPLICATION.

film from its glass support and its transfer or reversal.

The transfer is required when the glass (not the film) has by accident got broken, and we wish to place the film on a fresh support; also when we desire an enlargement, as will be seen later on; and again when the final support is intended to be opal, wood, paper, or metal.

The reversal is necessary when the printing process is to be *carbon* by the single transfer, the film in such a case being removed, turned over, and remounted. Such reverse negatives are useful only for this method of printing, or for collotype.

I believe it to be the case that until a very few years ago an easy and satisfactory method of detaching the film was not known. A fluid under a fanciful name, the composition of which was only inferred, was then introduced for the purpose of stripping and enlarging films; this preparation has been, and is being, used, I believe, with more or less success, according to the ability of the individual worker, and as a matter of fact, and with precautions, leaves little to be desired.

We shall not, nevertheless, be blamed if we find a reliable substitute—as for instance, diluted hydrofluoric acid; and 1 oz. of this acid diluted with 19 of water may be used. There are sundry objections to the use of hydrofluoric acid; we do not often stock it, and its effects on the fingers are not pleasant. My own cuticle is not particularly tender, but I cannot stand HF.

An acid, common to every pharmacy, will, I find, answer quite as well, viz., ac. hydrochlor. I think, as an acid appears to be requisite for the purpose, we could not choose an all-round better one than hydrochloric. My method of operating is as follows: A negetive developed with amidol, eikonogen, or metol, or pyrogallol, the former by preference, is carefully fixed, washed and dried; density may be carried to excess, or the average negative may be taken, trusting to increased density at a later period. The negative, say half plate, is placed at the bottom of a deep dish, 8 by 6, and the following solution poured over:

Acid. hydrochlor	½ oz.
Water	3½ ozs.

Rock the dish for a few seconds, and in rather less than one minute a little sign of detatchment should appear at the edges. At once, however, this must be tested by gentle rubbing of the edges with the finger; the film should thus be easily lifted or separated at these parts, being extremely careful to avoid any tearing. The edges are generally the most difficult parts to detach, the partly exposed rebate mark all round being rather akin to the safe edge familiar to "carbon" workers. The edge once free and starting from one corner, gentle dragging will suffice to strip the plate, the film, so to speak, being peeled of. The time occupied by this should not exceed one and a half minutes. It is only fair to say that now and then we meet with a very tenacious film, or one which is quite rotten. I now make a practice to desist at once if the edges do not detach easily, make no delay but wash and dry.

The film being detached is to be dropped at once into a large dish containing clean water, and in this the film will be found to expand to nearly double the original size. Here the film may remain pending further treatment.

The expansion is, of course, at some expense of density. If the negative be over dense to start with, the enlarged film may be all right at the finish. If only just right, it will require intensification. And now the question will be whether to intensify the film at once or after mounting.

If done while in the unattached state it is done quickly and very easily, very much less washing being requisite. At the same time, the film, though often quite tough and capable of being handled, is sometimes very tender, and may easily be torn. Therefore, many may prefer to mount the film first and dry, and then intensify.

The glass final support has to be considered. I have used plain glass, and the same coated with gelatine or collodion, but now always use a substratum of india-rubber. The rubber "solution" sold at cycle depots is very suitable and convenient, using 1 drachm to 2 ozs. of benzole; the cleaned glass plate, which must of course, be sufficiently large to take the film, being simply coated with this in the same way as if varnishing a negative—that is to say, pour on and off, and draining thoroughly, the plates being prepared two or three hours before use.

The rubber makes a very satisfactory base or foundation on which to lay this film. To bring the two into position, we place the prepared glass in the bottom of the large dish of water, and merely float the film over it, taking care not to reverse, unless this is intended. The film is straightened out by a few judicious touches with the finger, and brought approximately into position; the glass then carefully raised at one end, the corresponding end of film allowed to settle in contact; then, gently raising the plate, the film goes naturally into place. Any forcing is to be avoided.

The film will now, of course, have a good body of water under it, and this must be carefully pressed out. This can best be done by placing the plate on a flat surface—a blotting-board, say—then lay down gently on the film a piece of soft and rather damp linen; then again very gently apply a roller squeegee—rolled first one way and then another should be enough to fix the film in contract with the support. I do not known anything that will hold the film so well as rubber. If no substratum is used, the film will very likely contract in drying, and come out with large cracks. In view also of after intensification the support must be as reliable as we can get.

The intensifier is the ordinary mercury bichloride solution, 1 in 20; more attention being paid to secure *even* rather than complete bleaching. Three or four changes of water extended over 15 minutes will be enough washing for films; a more thorough wash being requisite for the mounted and dried negative, followed then by ammonia, liq. ammonia .880, 1 part, water 19, and finally a slight rinse in water.

The film contracts in the mercury bath, expands again in the ammonia, and subsequent washing water. It is obvious, therefore, if not firmly mounted, the intensification of the large negative on glass may be a source of trouble; reticulation and frilling sometimes occurring, in which case preparations should be made for the film leaving the glass altogether to be afterwards remounted.

A film intensified during the operation does not finally expand to the same dimensions as one not so treated, but the film mounted, dried, and then intensified, if this be done successfully, *shows no signs* of contraction by giving way at any part of its surface.

The under part of the film has a rather greater tendency to stick than the front which has been exposed to light and otherwise acted on with reducing agents, and this is natural enough When, therefore, pressing down a reversed film, it will, perhaps, show an inclination to attach itself to the linen cloth; the latter, therefore, should be kept quite damp, this preventing any damage being done.

The film may be brought to its original size, as for reversals, by the use of an astringent, as alum, or an immersion in methylated spirits, the latter is, however, a reducer of density more powerful than alum, and thus open to objection.

A vigorous negative should be chosen, plenty of contrast but no bare glass. The acid reduces, but takes nothing from the negative—leaves it, in fact, in the best condition for the mercury bath, the deposit at this stage being very heavy.

To conclude, it is well to give the finished negative a good hard varnish.—*British and Colonial Druggist.*

The Preservation of Infusions.

The following paper, read by Edmund White before the Chemists' Assistants' Association of London, is particularly timely, in view of the frequent inquiries for information on the subject discussed which have been received.

The preservation of infusions, in common with other organic fluids, is dependent upon the exclusion of various organisms—chiefly moulds and bacteria. The preservative action of alcohol is due to its inhibitory action on the life processes of any organisms which may gain access; that is to say, alcohol is an antiseptic. The addition of alcohol or other antiseptic is attended with disadvantages so obvious as to need no mention here. It has always seemed to me that there was ample room for the application in pharmacy of the comparatively recent results of biological research. Thus it is a simple matter for the bacteriologist to preserve for all time his culture media, which, under

ordinary conditions, rapidly putrefy. It is also a well established fact that an organic fluid once sterilized will remain unchanged if protected from the access of fresh organisms. The result of some experiments in this direction I now publish.

PRESERVATION OF INFUSIONS WITHOUT THE ADDITION OF ANTISEPTICS.

In November, 1892, some infusion of gentian was made. An 8-ounce flask (A), containing 2 ounces distilled water, was then boiled for ten minutes, and some of the infusion strained into it after turning out the residual water. The neck was instantly plugged with sterilized cotton wool and the flask set aside. The infusion remained good for five weeks, and then some filamentous mould appeared. Immediately this was observed the contents of the flask were raised to boiling point and the mould destroyed. The infusion has remained unchanged ever since.

