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CANADIAN

# PHARMACEUTICAL JOURNAL

VOL. VI, No. 2. TORONTO, SEPTEMBER, 1872. WHOLE No. LIII

## Transactions of Pharmaceutical Colleges and Societies.

### ONTARIO COLLEGE OF PHARMACY.

#### MINUTES OF COUNCIL MEETING.

The regular semi-annual Council Meeting was held at the rooms of the College, on Wednesday, August 7th, 1872. The President took the chair at two o'clock, the following members being present:—The President, Vice-President, Messrs. Brendon, Munspaugh, Elliott, Hodgetts, Miller, Parker, Saunders, Shuttleworth, and Stork.

The minutes of last meeting were read and adopted.

Mr. Saunders, on behalf of the examiners, read the following

#### REPORT OF EXAMINERS:

The examiners of the Ontario College of Pharmacy herewith present to the Council the results of the examination held yesterday in the College of Technology. Sixteen candidates presented themselves, twelve of whom succeeded in obtaining more than the requisite number of marks to entitle them to registration. We submit the names in the order of their merit:—

Henry Maclagan, Lindsay .....	99.50
Price Jackes, Toronto.....	92.10
T. H. Allen, Toronto.....	85.90

A. B. Bennett, Brantford.....	76.60
Chas. McLennan, Erin.....	70.50
J. E. Carson, Exeter.....	70.10
W. Marsh, Consecon.....	66.50
J. E. York, Otterville.....	66.40
John Wood, Erin.....	66.20
Chas. McGeorge, Milton.....	66.00
C. Caulfield, Stratford.....	65.60
W. S. Johnston, Peterboro'.....	60.40

It is with pleasure we draw attention to the marked progress in proficiency exhibited by many of the successful candidates. We would especially mention the following names: Henry Maclagan, Price Jackes, T. H. Allen, and A. B. Bennett. Mr. Maclagan's papers are so admirably correct as to entitle him to the highest commendation, he having scored 99.50 out of a possible 100, a result showing that he must have applied himself with great perseverance. His are by far the most perfect set of papers we have ever had presented to us. Mr. Price Jackes is but very little behind him, and is deserving of almost equal praise.

Mr. Maclagan is entitled to the first prize offered by the Council, Mr. Jackes to the second. The books selected by us for these prizes are, 1st. Gray's Garden and Field Botany, and Gray's Manual with Plates, illustrating the Ferns, Mosses, &c., handsomely bound together in full calf. 2nd. Parrish's Pharmacy, bound in the same manner. A special prize in chemistry given by one of our members, Mr. Eby, of Southampton, Attfield's Chemistry, also falls to Mr. Maclagan, he having scored 19.90 out of a possible 20 in this department, while Mr. Price Jackes scored 19.50.

We fully concur in the opinion expressed by some of the members of the Council at their last meeting respecting the importance of Practical Dispensing, and would suggest that before the next examination suitable utensils be furnished in order to carry it out.

F. BRENDON,  
R. W. ELLIOT,  
WM. SAUNDERS.

Toronto, August 7th, 1872.

Mr. Elliot moved,

Mr. Bickle seconded,

That the report just read be received and adopted, and the diplomas recommended be granted.

Mr. Hodgetts read the report of the Printing Committee.

#### REPORT OF PRINTING COMMITTEE.

At a meeting of the Printing Committee, held in the rooms of the College July 15th, 1872, it was...

Resolved,—That the number of journals to be printed for August be 100 copies in excess of those actually required.

Resolved,—That the offer of Mr. Trout of the *Monetary Times*, for printing the JOURNAL as per agreement, be accepted.

Resolved,—That Mr. Shuttleworth should retain the office of Editor until the meeting of the Council in August, and that the Editor be authorized to send copies of the JOURNAL to the different scientific bodies.

GEORGE HODGETTS, Chairman.

Adopted on motion of Mr. Saunders.

The Treasurer read his report as follows:—

*George Hodgetts, Treas., in account with the Ont. Col. of Pharmacy.*

RECEIPTS.

1872.			
Feb'y	7.	To balance on hand.....	\$1,543 48
May	2.	" Cash from Registrar.....	130 00
"	3.	" " ".....	119. 00
"	6.	" " ".....	318 00
"	15.	" " ".....	162 00
"	31.	" " ".....	308 00
June	15.	" " ".....	250 00
July	13.	" " ".....	350 00
"	"	" Interest on account in Canadian Bank of Commerce.....	18 51
"	31.	" Cash from Registrar.....	60 00
			\$3,268 99
August	1.	To balance in Canadian Bank of Commerce.....	\$1,939 61

We, the undersigned Auditors, appointed by the Ontario College of Pharmacy, have examined the above account and compared it with vouchers, and find them all correct.

WM. H. DUNSPAUGH, } Auditors.  
HUGH MILLER, }

DISBURSEMENTS.

1872.			
Feb'y	7.	By Cash paid members attending Meeting of Council.....	\$48 80
"	"	" two examiners, Messrs. Brendon and Saunders.....	20 00
Feb'y	8.	" J. B. Cook, printing JOURNAL No. 46.....	53 38
"	"	" J. R. Robertson, advertising semi-annual meet'g.....	8 00
"	9.	" Globe Printing Company, advertising.....	8 00
"	27.	" W. Elliot, attending meeting of Council.....	2 00
"	"	" R. W. Elliot, examiner.....	10 00
March	1.	" E. B. Shuttleworth, 8 months' salary as Editor.....	333 33
"	"	" H. J. Rose, 6 months' salary as Registrar.....	200 00
"	6.	" J. B. Cook, printing Journal No. 47.....	55 13
"	8.	" W. H. Dunspaugh, attending meet'g of Council.....	2 00
"	9.	" H. J. Rose, Postage account, Journal advertis'g.....	2 50
"	13.	" Globe Printing Company, advertising.....	5 00
"	16.	" Copp, Clark & Co., Diplomas, &c.....	46 00
May	2.	" <i>Ontario Gazette</i> , advertising.....	3 92
"	22.	" Globe Printing Company, advertising.....	5 00
"	27.	" <i>Monetary Times</i> , printing Journals Nos. 48 & 49.....	111 50
"	28.	" Messrs. Wood and Bryden, Scrutineers.....	12 00
"	"	" H. J. Rose, postage.....	14 70

June 24.	By Cash paid	Brown Bros., Stationery for Council.....	10 1/2
July 16.	"	" <i>Monetary Times</i> , printing Journals Nos. 50 & 51	121 00
" 20.	"	" H. J. Rose, three months' salary as Registrar...	100 00
" 24.	"	" London Chem. and Drug. Imp. Society.....	31 00
" 30.	"	" E. B. Shuttleworth, three mos. sal. as Editor...	125 00
"	"	" " " Postage .....	4 00
" 31.	"	Balance in Canadian Bank of Commerce.....	1,939 61
			\$3,268 99

GEO. HODGETTS, Treas.

*Pharmaceutical Journal in account with Ont. Col. Pharmacy.*

Dr.			
Feb'y 8.	Printing Journal.....		\$53 38
March 1.	Editor's Salary.....		333 38
"	Printing Journal.....		55 13
"	Postage .....		2 50
May 27.	Printing Journal.....		111 50
July 16.	" .....		121 00
" 30.	Editor's Salary.....		125 00
"	Postage.....		4 00
" 31.	" for distributing Journal.....		43 00
			\$848 88
	To Balance.....		\$751 99
Cr.			
Jan'y 2.	Cash on hand from E. B. S.....		22 1/2
" 6.	Subscription, Dr. Evans.....		3 00
" 11.	" T. Morson & Son.....		52 50
" 27.	Advertising situation.....		2 1/2
Feb. 2.	" " .....		2 1/2
" 19.	" business sale.....		1 00
"	Subscription, J. E. York .....		3 00
Mar. 4.	Advertising situation.....		2 1/2
April 3.	" business for sale.....		1 00
" 24.	Subscription.....		3 00
May 10.	Advertising, J. Chapman .....		4 00
" 18.	" situation .....		2 1/2
" 30.	" " .....		2 1/2
June 1.	" J. Chapman.....		2 1/2
July 12.	Subscription, I. Wolf & Co .....		3 00
	Balance.....		751 99
			\$848 88

We, the undersigned Auditors, appointed by the Ontario College of Pharmacy, have examined the above account, and compared with vouchers, and find them all correct.

WM. H. DUNSPAUGH, } Auditors.  
HUGH MILLER, }

Mr. Dunspaugh, on behalf of the Auditors, reported that the accounts of the JOURNAL showed a balance against the College of six hundred dollars for the past half year.

Mr. Bickle moved, Prof. Shuttleworth seconded, that the report of the Treasurer be received and adopted.

Moved by W. Saunders, seconded by F. Brenden, that the Auditors for last year be appointed a committee to investigate the

financial concerns of the Journal and make such arrangements regarding the advertisements as they may regard to be most conducive to the interests of the College.

The Registrar's report was read as follows :

Office of Henry J. Rose, Registrar,  
Corner of Yonge and Queen Streets,

Toronto, Aug. 7, 1872.

To the Council Ontario Col. Phar:

GENTLEMEN,—The Registrar begs to report that since the last Council meeting, he has issued 388 renewals for the current year, and added 47 names to the Register, including the successful candidates at the February examination, making a total of 435 for the current year.

An inspection of the Register shows the names of upwards of one hundred registered Chemists who from inadvertence or otherwise, have not remitted renewal fees for the current year, and your Registrar would ask authority to issue a circular to such, with instructions as to further proceedings if necessary.

HENRY J. ROSE,  
*Registrar.*

The Secretary then read the President's annual report as follows :

ANNUAL REPORT OF THE PRESIDENT OF THE COUNCIL OF THE ONTARIO  
COLLEGE OF PHARMACY, JULY, 1872.

In submitting the First Annual Report of the operations of the College, your Council would remark that their attention has, of necessity, been mainly directed to the work of organization and the laying of plans relating to the future conduct of the institution. The previous labors of the Provisional Council appointed by the Pharmacy Act had, to some extent, established the foundation which we have endeavoured to complete, and though we have not succeeded, in all particulars, in carrying out our more sanguine expectations, a fair amount of progress may be reported.

The first efforts of your Council were directed to procuring a suitable place for conducting the operations of the College. In this we have been successful. The present commodious accommodations were graciously assigned to the uses of the College by Mr. McKellar, Minister of Agriculture. We regard this position as peculiarly fortunate as affording especial facilities for availing ourselves of the library belonging to the Board of Arts and Manufactures, and other means of instruction at the disposal of the College of Technology.

The lateness of the season at which your Council took office precluded the possibility of carrying into active operation any scheme

for pharmaceutical education. It was, however, resolved that aid be extended to organizations in other cities and towns, and to this end that pecuniary assistance should be offered to classes formed for instruction on pharmaceutical subjects; provided such classes were regularly carried on for a period of six months. The amount of the grant was made to depend on the number of students whose regular attendance could be certified to by the secretary of the local association under whose auspices the classes might be carried on. It is believed that this plan will be largely taken advantage of during the coming winter, and that the cause of pharmaceutical education will be greatly advanced thereby.

Two examinations have been held during the past year; one in August and another in February. At the first of these five candidates presented themselves, of whom two were rejected; and, at the second, ten candidates, of whom eight succeeded in passing. Two of the three examiners appointed by the provisional council have tendered their resignation, by reason of dissatisfaction at the mode of examination prescribed, believing such to be detrimental to the best interests of pharmacy. The resignations were accepted, and two other persons were appointed.

In order to attend to the numerous complaints made in regard to infringements of the Act, a committee has been appointed, and a small number of cases have been presented for consideration. In the absence of a public prosecutor the powers of this committee are necessarily, limited to the cautioning of transgressors, and in this way it is believed that a certain amount of good has been accomplished.

The By-laws have suffered no material change since first drafted, except the insertion of a clause allowing time for those nominated for members of council to resign. Several other alterations have been proposed which your council have not thought best to adopt.

The second registration under the Act has lately been completed, and from the returns it is found that the number of those who have registered a second time is 388; new members 47; associates 33. At the close of the first year those who had registered as members amounted to 683; associates 31. The falling off is in some measure accounted for by the fact that the first Register contained the names of 161 qualified assistants, who, without their wish to maintain an *active* connection with the College, or wish to commence business on their own count, are not compelled to pay a second fee. Making all allowances, however, for this class of persons, there must still remain a considerable number of druggists who are not registered, and who still continue to carry on business in direct contravention of the Act. Your Council cannot forbear alluding to these, and at the same time, warning such persons that they render themselves liable to prosecution, and most certainly to

conviction and consequent payment of a penalty. It is by no means unreasonable that the small amount of the annual fee should be demanded to keep up the expenses of the College, and your Council will in such cases be compelled to seek the best means of having the law put into operation.

BENJAMIN LYMAN,

*President.*

The President reported verbally for the committee on infringements, stating that in a case of persistent infringement of the Act he had employed a Solicitor to apply for evidence against the party which had been declined by the Druggists in the neighborhood, and in the meantime, the party had transferred the business to a doctor, who was not required to register. The question as to the best means to be taken to carry out the provisions of the Pharmacy Act was entered on and discussed by the members present, some advocating the employment of a detective, which was objected to as likely to produce unpleasantness. A proposal to notify the acting magistrate of the district, was shown by Mr. Stork to be unavailing as it is necessary to have information laid in person. It was finally moved by Mr. Elliott, seconded by Mr. Hodgett, That those members of the College who have not renewed their annual fees, be notified by the Registrar of the necessity of doing so, he pointing out the penalty connected with such neglect, and if, in one month, no notice be taken of such intimation that the Registrar shall send to the County constable, or other competent authority, or agency, in such town, or village, a list of those keeping open shop in violation of the Act, by reason of non-registration, with a request that proceedings be at once taken against such offenders.

Mr. Elliot introduced his motion of which notice had been given to add the following to the By-laws. XLX, "No person shall be eligible to membership in the Council, unless he either reside or do carry on business as as a druggist in the Province of Ontario, and no person shall be allowed to hold a seat in the Council who is in receipt of any emolument in the gift of the Council, whether as salary or from a contract, or from any other source, excepting the payment of expenses of Councillors and Examiners as provided for by By-laws XIII and XIV."

In introducing this motion, Mr. Elliot asked for the legal opinion which had been obtained in accordance with a motion passed at the last meeting of the Council, which was read by the Secretary.

The By-law was carried on division, to take effect after the next election of Council.

Moved by Prof. Shuttleworth, seconded by Mr. Hodgetts, that in order to encourage a friendly feeling between the members of this College, and those belonging to similar bodies in other countries; and also for the benefit of all those lawfully engaged in the profes-

sion of an apothecary, it is desirable that the diplomas of the various Colleges be mutually recognized. To this purpose it is resolved that the certificates of proficiency, or diplomas, of the Pharmaceutical Society of Great Britain, the Pharmaceutical Association of Quebec, and the Philadelphia College of Pharmacy, be recognized by this College, provided the holders of such diploma has been four years in business previous to Feb. 15th, 1871, and that the production of such diplomas shall be considered by the Board of Examiners as sufficient evidence of the qualification of those possessing them. The resolution was allowed to stand as a notice of motion.

Mr. Bickle said that some more publicity should be given to the resolution adopted at the last Council meeting, granting aid to local societies, and the formation of such societies should be encouraged by members of the Council and others.

Mr. Saunders said that the annual meeting of the American Pharmaceutical Association was to be held at Cleveland commencing September 3rd, and as his engagements would prevent his sending a report for the Journal, he moved, seconded by Mr. Elliot, that the Registrar and Mr. Saunders be appointed delegates to the meeting of the American Pharmaceutical Association. The Registrar to make a report of the meeting for the Journal and his expenses to be paid by the Council. Carried.

Moved by Mr. Saunders, seconded by Mr. Elliot, that it is desirable that the different portions of the province should be more equally represented at this council board, and that a committee be appointed to consist of the President, Mr. Elliot and the mover to enquire wither by-law No. 11 could not be so modified as to secure this end. Accepted as a notice of motion to alter the by-laws.

Moved by Mr. Bickle, seconded by Mr. Saunders, that Prof. Shtuttleworth be re-appointed as Editor of the Journal on the same terms as heretofore, commencing from 1st day of Aug. prox. and ending 1st Aug., 1873. Carried.

Moved by Mr. Saunders, seconded by Mr. Parker, that the proper steps be taken to have Chloral Hydrate removed from the list of articles mentioned in part 2 to part 1 and that Oil of Cedar be expunged from the schedule. Carried.

Prof. Shuttleworth gave notice that the next meeting of the Council he would introduce a by-law authorizing the election of honorary members.

The question of introducing the necessary appliances so as to make practical dispensing available at the next examination was discussed and it was understood that the President had the power to have such arrangements made in accordance with a resolution of a former meeting.

Moved by Mr. Elliot, seconded by Mr. Miller, that for the purpose of encouraging the education of young men, associates of this College, who desire to avail themselves of the lectures instituted in

this city by the College of Technology, be it resolved, that this Council grant to any such associate who may reside out of the city the sum of \$1 per week as assistance towards the payment of his board during the time he may attend such lectures. Provided he shall have served as apprentice for not less than two years, and further that such pecuniary assistance be continued not more than one session to any such associate. Carried.

The meeting then adjourned.

HENRY J. ROSE,  
*Secretary.*

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## Original and Selected Papers.

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### HYPODERMIC INJECTIONS.\*

BY M. ADRIAN.

In the preparation of a solution for hypodermic injection, the choice between the normal alkaloid and its salts is not an indifferent one. When medicaments so powerfully active are injected under the skin, it appears necessary to define clearly the relation that exists between the alkaloid itself and its combinations with acids. In medical practice sufficient importance is not always attached to this distinction; and instances are sometimes met with where the same doses of hydrochlorate, sulphate and acetate of morphia, or of hydrochlorate and sulphate of strychnia are prescribed, although the constitution of these various salts assigns to them a sensibly different proportion of the active principle that is employed. This will be seen by an examination of the following numbers:—

One gram of	Crystallized Alkaloid	Water necessary for solution.
Hydrochlorate of Morphia contains.....	0.80	20
Sulphate of Morphia.....	0.76	10
Acetate of Morphia.....	0.86	5
Sulphate of Strychnia.....	0.75	10
Hydrochlorate of Strychnia.....	0.83	8

According to this table one gram of acetate of morphia contains ten centigrammes more of morphia than the same weight of the sulphate, and a similar difference exists between the hydrochlorate and the sulphate of strychnia.

\* Bulletin Therapeutique in Pharm. Jour. and Trans., July.