Another flask (B) was filled at the same time, November, 1892. It was thoroughly washed, some fresh infusion of gentian placed in it, the neck being plugged with cotton wool. After bringing the infusion to the boiling point and continuing the ebullition for one minute, the flask was set aside, the cotton wool plug being heated in the flame till it singed slightly, in order to completely sterilize it. This infusion has remained absolutely unchanged for fifteen months, and has been examined for bacteria at intervals, with negative results.

Some infusion of ergot was made on January 29 last, the flask (C) being previously sterilized by boiling water in it immediately before pouring in the infusion. The contents are therefore seventeen days old, and have shown no sign of decomposition. A further quantity of infusion of ergot was made on January 29 last, but the infusion was boiled after introduction to the flask (D). This also remains unchanged.

Other flasks (E and F) contain infusion of bucha, the manipulation being the same as for flasks C and D respectively. The results are the same also.

Infusion of calumba made twelve days ago has been sterilized by filtration through a kieselguhr block of the Berkefeld Filter Co., and received directly into a flask (G), which has been just previously sterilized by boiling distilled water in it. The filtering block and its connections were boiled in water just before filtration, the neck of the flask being afterwards plugged with sterilized cotton wool as in the other experiments. Some infusion of calumba was filtered in the same way and at the same time as that in G, into a flask (H) cleaned in the ordinary way only, and not sterilized by boiling water. The result is entirely different. After three days a faint turbidity appeared, which has continually increased, until now the infusion is absolutely putrid. The difference between the two experiments G and H was that flask G was sterilized and H was simply cleaned under the tap.

These experiments show, I think, that the pharmacist may do a great deal toward the abolition of the so-called concentrated infusion. For instance, a quantity of freshly made infusion may be filled into flasks of convenient size, the flasks having been *previously sterilized in the manner* described and the necks immediately plugged with cotton wool recently heated to 120-150 degrees C., say, in an ordinary kitchen oven. It would probably be safer to raise the contents of the flasks to the boiling point before putting them aside, but unless they are required to be kept a long period this will be unnecessary. Any loss of aroma through the cotton wool plug may easily be prevented by placing a rubber cap such as is used for bacteriological purposes over the mouth of the flask.

The method of filtration through cotton wool gives more trouble, but it enables one to present infusion of calumba or quassia in exactly the condition required by the Pharmacopœia, the application of heat being quite unnecessary if the filtration be properly carried out.

In place of preserving the infusion in a series of small flasks, one larger one may be employed. It has a well-fitting rubber stopper pierced with two holes, through one of which passes a thistle funnel plugged with sterilized cotton wool and terminating just inside the stopper. The end is constricted to a narrow orifice to prevent the infusion wetting the wool when the flask is turned up, or a simple valve made from rubber tubing may be attached. The other hole receives a tube bent downward and six or eight inches long, terminating likewise just inside the stopper. A few ounces of water is first placed in the flask and boiled for ten minutes. The residual water is then turned out and replaced by the fresh infusion. Whether it is necessary to raise the contents to the boiling point after introduction will depend partly on the nature of the infusion and still more on the care which has been exercised in preparing the flask and infusion. When any of the infusion is required it is simply necessary to turn up the flask and let it run out of the bent delivery tube, air flowing into the flask to replace the liquid poured out, through the cotton-wool plug in the thistle funnel. The entrance of organisms is thus prevented. For extra safety the open end of the delivery tube when not in use may be closed with a piece of rubber tubing and a clip. I have several times filled a flask of this kind with some infusion and poured out a few ounces daily, just as if it were required for dispensing purposes. The infusion has always remained good till the end.

I have followed a similar plan in the case of infusions—say buchu—where about two gallons is required every week. A bottle provided with a tubulure at the bottom, through which passes a glass tap or tube and clip, and holding a little over two gallons, is thoroughly cleansed and then rinsed several times with freshly boiled and cooled distilled water. The infusion is placed in the bottle and its mouth is closed by a good cork, through which a thistle funnel, plugged with cotton wool passes, in order to admit air as the contents are drawn off. It is by this means easy to keep an infusion from two to four weeks which would go bad in as many days if stored without these precautions.

The conclusions to which these experiments lead are as follows:

1. An infusion prepared with boiling water is sterile when perfectly fresh, if care be taken to avoid unnecessary exposure.

2. The infusion so prepared may be kept sterile in a flask in which water has been recently boiled.

3. Raising the contents of the flask to the boiling point after plugging renders their preservation more certain.

4. Cold infusions may be sterilized by filtration through kieselguhr blocks.

PRESERVATION OF INFUSIONS BY THE ADDITION OF ANTISEPTICS.

The addition of antiseptics to ordinary infusions is, of course, inadmissible, but the so-called concentrated infusions usually contain 15 or 20 per cent, of rectified spirit. The two chief objections to this addition are (1) the cost of alcohol and (2) the alteration in physical character which is produced by its addition. In several discussions on the preservation of infusions and fluid extracts, chloroform has been mentioned, but generally dismissed as altogether without the pale of discussion. This, I venture to think, is a great mistake. For instance, I produce a concentrated infusion of senega, preserved by the addition of 1 in 400 by volume of chloroform. Fluid extracts may be preserved equally well without the use of alcohol. One fluid drachm contains, therefore, one-seventh of a minim of chloroform, a quantity surely too small for any objection to be raised to its presence. If the infusion contained alcohol as a preservative the same dose would probably be equal to fifteen minims of rectified spirit. The diluted chloroformed infusion would contain 1 in 3200 of chloroform, equal to half-drachm of chloroform water in one ounce. This amount of chloroform has a very slight taste, even in plain water, and in presence of other flavors becomes practically indistinguishable. Moreover, the addition of 1 in 400 of chloroform produces no precipitate, and no change in the physical appearance of the fluid, such as follows the addition of 15 or 20 per cent. of rectified spirit. The relative cost of chloroform and rectified spirit, when used in the proportions I have mentioned, is about 1 to 80, if 20 per cent. of rectified spirit be used. In using chloroform the greatest care must be taken to prevent contamination or incipient decomposition before the addition of the preservative to the finished product. Where admissible, it is a good plan to raise the finished fluid to the boiling point in order to sterilize it, and then add the chloroform as soon as cold.

My own experience has proved that chloroform might advantageously replace alcohol as a preservative in many pharmaceutical preparations.—*Phar. Era.*

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Read T. C. Wheaton & Co.'s advertisement on page 256 of this issue. Their goods are uniform in measurement, of excellent quality and must commend themselves to the trade.

Vin Mariani.

Lawrence A. Wilson & Co., Hospital St., Montreal, are sole agents for this medicinal wine in Canada. Sales are, we understand, increasing rapidly and its excellence must lead to a permanent demand.

Holiday Goods.

The Reinhardt Mfg. Co., Montreal, are offering some very desirable lines in Holiday goods this fall. Their stock is principally of their own manufacture and the designs are for the most part very elegant. See advertisement.

Solazzi.

Solazzi, the well known brand of Pure Licorice Extract is advertised in this month's issue. The strong endorsement given it by the leading medical press and practitioners leave no doubt as to its purity and excellence. When ordering specify "Solazzi."

The "Ideal."