Of course it is that because of their greater solubility in water that the preference is given to the saline combinations over the alkaloids. But the preparations of these solutions are not so easy as at first sight might appear, and certain difficulties are met with in the operation which might possibly lead to a notable error in the final result, and so modify consequently the composition of the medicament. Thus in operating with the salts of morphia, it is found that their solubility is variable, and it is necessary sometimes to have recourse to elevation of temperature, or the addition of a fresh quantity of acid to obtain a solution. This difference may arise from an impurity in the salt, or more frequently from the greater or less amount of dehydration it has undergone in its preparation. On the other hand it is rarely that the solution is sufficiently clear, and it becomes necessary to filter it through paper. But what then happens? The filter absorbs a portion of the liquid; and although the precaution may be taken of well washing the filter, there is no proof that the whole of the active principle is carried off in the washing, so that in pouring 10 grams of distilled water containing 30 centigrams of hydrochlorate of morphia upon a filter weighing 50 centigrams, only 8.20 grams of the solution is recovered, being a loss of 1.80 gram, or nearly one-fifth.†

Solutions intended for hypodermic injection, prepared as they usually are, present another defect, namely, the alteration which they undergo after a time. Small fungi are seen to form on their surface; then the liquid becomes turbid and gives rise to a copious deposit. The experiments which the author has made with the object of avoiding this alteration, have led to the following results.

The solutions of atropia and codeia are decomposed more readily than the others. Also, when they are prepared in the cold they change more rapidly than when they are obtained from boiling distilled water. Liquid containing the alkaloids dissolved with the help of sulphuric acid are preserved better than those in which hydrochloric acid is used. Finally, solutions containing glycerine to the extent of one-fifth of the total volume may be kept for a long time without undergoing the least alteration.

Based upon these observations, the author has been led to consider the following conditions to be desirable in the preparation of solutions of hypodermic injections.

1. To use exclusively alkaloids of vegetable origin in a state of purity. These are always well defined, stable and uniform in composition, whilst their salts vary according to the equivalent of the acid which is used in their formation, and according also as they contain more or less water of crystallization.

† In a memoir upon which the author is engaged, he proposes to indicate the change of composition to such a liquid through the absorption in the filter.

2. To use as a vehicle boiled distilled water, containing twenty per cent. of glycerine.

3. To give the preference to sulphuric acid, diluted in the proportion of one of acid to ten of water, above all other acids.

4. To substitute measurement by volume for measurement by weight.

*Mode of Operation.*—After having verified the purity of the alkaloid, reduce it to powder, and weigh a quantity corresponding to a determined volume. Place the powder carefully in a graduated flask holding 10, 20, 50, or 100 cubic centimetres. After having added some drops of glycerined water to suspend the powder, the acid is poured in of the strength indicated above. The solution may be made in the cold, but more often it is necessary to raise the temperature a little in order to accomplish it. When the solution has cooled, it must be made up to the necessary volume with the glycerined water. Solutions may be prepared by these simple means that will be clear and of uniform composition, and have the advantage of keeping a long while without alteration. This result having been recognized, it remains only to indicate a formula which will enable the medical man to know the quantity of alkaloid contained in the solution, so that he may vary the dose at his will. The following proportions appear to the author to be the most suitable:—

Morphia .....	1 gram.
Sulphuric Acid (10 per cent.).....	2.50 grams.
Distilled water containing twenty per cent. of glycerine.....	q.s. to make 100 c.c.

If the syringe be gauged to one centimetre, and it require 20 half turns to empty it, then each half turn will equal one half of a milligram. By augmenting the proportion of the morphia and that of the acid, without changing the total volume, solutions containing one to two milligrams to the half turn may easily be obtained. If necessary the quantity may be increased to ten grams to the hundred cubic centimetres, but when the solutions are too concentrated they crystallize, and the composition of the liquid is thus modified.

The formula for Codeia is as follows:—

Crystallized Codeia.....	1 gram.
Sulphuric acid (10 per cent.).....	1.50 grams.
Distilled water containing 20 per cent. of glycerine.....	q.s. to make 100 c.c.

Each half turn of a syringe gauged to one cubic centimetre will correspond to half a milligram.

The other alkaloids may be treated in a similar manner.

The following are the approximative quantities of sulphuric acid required to dissolve one-gram of the substances named;—

Alkaloids.	Acids.
Aconitine (Duquesnel).....	1 gram.
Atropia.....	2.50 grams.
Narceia.....	7.50 "
Strychnia .....	2.50 "
Veratria.....	2.50 "

The author gives the following formula for the preparation of hypodermic injections of the crystallized digitaline of M. Nativelle, although he does not think that digitaline should be used in this manner since it causes intense irritation.

Crystallized Digitaline.....	1 centigram.
Alcohol (95 per cent.).....	5 cubic centim.

Dissolve and add

Distilled water.....	5 cubic centim.
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One cubic centimetre will contain one milligram of crystallized digitaline; by dissolving two centigrams of digitaline, each cubic centimetre will contain two millimetres.

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## THE MANUFACTURE OF ATTAR OF ROSES IN TURKEY.

The art of extracting the odoriferous liquids from the rose,—favourite flower of all civilized nations,—is very old. The ancient Greeks and Romans, the Egyptians and the Hindoos, were acquainted with rose-waters, but the oil of roses, the most precious part of the blossom of the flower, which alone gives the delicious flavour, and which is to be found only in extremely smallest quantities in the leaf cells of the blossom, was unknown to the Greeks and Romans. The preparation of it was the invention of the old Hindoos, and even at the present time a great quantity of the oil is produced in India. Ghazimpoor on the Ganges is now the most important place where this dear and precious ethereal oil is manufactured. But rose-waters are produced in other parts of the world in as great quantities as there. The Indian oils and rose-waters are consumed in that country, where these perfumes are in as much favour and used as extensively as the Eau de Cologne with us. It is most remarkable that, of the large quantity of rose-oil which England consumes, none of it comes from India. The produce of the "Shiraz plain" in Persia is also very insignificantly represented in the European market. It has been noticed that Persian rose-water is not exported for the European trade, and that rose-oil is not produced there but imported from India. The famous rose districts of "Medinet Fayum," south-west from Cairo, are only of advantage to Egypt; and the once important rose-oil produce of Srinagars is in decay.

The rose-oil which Europe consumes at present comes almost exclusively from the southern slopes of the Balkan, where, in some one hundred and fifty places, the ingathering of the rose-blossoms and the manufacturing of the rose-oil takes place. The quantity of oil which is produced in the south of France is very unimportant as compared with the quantity of the Turkish produce.

The most important Turkish districts where this valuable article is produced are Tchirpan, Philippopolis, Carlova, Yeni-zaghra, and Kizanlik: this last is the most important of all. The produce of this place alone amounted in 1857 to 199,000 midkals or metticals (1 mettical equal to 4.79 grams.) Now the quantity is estimated at 500,000 metticals.

Professor Dr. Hochstetter, from the Vienna University, in his most interesting reports to the Geographical Society at Vienna, of his travels through Roumelia in the summer of 1869, has given very important data of the produce of oil at Kizanlik which he gathered chiefly from Mr. Julius Kasselmann, settled there. These data may serve to remove many incorrect statements published on the subject.

The roses planted in the basin of Kizanlik have light red blossoms. They are planted in rows like the vine. Sometimes roses and vines are planted intermingled on the same plot. The most important species of roses planted there are *Rosa damascena*, *R. sempervirens*, and *R. moschata*; the first of these is also planted in the south of France; the last mentioned, which has a slight musk flavour, gives the chief material of the produce of the Indian rose-oil.

The roses are gathered in their blossom state during the month of May, and are subjected to distillation together with their green calyx leaves. The still consists of a tinned copper boiler from which a pipe runs into the cooling tub. In every boiler are placed 50 okes\* of water and 10 to 20 okes of roses, and the heating takes place over an open fire. The mass is boiled for two hours, the first part of the distilled fluid is put again into the boiler; the fluid, then condensed, is gathered into bottles with broad bottoms and strait necks. Water and oil distil over at the same time, the latter of course floating on the surface.

When there is a layer of oil of the thickness of a finger, it is removed. This is done by a funnel-shaped spoon with a very thin opening at the top which permits a passage to the water but not to the oil. 5000 lb. (German weight) of roses gives by careful distilling 1 lb. of oil.

The so-called freezing degree, that is; the degree of temperature when the separation of the solid parts takes place, varies with the oils of Kizanlik between 8 and 16 degrees Reaumur, equal to 50 to

\* Oke—1200 grams.

68 degrees Fahrenheit. The best oils get solid or stiff at these temperatures; they come from the colder mountain districts, whereas the oils from the warmer localities get solid at 12 to 16 degrees Reaumur equal to 59 to 68 degrees Fahrenheit. These oils, marked strong oils, have a less delicate flavour, and are preferred by ignorant traders.

It is evident that such a valuable substance as the rose-oil is very much exposed to adulteration. The adulteration takes place most extensively at the home of the oil, where also the substance for adulteration is produced on a large scale. This article, also an ethereal substance, is called in India "rosia-oil," in Egypt "idris-oil," and in England "ginger-oil." It is distilled from species of *Andropogon* and *Cymbopogon*.\* The idris-oil is sometimes called "geranium-oil." Among the data furnished by Mr. Kasselman is one that the distillers often adulterate the rose-oil with geranium-oil which is imported from Alexandria. This is but idris-oil exported from Bombay.