Lyman, Knox & Co., Montreal and Toronto, direct the attention of the trade in this issue (see second page of cover) to the "Ideal" Hair Brush, which is claimed to be a genuine "Siberian bristle brush with a single bristle substituted for the ordinary tuft, the bristles being set in an elastic air-cushion." The prices are reasonable and the brush should prove an excellent seller.

The Principles of Pharmacognosy.

The intelligent study of materia medica, or pharmacognosy as it is now more properly called, naturally presupposes a more than elementary acquaintance with the morphology and structure of plants. Without such previous knowledge it is difficult for the student to understand even the technical terms commonly used by the lecturer and author in describing a drug, and quite impossible for him to have an adequate grasp of the subject he is endeavoring to study. And yet for him to possess such knowledge is the exception rather than the rule; the apprentice is frequently advised to commence his studies with materia medica; he does so by committing to memory the botanical source, natural order, and habitat of the drug, and thus acquires a certain amount of parrot-like information which, when occasion may require, he repeats in a parrot-like manner, succeeding admirably in converting a fascinating study into tedious repetition. Should the student not be in a position to avail himself of the services of a teacher of botany, he would do well to take as his guide one of the many elementary text-books, and study morphology and structure on material that he can gather from field or hedgerow, for the commonest trees, shrubs, and herbs will furnish him with abundant examples. Such works as Lindley's 'School Botany,' Oliver's 'Lessons in Elementary Botany,' Scott's 'Structural Botany,' will not only render technical botanical terms intelligible and familiar to him, but will train him to observe, and to observe critically; for this reason the necessity for making the subject essentially a practical one cannot be too strongly insisted on. Nor should he content himself with simply collecting and examining leaves and flowers, as is often the case. Roots, stems, and fruits should, and as his interest grows, would be subjected to scrutiny. Much information can be gained by allowing stems and roots to dry, and observing the changes that take place. At the same time, with the aid of a text-book his knowledge of systematic botany would grow without effort, and the student would find himself in a position to study with advantage the crude drugs derived from the vegetable kingdom. In extending his studies in this direction he would do well to classify his drugs organographically, and study the most familiar, say the leaves, first. By this means the mental strain involved in constantly transferring the attention from one to some other totally different organ would be avoided, and the powers of observation further tested. Moreover, he should preface the study of the leaves by studying in his text-book the structure of the leaf in general, and the same with the other organs.

In dealing with the vegetable drugs the aid of a text-book must be invoked. As the student reads the drug should be in one hand, his hand-lens in the other, that each statement as it is read may be verified or corrected, but he is advised to refrain from subjecting the drug to microscopical examination until he has acquired a knowledge of botanical anatomy. From the 'Medicinal Plants' of Bentley and Trimen, if available, he will gather an idea of the appearance and habit of the mother plant, whilst the 'Pharmacographia' offers him in most attractive form concise accounts of its commerce and history. Thus, and thus only, can he learn to know a drug. Let him be warned against all tables of materia medica that contain little more than the "name, natural order, and habitat" of the drug, and that may at most serve to "cram" for examinations in which little else is required of the candidate, but bear about the same relation to materia medica as a box of dry bones does to the living creature of which they once formed a part. Let him also avoid the error, too commonly committed by both student and teacher, of reducing his studies to the mere discernment of certain characters by which one drug may be distinguished from others that resemble it. The desirability of his being able to distinguish each and every drug is undeniable, but it is only a fraction of the object of his study, and a fraction with which he will be already acquainted if his examination of each drug has been minutely and conscientiously carried out. He should at all times distinctly remember that his business is not simply to know this or that detail in any one drug, but to be familiar with at least the leading points in the history, life-history, structure, and composition of every drug.

To understand the production and collection of structureless drugs obtained from plants the student must be acquainted with the various glands, ducts, laticiferous vessels, and other tissues in which such substances as oils, oleoresins, gum-resins, etc., are secreted by the plants, as well as the changes which cellulose may undergo in the formation of such substances as gum or resin. Here, necessarily, the microscope must be requisitioned for the study of these structures, and it may be assumed that the student will have made sufficient progress in anatomical botany to enable him to make an intelligent use of the instrument; certainly he will find the study of this second section of materia medica amplify and explain much that he had read and observed in the first. Nor will the study of these drugs be complete without an approximate knowledge of their chemical constituents, their chief reactions, and principal physical characters.

Up to this point the student has been dealing with drugs more or less intact; the further development of the subject will logically consist, first, in the identification of unknown, fragmentary, powdered drugs, and, secondly, the micro-chemical detection of their active principles and determination of the tissue or tissues in which they reside, a study which is best pursued at the hand of an experienced histologist.—*Phar. Journal and Transactions.*

Borate of Calcium.

This salt has been introduced into therapeutics by Dr. A Alberto, of Rio Janeiro. It is white, inodourous and nearly tasteless and is prepared by precipitation from a solution of chloride of calcium by borax. The author recommends its application for burns and in cases of moist eczema and fœtid sweating. Taken internally it constitutes an excellent anti-diarrhœic, especially for children, the dose being about five grains for a child a few months old and proportionately greater for older patients. Its efficacy against diarrhœa seems to be due to a double antiseptic and anesosmotic action due to the boric acid and lime into which the salt is decomposed in the intestines (*L'Orosi*, xvii., 1894, 199, through *Rep. de Pharm.*)

Books & Magazines.

Books.

Handbook of Pharmacy, embracing the theory and practice of Pharmacy and the Art of Dispensing, by Virgil Coblentz, Ph.G., A.M., Phil. D., Professor of theory and practice of pharmacy and director of the Pharmaceutical laboratory in the New York College of Pharmacy.

The author in preparing this work has divided it into four parts, viz.: Physical and Mechanical operations; Galenical Pharmacy; the Art of Dispensing, and Volumetric Analysis, and his design has evidently been to supply a text book which would prove particularly valuable in the dispensing room and in the laboratory of the pharmacist and the college. This he has succeeded in doing in a volume of 445 pages which, while sufficiently detailed for systematic study seems to cover thoroughly the practical working of pharmacy as mapped out in the different departments.

The work is copiously illustrated, 395 cuts and diagrams of apparatus and appliances being shewn. An appendix is added giving tables of atomic weights and solubilities, a list of the pprincipal harmacopœial chemicals and reagents, etc. Publishers, P. Blakiston, Son & Co. Philadelphia, Pa. Price $4.00.

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We are in receipt of No. 1, Vol. 1 of *The Spatula*, the latest addition to pharmaceutical literature, published by The Spatula Pub. Co., Boston, Mass.

Magazines.

The Ladies' Home Journal.

For the first time in his literary career Jerome K. Jerome is about to write directly for an American audience. This work consists of a series of papers similar in vein to his "Idle Thoughts of an Idle Fellow," but addressed to American girls and women. The articles will begin shortly in *The Ladies' Home Journal*, which periodical will print the entire series.

The Canadian Magazine.

The Canadian Magazine for September is rich in the variety of matter which properly belongs to a review and magazine combined, and is well illustrated. Thos. Hodgins, M.A., Q.C., in "The Early Parliamentary Franchise of England," reviews the old manhood suffrage of England and the change to the restricted suffrage of later times. Edward Meek's study is comparative politics, "The Canadian Constitution; its Fictions and Realities," is an exceedingly able paper which brings satisfaction to those who have faith in the stability of the Canadian political system. "The Moral of the British Columbia Elections," by R. E. Gosnell, not only throws light on the situation in that distant province, but suggests valuable lessons for politicans everywhere. "Production of Wheat in Canada," by Sydney C. D. Roper; "Cecil Rhodes and South Africa," by J. Castell Hopkins; "Irrigation in the Arid Regions of America," by Harry S. Inglis, are all valuable and entertaining. "With the Prairie Chicken in Manitoba," by R. S. Masson, will please sportsmen and everybody.

Scribner's Magazine

Scribner's Magazine for October contains the first of two articles on English Railways by H. G. Prout, editor of the *Railway Gazette*. Colonel Prout recently made a trip to England expressly for the magazine, to accumulate fresh material on a subject with which he was already familiar. He has in his articles preserved the open mind and the even judgment of a man who is thoroughly well-posted on the railroad problem in all countries. In this first article, which deals with "Railroad Travel in England and America," he compares the systems of the two countries, particularly as to safety, speed, cost, comfort and construction.

Frank Leslie's Popular Monthly.

Frank Leslie's Popular Monthly is now issued from the new Frank Leslie Building, in historic old Bond Street, in what may be termed the midway publishing quarter of New York. The October number of this unique and deservedly popular magazine has for its frontispiece a fine portrait of Mrs. Frank Leslie, the head and informing spirit of the largest publishing business in the world owned and conducted by a woman. This business is described and illustrated in an article entitled "Modern Magazine Making," which is full of information and entertainment for everybody interested in the artistic and literary progress of the times.

The Ladies' Home Journal.

"An Intra-Mural View," a very artistic brochure, has been received from The Curtis Publishing Company, Philadelphia, publishers of *The Ladies' Home Journal*. As the title indicates, the booklet gives us glimpses of the interiors of the *Journal's* offices, and some idea of the work carried on there. The main building, entirely occupied by the editorial and business offices, was designed by Mr. Hardenbergh, the architect of the Hotel Waldorf, New York, and was completed in January, 1893. The exterior is attractive and the interior elegantly appointed and admirably planned. The numerous illustrations, showing the commodious and well-fitted offices, and the accompanying text, giving us some insight into the work in the different bureaus, requiring a force approximating four hundred employes, indicate the wonderful success which *The Ladies' Home Journal* has achieved in an almost incredibly short time. The first number was issued in December, 1883, so that less than eleven years have elapsed since Mr. Curtis conceived the idea which has developed into so vast an enterprise. In this short time its merit and steady improvement in all departments have received such recognition that its circulation has reached the enormous average of about 700,000, the largest magazine output in the world. The brochure also describes at some length the work of printing and binding the *Journal*, which is carried on in a separate building. "An Intra-Mural View" will be sent to any one who will address The Curtis Publishing Company, and inclose four cents in stamps for postage.

MANGANESE DIOXIDE IN PHARMACY.—Attention is drawn by Hemm (Mo. Phar. Asso. Proc.) to the fact that when this chemical compound is prescribed the dispenser should be particular to employ only the purified substance. The commercial powder usually contains about 66 per cent of the dioxide, while the pure is claimed to contain 90 per cent and has the objectionable contaminations removed. The pharmacopœial article is the commercial, but the purified substance is furnished by the manufacturing chemists at, of course, a much higher price, but well worth the difference from the standpoint of the carefnl prescriptionist.

DESTRUCTION OF MICROBES BY INFUSORIA.—D. Harvey Attfield a student in the hygenic institute of the university of Munich, recently carried out a number of experiments at the suggestion of Dr. Emmerich for the purpose of determining whether microbes of polluted river water are destroyed by infusoria. The experiment shows very clearly that the low forms of animal life which abound in river water are exceedingly active in the destruction of bacteria, and hence of service in the purification of water. In one instance, water which contained 3,000,000 bacteria per cubic centimeter was found to contain at the end of ten days after infusoria was introduced only 13,000 bacteria, a proportionate decrease of 200 to one.

Canadian Druggist Prices Current:

CORRECTED TO OCTOBER 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
Methyl, gal	1 90	2 00
ALLSPICE, lb	13	15
Powdered, lb	15	17
ALOIN, oz	40	45
ANODYNE, Hoffman's bot., lbs	50	55
ARROWROOT, Bermuda, lb	45	50
St. Vincent, lb	15	18
BALSAM, Fir, lb	40	45
Copaiba, lb	65	75
Peru, lb	2 50	2 75
Tolu, can or less, lb	65	75
BARK, Barberry, lb	22	25
Bayberry, lb	15	18
Buckthorn, lb	15	17
Canella, lb	15	17
Cascara Sagrada	25	30
Cascarilla, select, lb	18	20
Cassia, in mats, lb	18	20
Cinchona, red, lb	60	65
Powdered, lb	65	70
Yellow, lb	35	40
Pale, lb	40	45
Elm, selected, lb	20	21
Ground, lb	17	20
Powdered, lb	20	28
Hemlock, crushed, lb	18	20
Oak, white, crushed, lb	15	17
Orange peel, bitter, lb	15	16
Prickly ash, lb	35	40
Sassafras, lb	15	16
Soap (quillaya), lb	13	15
Wild cherry, lb	13	15
BEANS, Calabar, lb	45	50
Tonka, lb	1 50	2 75
Vanilla, lb	6 50	8 50
BERRIES, Cubeb, sifted, lb	50	55
powdered, lb	55	60
Juniper, lb	7	10
Ground, lb	12	14
Prickly ash, lb	40	45
BUDS, Balm of Gilead, lb	55	60
Cassia, lb	25	30
BUTTER, Cacao, lb	75	80
CAMPHOR, lb	65	68
CANTHARIDES, Russian, lb	1 40	1 50
Powdered, lb	1 50	1 60
CAPSICUM, lb	25	30
Powdered, lb	30	35
CARBON, Bisulphide, lb	17	18
CARMINE, No. 40, oz	40	50
CASTOR, Fibre, lb	20 00	20 00
CHALK, French, powdered, lb	10	12
Precip., see Calcium, lb	10	12
Prepared, lb	5	6
CHARCOAL, Animal, powd., lb	4	5
Willow, powdered, lb	20	25
CLOVE, lb	25	30
Powdered, lb	30	35
COCHINEAL, S.G., lb	40	45
COLLODION, lb	75	80
Cantharidal, lb	2 50	2 75
CONFECTION, Senna, lb	35	40
Creosote, Wood, lb	2 00	2 50
CUTTLEFISH BONE, lb	25	30
DEXTRINE, lb	10	12
DOVER'S POWDER, lb	1 50	1 60
ERGOT, Spanish, lb	75	80
Powdered, lb	90	1 00
ERGOTIN, Keith's, oz	2 00	2 10
EXTRACT, Logwood, bulk, lb	13	14
Pounds, lb	14	17
FLOWERS, Arnica, lb	15	20
Calendula, lb	55	60
Chamomile, Roman, lb	30	35
German, lb	40	45
Elder, lb	20	22
Lavender, lb	12	15
Rose, red, French, lb	1 60	2 00
Rosemary, lb	25	30
Saffron, American, lb	65	70
Spanish, Val'a, oz	1 00	1 25
GELATINE, Cooper's lb	75	80
French, white, lb	35	40
GLYCERINE, lb	14	16
GUARANA	3 00	3 25
Powdered, lb	3 25	3 50
GUM ALOES, Cape, lb	18	20
Barbadoes, lb	30	50
Socotrine, lb	65	70
Assafœtida, lb	25	28
Arabic, 1st, lb	65	70
Powdered, lb	75	85
Sifted sorts, lb	40	45
Sorts, lb	25	30
Benzoin, lb	50	1 00
Catechu, Black, lb	9	20
Gamboge, powdered, lb	1 20	1 25
Guaiac, lb	50	1 00
Powdered, lb	70	75
Kino, true, lb	1 25	
Myrrh, lb	45	48
Powdered, lb	55	60
Opium, lb	4 25	4 50
Powdered, lb	6 00	6 50
Scammony, pure Resin, lb	12 80	13 00
Shellac, lb	40	45
Bleached, lb	45	50
Spruce, true, lb	30	35
Tragacanth, flake, 1st, lb	75	80
Powdered, lb	1 10	1 15
Sorts, lb	45	75
Thus, lb	8	10
HERB, Althea, lb	27	30
Bitterwort, lb	27	30
Burdock, lb	16	18
Boneset, ozs, lb	15	17
Catnip, ozs, lb	17	20
Chiretta, lb	25	30
Coltsfoot, lb	20	38
Feverfew, ozs, lb	53	55
Grindelia robusta, lb	45	50
Hoarhound, ozs., lb	17	20
Jaborandi, lb	45	50
Lemon Balm, lb	38	40
Liverwort, German, lb	38	40
Lobelia, ozs., lb	15	20
Motherwort, ozs., lb	20	22
Mullein, German, lb	17	20
Pennyroyal, ozs., lb	18	20
Peppermint, ozs., lb	21	25
Rue, ozs., lb	30	35
Sage, Ozs., lb	18	20
Spearmint, lb	21	25
Thyme, ozs., lb	18	20
Tansy, ozs., lb	15	18
Wormwood, oz	20	22
Yerba Santa, lb	38	44
HONEY, lb	13	15
HOPS, fresh, lb	20	25
INDIGO, Madras, lb	75	80
INSECT POWDER, lb	25	28
ISINGLASS, Brazil, lb	2 00	2 10
Russian, true, lb	6 00	6 50
LEAF, Aconite, lb	25	30
Bay, lb	18	20
Belladonna, lb	25	30
Buchu, long, lb	50	55
Short, lb	20	22
Coca, lb	35	40
Digitalis, lb	15	20
Eucalyptus, lb	18	20
Hyoscyamus	20	25
Matico, lb	70	75
Senna, Alexandria, lb	25	30
Tinnevelly, lb	15	25
Stramonium, lb	20	25
Uva Ursi, lb	15	18
LEECHES, Swedish, doz	1 00	1 10
LICORICE, Solazzi	45	50
Pignatelli	35	40
Grasso	30	35
Y & S—Sticks, 6 to 1 lb., per lb	27	30