The rose-oil is exported in round tinned copper bottles called "kunkoumas," which, when filled, are closed by soldering. The price on the spot per German pound is 120 to 125 thalers.

## ON THE PREPARATION OF SYRUPS WITHOUT HEAT.†

BY L. ORYNSKI.

Regretting my inability to be present at the meeting, I send you some syrups prepared "via frigida" by percolation, which please, if you judge proper, present to the meeting of the American Pharmacæutical Association, together with the description of the method of preparation. From my personal experience I found that the syrups thus prepared will neither ferment nor crystallize.

The two-ounce bottle, with "*syrupus diacodion*," as ordinarily prepared, fermenting most readily, was made eighteen months ago, and only eight ounces put into a quart bottle. It has been so far kept unaltered.

All other samples are recently prepared, but they will afford an opportunity of judging of their qualities.

The syrups prepared according to the U.S. Pharmacopæia are too thin, and in my judgment do not contain sufficient sugar to withstand our summer temperature, particularly that of the Southern

\* *Cymbopogon* is synonymous with the genus *Anatherum*; the latter is the name used. Both *Anatherum* and *Andropogon* belong to the Order *Gramminaceæ* (section *Andropogoneæ*).

†Proc. Am. Pharm. Assoc.

States. Applying only "a gentle heat," fermentation on the slightest exposure to the air will take place.

If, on the contrary, the syrups are boiled (as the German and French Pharmacopœias recommend) without the aid of a saccharometer, the sugar may crystallize on account of over-boiling the syrup or evaporating it too much. One or the other way will meet with many obstacles, which can be removed by preparing all the medicinal syrups "via frigida," by percolation, which process is as follows:—

"Introduce thirty to thirty-two ounces of sugar (according to the temperature) into a percolator in which previously has been introduced a piece of lint or sponge, well adjusted, and gradually pour on sixteen ounces of liquid so as to make the percolate (syrup) pass drop by drop. If the liquid is turbid pour it back into the percolator till the syrup *passes clear*."

Syrups thus made will keep very long and never crystallize. The *syrupus scillæ comp.* is prepared as follows:—

"The roots are finely ground and macerated for twelve hours with as much diluted alcohol as they may absorb, then the tincture is obtained by percolation and evaporated to the consistence of a syrup. The extract thus obtained is mixed with a sufficient quantity of water, set aside till cool, and then filtered to separate all the albumen and other impurities. The liquid is now poured gradually into the percolator, in which the sugar has been previously introduced." The result, as the sample testifies, is a syrup clear and pleasant to the eye. It will neither crystallize nor ferment.

The *syrupus scillæ simplex* is made from the squills not picked. It could be yet clearer if the squills are select white. The vinegar of squills for this syrup must be made several weeks previous, so that the albumen and other sediments which always are formed may be separated by filtering.

The *syrupus pruni virgin.* is made by macerating for an hour the bark with as much water as it may absorb, and then the percolation is followed in its usual way till the necessary quantity of liquid is obtained, which gradually must be added to the sugar introduced in a glass cover percolator.

The syrup of Tolu, No. 2, is made by slightly digesting the balsam in a water bath; the liquid is filtered, and the syrup is prepared as above mentioned. This syrup is very cheap and may be used in place of other pleasant aromatic syrups.

All the medicinal syrups, I think, may be prepared "via frigida," and, I am quite sure, would give satisfaction to everybody.

The advantages of this process are:

First. The syrups are clear, and there is no necessity of purifying them.

Secondly. They possess their medicinal properties unaltered,

since many drugs may be injured by heat, more especially aromatics and those containing readily volatile substances; and,

Thirdly. The syrups will neither crystallize nor ferment, and may be prepared in large quantity, provided the vessels or bottles are clean before filling them with syrup.

All the accompanying samples are of the strength of the U. S. Dispensatory.

I most earnestly recommend the process of "via frigida," by percolation, to my pharmaceutical brethren, and would respectfully ask the Pharmaceutical Association to recommend this process for general adoption.

### PHARMACY IN BRAZIL.

The following extract is taken from an abstract of a paper read before the Liverpool Chemists' Association by Mr. J. Hallawell, Hon. Secretary of the Society, and at one time a resident of the southern provinces of Brazil:—

Referring to pharmacy, Mr. Hallawell stated that there were two medical schools or colleges in Brazil; one in the city of Rio de Janeiro, another at Bahia. The studies and privileges of both were the same. A student in pharmacy usually, after spending a few years in service in some retail establishment, goes up to the school at one of these two places, and there he must study two years. The course of study is almost the same as that adopted in Bloomsbury Square, and the examinations likewise. After a satisfactory examination he is granted a diploma, and may begin business as a pharmacist when and where he likes; for, like England in Brazil there is no limit placed on the number of pharmacies. A pharmacist is called a 'Boticario;' he is exempt from serving on juries, or in the National Guard, but he cannot engage in any other business, nor have more than one pharmacy. By law medical men are forbidden to dispense their own medicines; there is therefore plenty for the pharmacist to do; and while they sometimes encroach upon the province of the doctor by prescribing for casual and common complaints, they are protected by law from being encroached upon by the doctor.

Prescriptions are written in Portuguese, the language of the country, and are not copied into a book, but written upon the label of each mixture, lotion, or box of pills. This involves labels, and consequently pill-boxes of a much larger size than those used in this country. The prescription is usually retained, until the amount incurred by the patient has been paid, meanwhile serving as a sort of memorandum, each repetition of the medicine being marked upon it; it is then handed over to the owner, a receipt in full of all the

demands. The hours of working are very long, pharmacies generally opening at six in the morning and not closing before nine or ten in the night. They are open all Sundays and holidays in most places.

The law requiring two years of study is relaxed in the case of foreigners coming from other countries to Brazil, and who bring with them an accredited diploma or other proof of qualification from the school, college or university where they have resided. In this case an examination like our modified one is made; it is called an examination of competency; and it is divided into two parts, theoretical and practical. The first is made partly by written questions, partly *viva voce*, and if the examiners are satisfied with their answers, the candidate goes on to the practical one, where he is required to make one or two analysis, prepare from memory one or more pharmaceutical preparations or formula, detect the presence of some adulterations in one or more substances, and recognize those in the collection of *Materia Medica*, and finally dispense one or more prescriptions. If this is also satisfactory, his diploma is endorsed, and he may also begin business when and where he may please in the empire.

The charges for medicine varies much with the locality: the average would perhaps be about double those charged in a first-class pharmacy in England.

Patent medicines and specialities are very largely used; many of those approved by the academies of medicine in Paris and elsewhere being prescribed by the physicians, such as, for instance, the pills of Vallet or Blancard or other accredited preparation. One excellent regulation exists, no patent medicine is allowed to be advertised in the newspapers, unless the formula has been submitted to and approved by the Imperial School of Medicine. This law is evaded in some of the smaller towns, but it is rigorously observed in the principal cities.

The Pharmacopœia recognized in Brazil is the formula of Dr. Chernoviz, a compilation from most European Pharmacopœias, but chiefly from the French codex.

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## ON FLUID EXTRACT OF SENEGA.\*

BY H. N. RITTENHOUSE, OF PHILADELPHIA.

The tendency of fluid extract of senega to gelatinize in cold weather when made with the usual menstrua of alcohol and water, and in different proportions, is well known to pharmacutists.

\*Proc. Am. Pharm. Assoc., 1871.

To find a means to overcome this tendency, and reply to the above query, a number of experiments were made by myself during last fall and winter, with finely ground senega and alcohol and water in various proportions, following the usual manipulations of the U. S. Pharmacopœia.

As none of the resulting preparations proved to be what was desired, the fluid extract presenting the handsomest appearance among the number, was selected to repeat the experiment, with the addition of an alkali. This extract was made with mixture of one part of alcohol to three parts of water, and contained less sediment than any of the others made in different proportions of alcohol and water; after pouring off the clear extract, it was divided into two equal portions; to one was added two per cent of bicarb. soda of root used, causing an effervescence, which being over, the bottle was tightly corked and set aside in a window, where it has been subjected to the coldest weather of the past winter, and now after standing eight months remains perfectly clear. The other half has thickened, though not so much as usual.

In view of the foregoing, the following is suggested as an improvement on the old method of making this preparation.

Take of—

Senega in coarse powder.....	7680 grains.
Bicarb. Soda.....	153 "
Alcohol, one part	} ..... 32 oz., or q. s.
Water, three parts	

Mix thirty-two ounces of the alcohol and water, and dissolve the soda in it, moisten thoroughly the senega with this, and let it macerate in a covered vessel twenty-four hours, transfer the mass to a percolator and displace twelve ounces, set this aside and continue the percolation with alcohol and water in the above proportions until the drug is exhausted, evaporate or distil this last portion until reduced to three fluid ounces, add one ounce of alcohol to this, and mix it with the reserved twelve ounces. Shake well this extract for a day or two at frequent intervals, and then decant or filter.

In my hands the above has given a very satisfactory fluid extract, a sample of which, that has been exposed to all the changes of temperature of the past six months, has shown no tendency at all to gelatinize, and has only deposited a very slight sediment.

### CANADA OIL FOR EXTRACTING FATS.\*

Dr. Vohl, of Cologne, continues to discuss the virtues of the form of petroleum which he calls Canadol (Canada oil), which he considers especially adapted to the extraction of fats of any kind.