Y & S—Purity, 100 sticks in box	75	75
" Purity, 200 sticks in box	1 50	1 50
" Acme Pellets, 5 lb. tins	2 00	2 00
" Lozenges, 5 lb. tins....	1 50	1 75
" Tar, Licorice & Tolu, 5 lb. tins.....	2 00	2 00
LUPULIN, oz.....	30	35
LYCOPODIUM, lb.....	70	80
MACE, lb.....	1 20	1 25
MANNA, lb.....	1 60	1 75
Moss, Iceland, lb.....	9	10
Irish, lb.....	9	10
MUSK, Tonquin, oz.....	46 00	50 00
NUTGALLS, lb.....	21	25
Powdered, lb.....	25	30
NUTMEGS, lb.....	00	1 10
NUX VOMICA, lb.....	10	12
Powdered, lb.....	25	27
OAKUM, lb.....	12	15
OINTMENT, Merc., lb ½ and ¼	70	75
Citrine, lb.....	45	50
PARALDEHYDE, oz.....	15	18
PEPPER, black, lb.....	22	25
Powdered, lb.....	25	30
PITCH, black, lb.....	3	4
Burgundy, true, lb.....	10	12
PLASTER, Calcined, bbl cash....	2 25	3 25
Adhesive, yd.....	12	13
Belladona, lb	65	70
Galbanum Comp., lb.....	80	85
Lead, lb..... ..	25	30
POPPY HEADS, per 100.....	1 00	1 10
ROSIN, Common, lb.	2½	3
White, lb.....	3½	4
RESORCIN, White, oz.....	25	30
ROCHELLE SALT, lb.....	25	28
ROOT, Aconite, lb.....	22	25
Althea, cut, lb.....	30	35
Belladona, lb.	25	30
Blood, lb.....	15	16
Bitter, lb.....	27	30
Blackberry, lb.....	15	18
Burdock, crushed, lb.....	18	20
Calamus, sliced, white, lb....	20	25
Canada Snake, lb.....	30	35
Cohosh, Black, lb.....	15	20
Colchicum, lb.....	40	45
Columbo, lb.....	20	22
Powdered, lb.....	25	30
Coltsfoot. lb.....	38	40
Comfrey, crushed, lb.....	20	25
Curcuma, powdered, lb.....	13	14
Dandelion, lb.....	15	18
Elecampane, lb.....	15	10
Galsangal, lb.....	15	18
Gelsemium, lb.....	22	25
Gentian or Genitan, lb.....	9	10
Ground, lb.....	10	12
Powdered, lb.....	13	15
Ginger, African, lb.....	18	20
Po., lb.....	20	22
Jamaica, blchd., lb.... ...	27	30
Po., lb.....	30	35
Ginseng, lb	3 00	3 25
Golden Seal, lb.....	75	80
Gold Thread, lb.....	90	95
Hellebore, White, powd., lb..	12	15
Indian Hemp.....	18	30
Ipecac, lb.....	2 65	2 75
Powdered, lb.....	2 80	3 00
Jalap, lb.....	55	60
Powdered, lb....	60	65
Kava Kava, lb.....	40	90
Licorice, lb.....	12	15
Powdered, lb.....	13	15
Mandrake, lb.....	13	18
Masterwort, lb.....	16	40
Orris, Florentine, lb.....	30	35
Powdered, lb	40	45
Pareira Brava, true, lb..... .	40	45
Pink, lb.....	75	80
Parsley, lb.....	30	35
Pleurisy, lb.....	20	25
Poke, lb.....	15	18
Queen of the Meadow, lb.....	18	20
Rhatany, lb.....	20	30
Rhubarb, lb.....	75	2 50
Sarsaparilla, Hond, lb.....	40	45
Cut, lb.....	50	55
Senega, lb.....	55	65
Squill, lb.....	13	15
Stillingia, lb.....	22	25
Powdered, lb.....	25	27
Unicorn, lb.....	38	40
Valerian, English, lb true....	20	25
Virginia Snake, lb.....	40	45
Yellow Dock, lb.....	15	18
RUM, Bay, gal.....	2 25	2 50
Essence, lb.....	3 00	3 25
SACCHARIN, oz.....	1 25	1 50
SEED, Anise, Italian, sifted, lb..	13	15
Star, lb.....	35	40
Burdock, lb.....	30	35
Canary, bag or less, lb..	5	6
Caraway, lb	10	13
Cardamom, lb.....	1 25	1 50
Celery	30	35
Colchicum.....	50	60
Coriander, lb.....	10	12
Cumin, lb.....	15	20
Fennel, lb..... ..	15	17
Fenugreek, powdered, lb.....	7	9
Flax, cleaned, lb	3½	4
Ground, lb.....	4	5
Hemp, lb.....	5	6
Mustard, white, lb.....	11	12
Powdered, lb..... ..	15	20
Pumpkin, ...	25	30
Quince, lb..... .	65	70
Rape, lb.....	8	9
Strophanthus, oz.....	50	55
Worm, lb.....	22	25
SEIDLITZ MIXTURE, lb.....	25	30
SOAP, Castile, Mottled, pure, lb..	10	12
White, Conti's, lb.....	15	16
Powdered, lb.....	25	35
Green (Sapo Viridis), lb.....	15	25
SPERMACETI, lb.....	50	55
TURPENTINE, Chian, oz.....	75	80
Venice, lb.....	10	12
WAX, White, lb.....	50	75
Yellow	40	45
WOOD, Guaiac, rasped.....	5	6
Quassia chips, lb.....	10	12
Red Saunders, ground, lb....	5	6
Santal, ground, lb.....	5	6
CHEMICALS.		
ACID, Acetic, lb.....	12	13
Glacial, lb.....	45	50
Benzoic, English, oz.....	20	25
German, oz.....	10	12
Boracic, lb.....	20	25
Carbolic Crystals, lb.....	18	25