\* Harpers' Monthly.

from their original sources, and their conversion into articles for the table or for industrial purposes. The advantages of his method over that of cold and warm pressure he finds to consist both in the much greater yield, and in the vastly improved quality, the residuum not being at all injured for use in other ways. The sulphide of carbon has frequently been employed by perfumers and others for extracting oily substances: but Dr. Vohl considers its use so greatly inferior to that of Canada oil as not really to come in competition with it. The butter can be extracted from the cacao-bean by this substance, thereby greatly improving the quality of the prepared cocoa.

Another application of the Canada oil is to the removal of the fat from bones, leaving them as white as if bleached for a long time, and perfectly adapted for use. Even the ivory of the elephant, the narwahl, and the walrus, can be greatly improved in quality by this application. Glue made from bones thus prepared is also a very superior article. An important application of this substance, if all that is claimed for it by Dr. Vohl be true, will be in the hands of the anatomist in preparing bones for skeletons. This, as is well known, generally involves the use of ether or other expensive agencies in removing the grease. The special application of the process, and the method of extracting oil from seeds, with the apparatus required, is given at length in a recent number of Dingler's *Polytechnic Journal*.

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## ON THE PREPARATION OF ATROPIA FROM BELLADONNA LEAVES.\*

BY J. LEFORT.

Dry and coarsely contused belladonna leaves are exhausted by boiling water containing 10 grm. tartaric acid for each kilogramme of the leaves; the decoction is strained and evaporated to a soft extract, which is treated with strong alcohol heated to 50° C (122° F.), to dissolve the tartrate of atropia. By treating the extract three or four times, only about a litre of alcohol is required for about 200 grm. of extract, the approximate yield of 1 kilogramme of leaves. From the dark brown tincture the alcohol is distilled off, leaving about 50 grm. of extract of a thick syrupy consistence, which in a suitable flask is agitated with one or two portions of ether, to remove a little resin and chlorophyll. The extract is now treated with a fresh portion of ether and with a solution of 8 grm. of caustic potassa in half its weight of water; on agitation, a little

\*Translated from *Journal de Pharm. et Chim.*, in *Am. Jour. Pharm.*

ammonia is disengaged from an ammoniacal salt, normally contained in the leaves, and the liberated atropia dissolves in the ether, which is several times renewed to completely exhaust the alkaloid. The ether is now distilled off, leaving a transparent, yellowish-brown, semi-solid extract, which is dissolved in water acidulated with sulphuric acid. A little resin is separated by filtration, bicarbonate of soda is added until effervescence ceases, when, on agitating with ether, all the atropia will be dissolved, and obtained in a crystallized condition on the spontaneous evaporation of the ether.

The preparation of atropia by this process is as easy and satisfactory as from the root, and has the advantage of saving labor in not requiring the leaves powdered. It is to be observed that the extract, previous to its treatment with ether, has the consistence of grape sugar syrup; if more diluted, a portion of the alkaloid will not be dissolved from the aqueous liquid, except by considerable portions of ether.

Other advantages are that the loss of alcohol is entirely, and that of ether almost totally, avoided, the loss of the latter liquid occurring in the requisite spontaneous evaporation of the alkaloid solution. The author also draws attention to the probability of obtaining, by the same process, the alkaloids from the leaves of *hyoscyamus*, *stramonium* and *aconite*.

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## LINIMENT OF AMMONIA.\*

BY R. ROTHER.

The officinal liniment of ammonia is prepared by mixing one fluid ounce of officinal 10 per cent. ammonia water with two troounces of pure olive oil. When these directions are strictly complied with, a result approaching the officinal requirements will most usually be obtained. The proportions of the two ingredients in this case are about one measure of the first to three measures of the second. Now if, however, as is often done, a pure article of oil be employed in a smaller proportion, together with a strong ammonia, that is, about equal measures of each, then, either no saponification will take place until after some time, or but very imperfectly, at the moment of mixing; quite a similar action occurs if a stronger ammonia be used, even in the officinal proportion with pure olive oil. It is therefore evident that in connection with pure olive oil the ammonia must not only be weak, but in an in-

\*From the *Pharmacist*, June, 1872.

Commercial oil produces a much superior liniment. Yet in this case a stronger ammonia must be applied than in the officinal process; it is also necessary, in order to produce a sufficiently fluid preparation, to augment the quantity of this equal to the bulk of the oil. Commercial olive oil cannot be substituted for the pure oil in the officinal process. If one fluid ounce of 16 or 18 per cent. ammonia water be mixed with two troy ounces of commercial olive oil, a very thorough saponification is effected, but the resulting liniment is too thick to pour, acquiring a gelatinous nature similar to soft soap. With the use of officinal ammonia in this experiment, the oil is less perfectly changed, and the mixture assumes a curdy appearance; consequently neither of these modifications of the officinal proportions in the employment of commercial oil is satisfactory. The writer, however, observed that the gelatinous magma produced by the action of ammonia, on whatever oil of any kind, was instantly liquified by a small proportion of alcohol, forming a mixture which in every respect conforms with the true characteristics of ammonia liniment. Therefore, if in the preparation of this liniment a magma results that cannot be poured from a bottle, add to the jelly quantity of strong alcohol equal to one-sixteenth of the whole volume.

PASTE OF PAPER AS A CLARIFIER OF SUGAR.\*

In *L'Union Pharmaceutique* for March, 1872, M. Magnes-Lansens contends for the superiority of paper to albumen as a means of clarifying syrups. He states his formula and method for simple syrup are as follows:—

Take of Sugar, in pound lumps.....	20,000 gr.
Water .....	10,000 gr.
White filtering paper.....	24 gr.

A straining *muslin* bag of capacity of 8 to 9 litres.

Put the water, after having rubbed the paper up in it, in a large vessel, add the sugar, and heat, with constant stirring, until the temperature of 35° to 40° C. is reached, and the sugar dissolved. Strain. After all has passed through the filter the felty mass still retains some 500 grammes. After impregnating the filter with a sufficient quantity of boiling water, express strongly, bring the sweet liquid to a syrupy consistency, add some paste of paper, and strain through a small filter-bag; in this way the waste is reduced to a minimum.

\* New Remedies, July.

M. Magnes-Lahens says that this process is applicable to all syrups, giving greater clearness with greater rapidity than any other method in use. In all the syrups made from vegetable preparations, as decoctions, extracts, etc., the results of the use of paper paste is especially brilliant, much better than those of the ordinary filtering through paper; the time taken is much shorter and the resulting liquid much clearer.

He also states that the honeys and the oxymels are best prepared by this plan.

In the process the points to be attended to are—

1. The strainer must be cotton, not wool, and should represent in capacity a third part of the liquid to be acted on.
2. One gramme of paper suffices for one litre of water.
3. The paper must be unsized, white, and of good quality, and thoroughly reduced to a paste.
4. The syrup should be heated to 40° C. and not beyond it.

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## FALSIFICATION OF ESSENCE OF BITTER ALMONDS BY NITRO-BENZINE.\*

BY EDME BOURGOIN.

Different methods have been suggested for detecting this falsification, but none of them is quite satisfactory. It has been proposed to take advantage of the different specific gravities of the substances, but the lightness of the benzine can always be counterbalanced and concealed by the addition of alcohol or some other suitable liquid.

Dragendorff proposes to add to some drops alcohol a very small quantity of the essence and add thereto a globule of sodium; the coloration becomes more deep in proportion as the nitrous substance is more considerable.

Another method is to distil the mixture in the presence of iron filings and acetic acid, and add to the product a trace of lime according to the method of M. Berthelot, and to seek to develop a bluish violet color by the addition of solution of hypochlorite of lime. This process is excessively sensitive when the pure nitro benzine is operated on, but the presence of oil of bitter almonds interferes most singularly with the reaction.

The following simple method is now proposed as efficient :

Treat a small quantity of the suspected liquid in an assay tube with little less than its weight of caustic potash; agitate to favor the action of the alkali. If the essence be pure it takes

\* Journ. de Pharmacie et de Chemie, April, 1872, in New Remedies.

yellowish color; if it contain nitro-benzine, this yellow soon passes to a yellowish red and in a few minutes to green.

If a small quantity of water be now added the mixture plainly separates into two layers, the inferior yellowish, the superior green, which becomes red in a day or so.

Alcohol, instead of interfering with this reaction, appears to favor it. The green color developes more rapidly when the mixture is heated.

HOW TO DETECT ADULTERATION OF OILS.\*

The following instructions for the detection of adulterated linseed and refined rape oils, may prove very useful to many of our readers who wish to possess either article perfectly genuine :—

“Rosin oil is exceedingly heavy, having a sp. gr. of 0.989 (the gravity of pure linseed oil is about 0.935). Fischer's oil balance is a convenient instrument for comparing the density of oils. The following table shows the results of a few experiments ;—

	Fischer's oil balance.	Gay-Lussac's alcoholom'r.	Sp. gr.
Pure Linseed oil.....	29° to 30°	50°	0.935
Linseed oil containing 5 p. c. rosin oil..	27° to 28°	49°	0.939
Linseed oil containing 10 p. c. rosin oil	25° to 26°	47½°	0.943
Linseed oil containing 20 p. c. rosin oil	23° to 24°	46°	0.947
Rosin oil.....	—	6°	0.989

If the sample of oil is below 29°, the presence of rosin oil may fairly be suspected, and the following confirmatory tests should be applied :—Put about a quarter of an ounce of the suspected sample into an ounce vial, and add pure linseed oil till it is about three-quarters full. If the sample under examination contains rosin oil, the pure linseed last added floats on the top, the line of contact being plainly visible. If the finger be now placed on the mouth of the bottle, and the latter inverted two or three times, and held up to the light, bright wavy streaks will be observed, caused by the slow mixing of the two oils. Even five per cent of rosin oil may easily be detected in this way. Place a slab of clean glass on a piece of white paper, at one end put from ten to twenty drops of a known sample of pure linseed oil, at the other an equal quantity of that suspected; to each add one drop of oil of vitriol. On the pure linseed oil a dark-brown spot slowly forms; if the suspected sample contains rosin oil, a dark reddish-brown spot quickly forms, retaining its red color for a long time, and a peculiar scum forms over it.

\*Oil Trade Review.

Rosin oil may be detected in boiled linseed oil in a similar manner, and with the same certainty, the reactions being more rapid. A sample of genuine boiled oil must be used for the comparison. The half the price of the latter; it is free from smell even when heated; it has a peculiar metallic taste, which is not masked by the linseed oil. It greatly retards the drying properties of linseed oil, causes it to remain 'tacky' for some time, and prevents it ever becoming hard."

*To detect the Purified Mineral Oil used in the Adulteration of refined Rape (Colza) Oil.*—The mineral oil is rather lighter than rape oil, having a specific gravity of 0.902 (the gravity of refined rape being about 0.914). When mixed with rape it may be detected by a slight peculiar smell on gently heating, and by a slightly disagreeable taste. It imparts the opalescent appearance peculiar to all earth and mineral oils. Bright wavy streaks may also be seen when an adulterated sample is mixed with a pure sample, as described above, but in this instance the pure oil should be added first. Place a slab of clean glass on a piece of white paper, at one end put from ten to twenty drops of a known sample of refined rape, at the other an equal quantity of that suspected; to each add one drop of oil of vitriol. On the pure rape a pale yellow spot slowly forms, throwing out dirty orange streaks; on the adulterated sample a reddish-brown spot quickly forms. Mineral oil interferes greatly with the burning of refined rape, causing smoke and great deposit on the wick.

*Detection of Mineral Oils in Fatty Animal or Vegetable Oils, and vice versa.*—The distinction of coal oil from animal and vegetable oil is not very difficult, from the fact that mineral oils cannot be saponified, as the following experiment will show. Boil the oil with caustic soda liquor until it is saponified; the soap resulting from it is to be evaporated in a water bath, and the residue treated with ether or petroleum spirit. The soap will be insoluble, while the coal oil, if such was mixed with the oil to be tested, will be soluble in the ether or petroleum spirit. The latter is to be evaporated carefully in a graduated cylinder, and, as the coal oil boils at a much higher temperature than ether or petroleum spirit, the former will remain in the glass cylinder, while all the ether or petroleum spirit will be evaporated. The best way for evaporating the ether or spirit will be to put the glass cylinder containing the same in a vessel with hot water.

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## COD LIVER OIL AND LIME SOAP.

M. E. Beck (*Journ. Pharm. et de Chimie*, 4th ser. vol. xiv. p. 43) describes the preparation and properties of a soap made from lime and cod-liver oil, in the following proportions:—

Slacked Lime in fine powder.....	600	grams.
Cod-Liver Oil.....	500	“
Rain Water.....	1700	“

The lime is to be mixed with 1500 grams of the water, boiling, into a homogeneous milk of lime. The other 200 grams of water are to be added hot to the cod-liver oil and stirred to form a perfect emulsion. To this emulsion the milk of lime is to be gradually added, with continual stirring; the mixture gradually heated to the boiling-point and a gentle ebullition kept up, with continual stirring, until the lime has disappeared and the soap become uniformly yellow and firm. This is washed with water until, when kneaded and pressed, the liquor that runs away is colorless and tasteless. It should then be freed from moisture by a gentle heat, and preserved in closed vessels. When recently prepared, the soap has a waxy consistence, convenient for the preparation of pills, dragees or pastilles; and if white oil be used it is perfectly odorless. Tin vessels must not be used, in its preparation, which may be best accomplished on a small scale in porcelain capsules. M. Beck claims for this soap that, when used as a medicinal agent, it facilitates the assimilation of the calcareous element and neutralizes the objectionable features of the oil. A suitable pill-mass may be formed by mixing together in a mortar 20 grams of the calcareous cod-liver oil soap with 4 drops of oil of almonds.

—*Phar. Jour. and Trans.*

## PULVERULENT TAR.

As a convenient method of facilitating the division, and increasing the solubility of tar, M. Magnes-Lahens recommends (*Journ. Pharm. et de Chimie*, 4th ser. vol. xiii. p. 42) a preparation made by mixing together in an earthenware vessel two parts of finely divided charcoal and one part of liquid tar. The product, which he calls pulverulent tar, resembles small grains of gunpowder; it does not soil either the finger or the vessels with which it comes in contact, and yields freely to water the tar which it contains, the temperature most favorable to solution being 20° C. (68° F.). M. Magnes-Lahens proposes to prepare from pulverulent tar a syrup

which, although too concentrated for administration pure, will keep well, and, if diluted in the proportion of a tablespoonful of syrup to a tumblerful of water, gives a tar-water resembling that of the French Codex, with the addition of sugar. The formula given is—

Pulverulent Tar.....	50 grams.
Water .....	180 "
Granulated Sugar .....	320 "

Mix the tar and sugar together in a mortar, and then add the water and heat the mixture in a water-bath to 60° C.; remove it from the bath and shake until the sugar is all dissolved; strain while hot and again when cold. The pulverulent tar may also be used for pills with a suitable excipient, and for fumigation by throwing a few grams on a hot fire-shovel.—*Phar. Jour. and Trans.*

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### CHINESE DRUGS.

The San Francisco *Bulletin* says, the ingredients of a witches' cauldron as described by the poet could not have been more repulsively disgusting than are the articles and compounds shipped to the Chinese physicians of this city from their native country, and used as medicines here. There seems to be just at the present time an extra demand for a venomous serpent, closely resembling the rattlesnake, and of which hundreds are received constantly. A custom-house official brought a specimen of these cheerful looking creatures to this office yesterday; a coiled snake about four feet long, fanged, and with hideous head scales like a crest. How these animals are taken by patients of Chinese doctors is not known. One would be a fair dose if disguised in a coating of sugar. They may be taken in sections three times a day, as they are dessicated, or they may be boiled down or pulverized and taken in powders, or rolled into pills. Lizards are in nearly as great demand as the snakes. These also are dried and sent over in packages, together with hundreds of other loathsome things, all of which are consigned to the Chinese physicians and used by them in their practice.

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## Editorial.

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### THE FORMATION OF LOCAL SOCIETIES.

The formation of local societies has, during the past year, being frequently brought before the notice of the readers of this journal, but at the last Council meeting we were requested to call further attention to the subject, and especially to urge upon members of the College, resident in our larger towns, the necessity of taking immediate steps toward the organization of associations under whose auspices classes could be carried on during the coming winter.

It is scarcely needful to discuss the necessity of providing further means for the education of our apprentices and assistants than are afforded by the facilities provided in Toronto. It would be quite impracticable, if not altogether impossible, for any considerable number of students to come to this city, even for the purpose of finishing their education. Those who select the profession of an apothecary are generally under the necessity of earning their daily bread at the same time that they pursue their studies. The rule might be safely stated as being labor by day and study at night. Exceptions to this are exceedingly uncommon, being almost wholly comprised in that class of young men who are favored with wealthy relatives and ample resources. It is not for this class that the benefits to be derived from local organizations are intended, but rather for the hard-worked and not over-rich student, who is not in a position to help himself. As we have said, by far the greater majority consists of such persons, and it behoves the College—our parent society—and all those persons who have the interests of the profession at heart, as well as the individual and collective welfare of its younger members, to give every assistance in their power in aid of these objects.

Of all plans which have been under discussion, that which relates to the formation of branch associations gives promise of the best results. The regular periodical meetings of such societies would afford an opportunity for the interchange of ideas on phar-

maceutical subjects, and for the regulation and protection of local or sectional interests. With a flourishing and harmoniously conducted organization in each of our larger towns, we believe the working of the Pharmacy Act would be much facilitated, and that infringements would soon cease to be a source of complaint. While the older druggists would profit by these advantages, the younger members would also derive a share of benefit. It is, however, in the formation of classes that the latter would be the principal gainers. There should certainly be no difficulty in obtaining teachers, as we are sure that every community has some amongst its members who are capable enough and willing enough to bestow a small portion of their time in aid of so laudable an object.

The College is prepared to perform its share in the matter, and to assist, to the fullest extent of its resources, the establishment of these branch societies. At the Council meeting preceding the last a certain sum of money was devoted to the purpose. We have already pointed out the terms of the grant, but may again say that for every student who attends any class or classes which may be organized, the association under whose auspices such classes may be carried on will be entitled to receive the sum of two dollars.

The perfection of this scheme rests entirely with the druggists and assistants of our larger towns. Some of these have already signified their intention of commencing operations at once, and we trust that during the next month all our principal centres will have taken action. Every preliminary should be settled by the beginning of October, so that all arrangements may be made during that month.