Calvert's No. 1, lb.....	2 10	2 15
No. 2, lb.....	1 35	1 40
Citric, lb.....	50	55
Gallic, oz.	10	12
Hydrobromic, diluted, lb.....	30	35
Hydrocyanic, diluted, oz. bottles doz	1 50	1 60
Lactic, concentrated, oz.....	22	25
Muriatic, lb.....	3	5
Chem, pure, lb.....	18	20
Nitric, lb.....	10½	13
Chem, pure, lb.....	25	30
Oleic, purified, lb.....	75	80
Oxalic, lb.....	12	13
Phosphoric, glacial, lb.....	1 00	1 10
Dilute, lb.....	13	17
Pyrogallic, oz.....	35	38
Salicylic, white, lb.....	1 60	1 80
Sulphuric, carboy, lb.....	2½	2¾
Bottles, lb.....	5	6
Chem. pure, lb..	18	20
Tannic, lb.....	90	1 10
Tartaric, powdered, lb	35	40
ACETANILID, lb.....	90	1 00
ACONITINE, grain.....	4	5
ALUM, cryst., lb.....	1¾	3
Powdered, lb.....	3	4
AMMONIA, Liquor, lb .880.....	8¾	10
AMMONIUM, Bromide, lb.....	65	75
Carbonate, lb.....	12	13
Iodide, oz.....	35	40
Nitrate, crystals, lb.....	40	45
Muriate, lb.....	12	16
Valerianate, oz.....	55	60
AMYL, Nitrite, oz.....	16	18
ANTINERVIN, oz.....	85	00
ANTIKAMINA	1 25	1 30
ANTIPYRIN oz.....	1 00	1 10
ARISTOL, oz	1 85	2 00
ARSENIC, Donovan's sol., lb.....	25	30
Fowler's, sol., lb.....	13	15
Iodide, oz.....	50	55
White, lb.....	6	7
ATROPINE, Sulp. in ¼ ozs. 80c., oz.	5 00	5 00
BISMUTH, Ammonia-citrate, oz..	35	40
Iodide, oz	50	55
Salicylate, oz	30	35
Subcarbonate, lb.....	2 25	2 40
Subnitrate, lb.....	2 00	2 10
BORAX, lb	9	10
Powdered, lb.....	10	11
BROMINE, oz.....	8	13
CADMIUM, Bromide, oz.....	20	25
Iodide, oz.....	45	50
CAFFEINE, oz	25	30
Citrate, oz	25	30
CALCIUM, Hypophosphite, lb....	1 50	1 60
Iodide, oz....	95	1 00
Phosphate, precip., lb.....	35	38
Sulphide, oz.....	5	6
CERIUM, Oxalate, oz.....	10	12
CHINOIDINE, oz.....	15	18
CHLORAL, Hydrate, lb.....	1 00	1 10
Croton, oz.....	75	80
CHLOROFORM, lb..... ...	60	1 00
CINCHONINE, sulphate, oz.....	25	30
CINCHONIDINE, Sulph., oz.....	15	20
COCAINE, Mur., oz.....	5 75	7 00
CODEIA, ¼ oz	1 00	1 10
COLLODION, lb	65	70
COPPER, Sulph. (Blue Vitrol) lb.	6	7
Iodide, oz.....	65	70
COPPERAS, lb....	1	3
DIURETIN, oz	1 60	1 65
ETHER, Acetic, lb	75	80
Sulphuric, lb.....	40	50
EXALGINE, oz.....	1 00	1 10
HYOSCYAMINE, Sulp., crystals, gr.	25	30
IODINE, lb	4 75	5 50
IODOFORM, lb.....	6 00	7 00
IODOL, oz.....	1 40	1 50
IRON, by Hydrogen.....	80	85
Carbonate, Precip., lb.....	15	16
Sacch., lb.....	30	35
Chloride, lb.....	45	55
Sol., lb.....	13	16
Citrate, U. S. P., lb.....	90	1 00
And Ammon., lb.....	70	75
And Quinine, lb.....	1 50	3 00
Quin. and Stry,. oz.....	18	30
And Strychnine, oz.....	13	15
Dialyzed, Solution, lb.....	50	55
Ferrocyanide, lb.....	55	60
Hypophosphites, oz.....	25	30
Iodide, oz.....	40	45
Syrup, lb.....	40	45
Lactate, oz.....	5	6
Pernitrate, solution, lb.....	15	16
Phosphate scales, lb.....	1 25	1 30
Sulphate, pure, lb.....	7	9
Exsiccated, lb.....	8	10
And Potass. Tartrate, lb....	80	85
And Ammon. Tartrate, lb..	80	85
LEAD, Acetate, white, lb.....	13	15
Carbonate, lb.....	7	8
Iodide, oz.....	35	40
Red, lb.....	7	9
LIME, Chlorinated, bulk, lb.....	4	5
In packages, lb	6	7
LITHIUM, Bromide, oz.....	30	35
Carbonate, oz.....	30	35
Citrate, oz	25	30
Iodide, oz.....	50	55
Salicylate, oz.....	35	40
MAGNESIUM, Calc., lb.....	55	60
Carbonate, lb.....	18	20
Citrate, gran., lb.....	35	40
Sulph. (Epsom salt), lb.....	1¾	3
MANGANESE, Black Oxide, lb....	5	7
MENTHOL, oz.....	50	55
MERCURY, lb.....	80	85
Ammon (White Precip.),.....	1 25	1 30
Chloride, Corrosive, lb.....	1 00	1 10
Calomel, lb.....	1 00	1 10
With Chalk, lb	60	65
Iodide, Proto, oz.....	35	40
Bin., oz.....	25	30
Oxide, Red, lb.....	1 15	1 20
Pill (Blue Mass), lb.....	70	75
MILK SUGAR, powdered, lb.....	30	35
MORPHINE, Acetate, oz	2 00	2 10
Muriate, oz.....	2 00	2 10
Sulphate, oz	1 80	1 90
PEPSIN, Saccharated, oz	35	40
PHENACETINE, oz	35	38
PILOCARPINE, Muriate, grain....	20	22