It would be very desirable if these societies could be conducted on some uniform plan, and we should be pleased if some of our friends would send us, at once, a scheme for publication, so that by the first of November everything may be in good working order. It will be remembered that, according to the resolution of the Council, classes must be continued during six months, and we think the period between 1st November and 1st May the most fitting and convenient time.

We need scarcely say that the JOURNAL will be open for all matters pertaining to the organization and working of these societies, and we shall always be gratified to give space to any communications which may be sent in.

## THE LATE EXAMINATIONS.

We are pleased to report that the examination which was held on the 6th instant, was, in all respects, more successful than those which preceded it. The number of students was much larger than on any previous occasion, and the degree of proficiency, as shown by the examination papers, was very creditable indeed.

It is with particular pleasure that we notice the success of the first two candidates, Mr. Henry Maclagan, of Lindsay, who obtained 99.50 marks out of a possible 100.00; and Mr. Price Jackes, of Toronto, who was awarded 92.10 marks. When the "Students Column" was published in the Journal, both these gentlemen were amongst the foremost of the competitors. We have frequently admired the perfection and thoroughness of the answers they then sent in, and the indefatigable zeal they evinced in solving chemical problems, which really required the expenditure of considerable time, and no small amount of chemical knowledge. It is as gratifying to us as the candidates themselves to learn that they have become the first prizemen of the college, and as the examination on their part was not compulsory, as they were both entitled to registration, if not already registered, the honors they have achieved are all the more creditable.

We may so far betray confidence to state that Mr. Maclagan's only failure was, from a scientific standpoint, excuseable enough. The term—*Ne tradas sine nummo*—sometimes appended to prescriptions was not correctly translated. It is quite possible that this relates more to commercial matters than to pure pharmacy, but we think, nevertheless, that it is a phrase with which all young druggists should be acquainted, and we would especially commend to Mr. Maclagan, and his fellow candidates, the principle which is involved as being the only safe basis on which a successful business career can be carried on.

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#### A PROPOSAL TO ASSOCIATES OF THE COLLEGE.

For the purpose of aiding those young men who have already completed a portion of their preliminary studies, it has been resolved by the Council that any associate residing out of the city

who may wish to attend the lectures delivered in the College of Technology shall be assisted in doing so by a grant of one dollar per week during the period such lectures may be held: provided such associate shall have served as an apprentice for not less than two years.

We presume the term "apprentice" may be accepted in its most liberal sense to mean those who have served the stated period in a pharmaceutical establishment, whether as regularly indentured apprentices or not.

This is a most generous offer on the part of the Council, and is certainly calculated to be of much service to those who wish to render themselves proficient in their business; not only as affording an opportunity for more study, but also for learning the details of accurate dispensing.

We are not informed as to the exact period at which the lectures in the College of Technology will commence, but presume that it will be during the early part of October. We shall endeavour to obtain some definite information before going to press.

Parties intending to take advantage of this offer may communicate with the Registrar, or with us. We may further say that we shall be pleased to give any information or assistance in our power to those who may call on us during the day at the Toronto Chemical Works, and in the evening at our residence, 220 Sherbourne street.

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#### NOTICE TO MEMBERS IN ARREAR.

The attention of those members of the College who have not yet sent in their fees for the current year is respectfully directed to the following extract from the minutes of last meeting of last meeting:

"Moved by Mr. Elliot, seconded by Mr. Hodgetts: That those members of the College who have not renewed their annual fees, be notified by the Registrar of the necessity of doing so, he pointing out the penalty connected with such neglect, and if, in one month no notice be taken of such intimation that the Registrar shall send to the County constable, or other competent authority, or agency in such town, or village, a list of those keeping open shop in viola-

tion of the Act, by reason of non-registration, with a request that proceedings be at once taken against such offenders."

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**BORATE OF MANGANESE IN BOILING LINSEED OIL.**—We understand that the use of borate of manganese is rapidly superceding the ordinary dryers, such as lytharge, red lead, acetate of lead, sulphate of zinc, or oxide of manganese, which have been heretofore used in the boiling of oil. The advantages are the production of a lighter colored oil; the avoidance of a sediment, and the consequent reduction of loss during the process. The proportion of borate employed is three pounds and three-quarters to one hundred gallons of the oil. The salt should be rubbed up, or thoroughly mixed with a portion of the oil before putting into the pan. The whole is then well mixed and stirred during the application of heat, as in the old method.

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## Editorial Summary.

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**COLORLESS TINCTURE OF IODINE.**—J. R. McCullough, (*Pharmacist*) gives the following formula as producing a better preparation than those commonly employed:

Tinct. iodinii.....	one ounce.
Glycerin pure.....	one ounce.
Sulphite of soda.....	one drachm.

Rub the salt to a powder in a small mortar, and add the glycerin gradually; then pour in the tinct. iodine and triturate gently until a solution is effected, and the mixture assumes an amber color. The properties of iodine are increased by the aid of the salt, and the vehicle of glycerin employed, certainly enhances its value and convenience for application locally, to scorbutic and other similar ulcers.

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**VARIATION IN COLOR OF INFUSION OF WILD CHERRY BARK.**  
—In answer to a query in regard to this subject, propounded by the American Pharmaceutical Association, Mr. Joseph L. Lem-

burger states that after repeated experiments he finds that the difference of color presented by different samples of the infusion, prepared after the same method, is due to the amount of tanning present in the bark; and that the season at which the bark is collected influences the amount of that constituent. Bark collected in January, February, March, November and December gave light colored infusions, while that collected in the intervening months gave infusions of darker color.

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PREVENTION OF THE GELATINIZATION OF TINCT. KINO.—A correspondent of the *Druggists' Circular* states that by adding sugar in weight equal to that of the gum employed, the tincture may be made to keep indefinitely; at least it is stated that during an experience of thirty-five years no case of gelatinization of tincture so prepared has been known to occur.

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DETECTION OF OIL MIRBANE IN ESSENTIAL OIL OF ALMONDS.—The following plan is recommended by M. Burgoin, (*Four. de Pharm. et Chem.*) Place in a test tube a small quantity of the suspected oil, say 1 gramme (15.43 grains), and add half its weight of pure caustic potassa, shaking the tube to facilitate the reaction. If the oil be pure, only a slight yellowish coloration will be observed; if it contain nitro-benzole, on the contrary, the yellow color turns speedily to reddish-yellow, which changes to green in less than one minute; if then a small quantity of water be added, the mixture separates into two distinct layers, the lower one yellow, the upper green, which changes to red in twenty-four hours. The presence of alcohol does not interfere with these reactions.

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PERSIAN OPIUM.—The *Pharmaceutical Journal* says that according to reliable authority the yield of morphia from Persian opium ranges from two to eight per cent. It is principally cultivated in Yezd and Ispahan, and partly in some of the Khorassan districts. The Yezd opium is considered the best. The crop of 1871 was computed at 1200 chests only, owing to the drought, but a good year's crop may produce 2,500 chests. About 200 to 300 chests are said to be annually exported to London, 200 chests to Singapore, 200 to Java, and the remainder to China:

PREPARATION AND PROPERTIES OF SULPHOVINATE OF SODA.—In a paper read before the Société de Pharmacie de Paris, (*Four. de Pharm. et de Chim.*) M. Limousin alludes to the peculiar purgative properties of sulphovinate of soda as already pointed out, in 1870, by Dr. Rabuteau. The high price of the salt as then prepared would prevent its general employment and, after several attempts, M. Limousin has succeeded in devising a more economical mode of preparation, a description of which is appended to this note. The sulphovinate has the cool taste peculiar to all the salts of soda; it is nearly free from bitterness, and has a sweet after-taste that makes it more easily tolerated than the sulphate, while, as a laxative, it is about three times more powerful than that salt, and much more prompt. It is claimed that its administration is not followed by constipation, nor is there the danger of the formation of vesical calculi which sometimes attends the use of salts of magnesia. The salt may be administered in water; or sweetened water; or water charged with carbonic acid. In the latter form it is much more agreeable than citrate of magnesia, and will keep unaltered for a long time. The process prepared by M. Limousin is as follows:—A kilogram of pure sulphuric acid, sp. gr. 1.715, and a kilogram of concentrated alcohol, about 96°, are introduced by means of two funnels (one for the alcohol and the other for the acid) into a third funnel arranged in a flask plunged into a freezing mixture or kept in a current of cold water, the flow of the two liquids into the flask being so regulated as to keep the alcohol in excess. The mixture is kept for four or five days at a temperature of 20° C. to 25° C., then diluted with five or six litres of distilled water, and saturated with about 1500 grams of pure carbonate of baryta diluted with a sufficiency of distilled water. When the point of saturation is attained, the liquid is left to deposit the sulphate of baryta, and afterwards filtered. The solution of sulphovinate of baryta so obtained is saturated by 850 to 900 grams of pure carbonate of soda dissolved in four litres of distilled water. When no more precipitate is formed by the addition of the alkaline solution, and the liquid is neutral to test paper, the transformation of the sulphovinate of baryta into sulphovinate of soda is complete. The liquor, decanted and filtered, is evaporated in a water bath to about sp. gr. 1.33, and left to crystallize. The crystals, after draining, are dried in a stove. The salt so obtained is of great purity, and may be kept without alteration. With the quantities above indicated, about one kilogram of the product is obtained. If the salt be free from sulphate of soda and sulphovinate of baryta, chloride of barium and sulphuric acid will not give a precipitate in a solution in distilled water.