Shop Etymology.

It may, perhaps, be of some interest to glance briefly at the origin of the words which designate the objects with which a chemist is surrounded daily, the utensils of his business, and the essential operations of pharmacy.

The word "shop" is traceable to the Anglo-Saxon *sceoppa*, which meant a stall or a booth at a market or fair. Similar words are found in all the old Gothic languages. To the same origin belongs the word *shippen* or *shippon*, still used in some parts of the country for a cowshed; but "ship" has quite a different derivation.

"Scale" has a similar history, corresponding words being found in all Scandinavian and old Teutonic languages. The Anglo-Saxon *scyll* or *scell* is the same word as we now use in the form of "shell," and it came to be used for drinking-bowls, and these bowls being employed as balances the word followed them. "Skoal," the Icelandic hailing shout (as in Longfellow's "Skoal to the Northland, Skoal") depends for its birth on the same bowl.

"Bottle" reaches us through *bouteille* (French), *botella* (Spanish), *bottiglia* (Italian), from the Latin *buticula*, diminutive of the Latin *butis* or *buttis*, a butt. A similar word is found in the Gothic languages (*bytte*, Anglo-Saxon; *botte*, Danish; *butte*, German) to designate vats, casks, butts in which wine or other liquids were stored. "Vial" or "phial" is the Greed *phiala*, which was a shallow cup or bowl used for drinking, but originally for libations, and for cineary urns.

"Box" has been in use in our language from Anglo-Saxon times, and comes from the name applied to the box-tree (*Buxus sempervirens*), which also occurs in Latin as *buxus*, Greek *poxus*.

"Label" corresponds with the French *lambeau*, a rag, and with our lappet. Lappa was a Saxon word for a hanging slip of ribbon or such like. The word was Latinized as *labella*, and has been retranslated. It was naturally applied to the labels which were tied around the necks of bottles, and thence to those more in use now.

"Pestle and mortar" are words so peculiarly associated with the drug trade that these cannot be passed by. "Pestle" comes through old French *pestel*, Italian *pestello*, Latin *pistilus*, diminutive of *pistrum*, the noun derived from the verb *pinsere* or *pisere*, to pound, traceable back to the Sanscrit root *pish*, to pound. The pistil of plants derived its name from its resemblance in shape to the pestle. "Mortar" comes from the Latin *mortarium*, which meant the same thing, and was related to *marcalus* or *martulus*, diminutive of *marcus*, a hammer. Mortar, the material used for binding bricks or stones, was so called from its being made in a mortar.

To "dispense," from the Latin *dispensare*, has the original meaning of to weigh out; but to weigh, German *wegen*, Anglo-Saxon *wegan* had the first meaning of to carry, equivalent to the Latin *vehere*, whence vehicle, as "waggon" comes from the Saxon word. The original meaning of carrying passed into that of raising, lifting (as, for example, to weigh anchor) and thence to its modern signification.

"Weigh" suggests weights. The "grain" was originally a plump grain of wheat. "Scruple" is supposed by some to be the diminutive of *scrupus*, a sharp stone, from which its meaning as "scruple of conscience" would be also indicated; but it is more generally traced to *scripulum*, something written, which was exactly the meaning of the Greek small weight *gramma* (from which the French *gramme* was adopted), though it is not quite easy to see the connection between "something written" and a small weight. "Drachm" is the Greek *drachma*, the principal silver coin of the Greeks, the word being derived originally from *drax*, a handful. The silver coin became a weight, and that weight was known among all the nations round about in that age, though its value varied somewhat. The Arabs adopted a *derham*, which became in Spanish *adarme* and this brought us our dram, correctly the one-sixteenth of an avoirdupois ounce. "Ounce" was the Greek *ougkia* (pronounced *ounkia*), Latin *uncia*, and meant at first a twelfth part. Hence the same word was applied to the twelfth part of a pound and to the twelfth part of a foot, the latter meaning becoming our inch, inch and ounce having thus a common origin. The "pound" has been known by something like that name, and was something approaching to the same value in weight, in all European countries. It comes to us from *pondo libra*, a pound by weight of the Romans. The *libra* was the balance, and this gave the word *livre* to the French, and "level" to ourselves. We also owe to it the abbreviation "lb" to represent the pound. The "pound" of money was originally a pound by weight of silver, or of the alloy used for it.

Of measures, "pint "comes from the point or mark *picta* or *pineta* or painted on a larger measure, "quart" is the *quartus* or fourth part of a gallon; and "gallon" is a very ancient liquid measure, possibly originally derived from an old French word *gale*, for a bowl.

"Paper" comes from *papyrus*, the rush from which it was first made; "string" seems to be traceable back to the Anglo-Saxon *strang*, strong, though it may be related to the Latin *stingere*, to draw tight, Greek *straggos*, hard twisted, *straggale*, a halter (the Greek words are pronounced strangos, strangale); "twine" is a twin thread, a string of two strands; and "cork" from the Spanish *corcho*, is related to the Latin *cortex*. "Spatula" is a little spathe or spade.

In the laboratory we find the "still" formally called in English the stillatory, from the Latin word *stilla*, a drop, *stillare*, to drop. "Retort" is from the Latin *retortus*, past participle of *retorquere*, to twist back. "Flask" appears in all Arian languages—in Anglo-Saxon as *flasce* and *flaxe*, in Greek as *phlaske*, with the meaning of a vessel to hold liquids, the leather bottles principally. In modern French we have it as *flacon*, and in English again as flagon. Probably the Greek and the Teutonic words may have both had a common Celtic origin. "Beaker" is the German *becher*, the Danish *beger*, (a cup), the Italian *becchiere* (from which comes our pitcher), all probably of Eastern origin. "Crucible" may or may not be associated with *crux*, cross. It seems to have come to us from the old French *croche*, English crock, crockery.

Lastly, we may note, without entering on the names of particular medicines, those of classes of pharmaceutical preparations. "Tinctures" are tinted substances, from *tinctus*, the past participle of *tengere*, to dye. "Syrup" comes from the Arabic *sharab* or *shurab*, a sweet drink, and is allied to shrub and sherbet. "Pill" is a corruption of "pilule," probably resulting from the general abbreviation of the word "pil" in doctors' prescriptions. *Pilula* was the Latin diminutive of *pila*, a ball. "Ointment" is a word formed from the old English "oint," to anoint; Latin, *unctus*, "Essence" is the thing that is—the *esse*. "Plaster" is traceable to the Greek *plassein*, to form or mould. —*Exchange.*

Confection of Phosphorus.

Hartz recommends the following confection of phosphorus as a stable and satisfactory preparation: 7 ounces of the best wheat flour, 1 ounce of armenian bole, and 8 ounces of glycerin are stirred together in a tin kettle of the capacity of ¼ gallon. A solution of 4 scruples of salicylic acid and 4 drams of sodium phosphate in 2 fluid ounces of water, is added, and then 14 fluid ounces of boiling water are added with constant stirring. The whole is now heated, until a thick, uniform paste is formed. 3 drams of phosphorus in sticks are then covered with the hot paste, and, by rapid but careful stirring, the phosphorus is distributed in about three minutes in a manner that no phosphorus granules will any longer be visible to the naked eye. 2 ounces of mutton-tallow are then introduced, the whole is covered, and when the tallow is melted, again cautiously stirred. The mass is apt to ignite during this last operation, unless this be done quickly and with care. Inexperienced persons will therefore do well to wrap a cloth around their hands.—*Phar. Rundsch.*

Some Interesting Facts about Cochineal insects are reported (Pharm. Jour.) by Dr. Paul Meyer. The embryos develop completely within the mother, but are born within egg shells. The red pigment is not found within any organ apart from the diffuse fatty body and the yolk. It does not occur in skin, gut, salivary glands, excretory tubules, or blood, and nothing is yet known regarding its use to the insect. Carminic acid is said to be a product of metabolism.

Piperis, oz	1 00	1 10
Phosphorus, lb	90	1 10
Potassa, Caustic, white, lb	55	60
Potassium, Acetate, lb	35	40
Bicarbonate, lb	15	17
Bichromate, lb	14	15
Bitrat (Cream Tart.), lb	22	25
Bromide, lb	55	60
Carbonate, lb	12	13
Chlorate, Eng., lb	22	25
Powdered, lb	25	27
Citrate, lb	70	75
Cyanide, lb	40	50
Hypophosphites, oz	10	12
Iodide, lb	4 00	4 10
Nitrate, gran., lb	8	10
Permanganate, lb	40	45
Prussiate, Red, lb	50	55
Yellow, lb	32	35
And Sod. Tartrate, lb	25	30
Sulphuret, lb	25	30
Propylamine, oz	35	40
Quinine, Sulph., bulk	30	32
Ozs., oz	35	38
Quinidine, Sulphate, ozs., oz	16	20
Salicin, lb	3 75	4 00
Santonin, oz	20	22
Silver, Nitrate, cryst., oz	90	1 00
Fused, oz	1 00	1 10
Sodium, Acetate, lb	30	35
Bicarbonate, kgs., lb	2 75	3 00
Bromide, lb	63	65
Carbonate, lb	3	6
Hypophosphite, oz	10	12
Hyposulphite, lb	3	6
Iodide, oz	40	45
Salicylate, lb	1 75	1 80
Sulphate, lb	2	3
Sulphite, lb	8	10
Somnal, oz	85	00
Spirit Nitre, lb	35	65
Strontium, Nitrate, lb	18	20
Strychnine, crystals, oz	1 00	1 10
Sulfonal, oz	34	35
Sulphur, Flowers of, lb	2½	4
Pure precipitated, lb	13	20
Tartar Emetic, lb	50	55
Thymol, (Thymic acid), oz	55	60
Veratrine, oz	2 00	2 10
Zinc, Acetate, lb	70	75
Carbonate, lb	25	30
Chloride, granular, oz	13	15
Iodide, oz	60	65
Oxide, lb	13	60
Sulphate, lb	9	11
Valerianate, oz	25	30
ESSENTIAL OILS.		
Oil, Almond, bitter, oz	75	80
Sweet, lb	50	60
Amber, crude, lb	40	45
Rec't, lb	60	65
Anise, lb	3 00	3 25
Bay, oz	50	60
Bergamot, lb	3 75	4 00
Cade, lb	90	1 00
Cajuput, lb	1 60	1 70
Capsicum, oz	60	65
Caraway, lb	2 75	3 00
Cassia, lb	1 40	1 50
Cedar	55	85
Cinnamon, Ceylon, oz	2 75	3 00
Citronelle, lb	80	85
Clove, lb	1 00	1 10
Copaiba, lb	1 75	2 00
Croton, lb	1 50	1 75
Cubeb, lb	3 00	3 25
Cumin, lb	5 50	6 00
Erigeron, oz	20	25
Eucalyptus, lb	1 50	1 75
Fennel, lb	1 60	1 75
Geranium, oz	1 75	1 80
Rose, lb	3 20	3 50
Juniper berries (English), lb	4 50	5 00
Wood, lb	70	75
Lavender, Chiris. Fleur, lb	3 00	3 50
Garden, lb	1 50	1 75
Lemon, lb	2 00	2 10
Lemongrass, lb	1 50	1 60
Mustard, Essential, oz	60	65
Neroli, oz	4 25	4 50
Orange, lb	2 75	3 00
Sweet, lb	2 75	3 00
Origanum, lb	65	70
Patchouli, oz	80	85
Pennyroyal, lb	2 50	2 75
Peppermint, lb	4 25	4 50
Pimento, lb	2 60	2 75
Rhodium, oz	80	85
Rose, oz	7 50	11 00
Rosemary, lb	70	75
Rue, oz	25	30
Sandalwood, lb	5 50	7 50
Sassafras, lb	75	80
Savin, lb	1 60	1 75
Spearmint, lb	3 75	4 00
Spruce, lb	65	70
Tansy, lb	4 25	4 50
Thyme, white, lb	1 80	1 90
Wintergreen, lb	2 75	3 00
Wormseed, lb	3 50	3 75
Wormwood, lb	4 25	4 50
FIXED OILS.		
Castor, lb	9	11
Cod Liver, N. F., gal	1 15	1 25
Norwegian, gal	1 50	1 60
Cottonseed, gal	1 10	1 20
Lard, gal	90	1 00
Linseed, boiled, gal	60	63
Raw, gal	58	61
Neatsfoot, gal	1 00	1 10
Olive, gal	1 30	1 35
Salad, gal	2 25	2 40
Palm, lb	12	13
Sperm, gal	1 75	1 80
Turpentine, gal	60	65

Drug Reports.

Canada.

Business is very fair and collections are reported as improving. The prospects of a good fall trade are very promising.

Quinine is creeping up slowly in price. Latest reports are very firm.

Norway Cod Liver Oil is very firm at advanced prices.

Glycerine is reported a little easier in price.

Camphor, Pot. Bromide, Pot. Iodide and Rhubarb are firm at higher prices.

Oil Anise, higher.

Oil Cloves, Copaiba, Lemon, Orange, Peppermint, Pennyroyal, Wintergreen, Wormwood, easier.

Ammonia Carb. and Liquor have advanced.

England.

London, Sept. 26th, 1894.

There has been some improvement in the drug market during the month, although chemicals remain for the most part unaltered.

The war in China has led to a still further increase in the price of Camphor and there has been a run on Oil of Cassia.

Rhubarb, Menthol and other products from that part of Asia are all firmly held at recent advances.

Quinine, after moving upward, has commenced to sag.

Opium is featureless in the absence of demand.

Pilocarpine has again advanced, the scarcity of good Jaborandi Leaves being the cause.

Gum Kino has also been raised and future supplies are difficult to secure.

Balsam Copaiba is down and the new Chamomile Flowers are offered at lower rates.

Jalap, Ipecacuanha, Senega and Cubebs are easier.

Sulphate of Copper has moved upward and is being firmly held.

Manufacturers of Mercurials have advanced their prices 2 cents per lb., but as the metal is easier, they will probably relapse.

Canada Balsam.

Owing to the reduced export of Canada Balsam the price in the United States has risen to $3.25 per gallon and bids fair to go still higher. Although Oregon Balsam enters into competition with it to some extent, it is not a desirable substitute in a majority of the processes in which the Canadian is used. One of the largest consumers, makes a special article that cannot be produced from any other substance, however similar, while other manufacturers would give the Canadian Balsam at $4 per gallon preference over the Oregon product at seventy-five cents. —*Journal of Commerce.*

Vaccination and Typhoid Fever.—Dr. William Finder has observed (Medical Standard) that after typhoid fever patients had recovered they were very susceptible to vaccination. Dr. Finder has verified his observation many times during a number of years, and suggests that others confirm or disprove the theory. So satisfied is he with the correctness of the observation, that he now revaccinates his typhoid fever patients as soon as they recover from the fever.