## Correspondence.

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The editor is not responsible for the statements made by correspondents, nor does he of necessity endorse the views advanced. This department of the *Journal* is open for the free and ungarbled discussion of matters connected with the local or general interests of pharmacy, and communications will at all times receive due attention. The signature of the writer should always be appended, but need not necessarily be published unless it is so desired.

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### INFRINGEMENTS OF THE ACT.

*To the Editor of the Canadian Pharmaceutical Journal.*

DEAR SIR,—I see by the last number of the *Journal* that complaints are being made about the working of the "Pharmacy Act." For one, decidedly think that something should be done, for it seems to be a complete dead letter here. Druggists think it is a humbug to Register, and they are "not going to pay \$4 a year." Now the question is, are we going to make them pay it or not. Another thing, I don't *think* there is another druggist besides myself, who keeps a poison book. People come in for arsenic, corrosive sublimate, antimony, or any other poison, and when we request them to sign their names, they frequently refuse, and go out with the remark that "Oh I can get it anywhere else, without signing a book or any other bother." By this we are continually losing custom, besides paying \$4 a year for it, whilst our neighbours can laugh in their sleeve, and say "what fools you are to pay at all." Now I do not mind paying my fee, provided my neighbours do the same, and if one is to keep a Poison Register why not all. Now that we have taken all the trouble to get a good act passed, by all means let us work it up to the letter, not to the injury of any one, but justice to all. Of course one cannot do much alone, and does not like to prosecute his neighbour. Such a course, would undoubtedly create ill feeling against him. It must be done by disinterested parties.

I think a committee should be appointed to see that the law is carried out. Notice should be given to all druggists not registered that if they are not registered within one month, that an action will be entered against them. They should also be compelled to keep poison books.

Yours, &c.,  
DRUGGIST.

August 5th, 1872.

## Practical Formulæ.

*Arsenical Cosmetic Lotion.*—The following formula produces a very elegant and effective article, which is perfectly harmless for external use, provided the directions be strictly followed:—

Take of Arsenious Acid, 3 to 5 grains; crush it to fine powder (weighing it afterwards) place it in a jug or basin, pour on it, distilled water (boiling),  $\frac{3}{4}$  of a pint, and promote solution by constantly stirring the liquid for some time with a glass rod. After repose, and when cold, pour off the clear solution into a clean bottle, carefully observing not to disturb the sediment or any undissolved portion, which must be entirely rejected. To the clear liquid add, of Eau de rose, and Glycerine (pure) ea. 1 oz., and after mixture by agitation further add enough cold distilled water to make the whole measure exactly one pint. It should then be poured into 5-ounce or 6-ounce bottles, only one of which, for safety, should be kept out for use.

*Indelible Ink without Nitrate of Silver.*—Besides the nitrate of silver inks, for which you will find numerous formulæ in works that are easily accessible, the following recipe by Puscher may answer your purpose: Dissolve 4 parts of aniline black in 16 parts by weight of alcohol, with 60 drops of strong hydrochloric acid, and dilute the dark blue solution with 90 parts by weight of water in which 6 parts of gum arabic has been previously dissolved. This ink is said not to attack steel pens, nor is it altered by alkalies.

—*Drug. Circular.*

*Elixir of Bismuth.*—

Oxide of bismuth.....	ʒ ix.
Citric acid.....	ʒ xvi.
Strong solution of ammonia.....	ʒ xij. or q. s.
Water.....	q. s.

To provide the oxide of bismuth, a pound of the sub-nitrate of commerce is boiled for five minutes in four pints of liquor potassæ, which must be free from carbonate. The oxide is easily washed by decantation, and must be dried at a moderate heat. It forms a dull lemon-yellow powder, having the formula  $\text{Bi}_2 \text{O}_3$  ( $\text{Bi}_2 \text{O}_3$ ).

To prepare the solution, dissolve first eight ounces of the citric acid in four fluid ounces of water, and carefully neutralize with solution of ammonia (about seven fluid ounces) mixed with half its volume of water. Then add the remainder of the citric acid, and when it has dissolved introduce the oxide of bismuth. Heat the

mixture to near its boiling point for fifteen minutes; with frequent stirring; then add a pint of water and sufficient ammonia to dissolve the citrate of bismuth, and render the liquid slightly alkaline. Finally make up the measure of one gallon, and filter through paper.—*London Pharmaceutical Journal*.

*To Obtain Perfect Crystals.*—According to Prof. Schulze, such crystals may be obtained from solutions of salts containing gelatine. He exhibited splendid crystals of borax, sugar, etc., which had formed in such solutions, suspended in the fluid without touching the vessel.

## Varieties.

**A DELICATE TEST FOR PHENOL.**—Landolt, wishing to detect the presence of phenol (carbolic acid) in a well-water from the vicinity of a gas-works, and finding that the ferric chloride test is only of moderate delicacy, and is interfered with even by normal salts, as sodium sulphate, made use of bromine-water. When used in excess, this reagent gives, even with a solution of phenol in 43,700 parts of water, an immediate bulky precipitate of tribromophenol. The odor of phenol cannot be recognized when the solution contains less than 1 of phenol to 2800 of water; and the color developed by ferric chloride appears only when there is more than 1 of phenol to 2100 of water. By this test, the presence of phenol may be shown in 500 c.c. of urine. It may also be used quantitatively.—*Amer. Jour. Science and Arts, May, 1872, from Ber. Berl. chem. Ges., iv., 770, Oct., 1871.*

**A NEW USE FOR THE ANILINE COLORS.**—Mr. F. Springmuhl recommends the use of alcoholic solutions of various gums (shellac, sandarach, etc.), to which various aniline colors have been added, in coloring all kinds of paper, linen; &c.

The gum solution, which should be thin, penetrates entirely through the paper and gives to it an even tone. The operation is simply to place the coloring liquid in a shallow dish, and to draw the substance to be colored through it, which is subsequently hung up to dry; when dry another color can readily be produced upon one of the sides. Sandarach is said to produce matt; shellac and most other gums, a lustrous color. By adding to the lac solutions a small quantity of some ethereal oil, the substance may at the same time be perfumed. By judiciously mixing several of the lacs, any desirable tint can be produced.—*Journal Franklin Institute, June, 1872, in Am. Jour. Phar.*

**THE SPILANTHES OLERACEA.**—At a recent meeting of the Agri-Horticultural Society a reference was made to the medicinal properties of *Spilanthès oleracea*, especially as to its use as a remedy for toothache.

Colonel Pears, who communicated the fact, says that it was administered on the recommendation of a native servant to a friend of his, who was suffering from a severe toothache, and that it effected a perfect cure in a very short time. Dr. Hunter pointed out that the *Spilanthes* contains some acid principles, and, when chewed, caused a copious flow of saliva. The use of such articles for the relief of toothache is of very ancient date in European medicine, the pellitory of Spain having long been used as a masticatory in cases of toothache. The *Spilanthes* is probably just as effective as the pellitory, and is, moreover, easily obtained in India. The plant, which belongs to the *Compositæ*, is an erect, branching annual, growing about twelve or fourteen inches in height, and having small yellow flowerheads at the end of the branches. It is well known for its peculiarly pungent taste of its leaves, on which account it is frequently cultivated in some tropical countries for use as a salad and pot-herb. It is known as Pa'a grass; in Japan it is called Ho Ko So.—*Phila. Med. and Surg. Rep.*

IRISH WHISKEY.—Dr. Hodge, of Belfast, has recently had occasion to analyse several samples of "whiskey," and has published the result of his examination in the *Dublin Evening Mail*. Dr. Hodges reports that a bottle of whiskey described as a fair sample of the drink sold in low class public-houses was on examination found to be heavily adulterated with naphtha, cayenne pepper and vitriol. Another sample was composed almost entirely of naphtha, slightly colored with genuine whiskey; and a third delectable compound had not even "a coloring" of the genuine spirit, being a pleasing combination of cayenne pepper, vitriol, spirits of wine and bluestone, which could be produced by any amateur chemist at the rate of one penny per gallon. After this one is not surprised to learn that the physical results of this diabolical decoction are "frightful," more especially when one considers how many of the lower order of Irish during the year, swallow, to quote the immortal Artemus, "several square feet of the seductive fluid," of the composition of which, however, we must charitably suppose them ignorant.—*Chemist and Druggist.*

THE EUCALYPTUS GLOBULUS AS A DISINFECTANT AND DRESSING.—Some highly important observations are contributed to the *Bulletin General de Thérapeutique*, of May 15, by Dr. DEMARQUAY. In his researches to find a disinfectant, itself of pleasant odor, and free from the disagreeable stains of permanganate of potash, he tried, and with the most satisfactory success, a tincture of the *Eucalyptus globulus*. He reports nine cases, including gunshot wound, cancer, necrosis of bone, hospital gangrene, and child-bed injuries, in all of which the local application of the tincture not only destroyed promptly all fetid odor, but also improved the appetite and sleep of the patients, and rendered the atmosphere of the ward fragrant and healthful, instead of nauseating and foul, as it had previously been. Should further trials confirm these results, it will be a most gratifying discovery.—*Phila. Med. and Surg. Rep.*

THE TANNATE OF QUINIA.—This substance was discussed at a late meeting of the Pharmaceutical Society of Paris. Mr. Roucher regards it as possessing rather less activity than the sulphate, but to possess certain advantages in special cases. Mr. Regnault stated that by precipitating acetate of quinia with tannin, a turbid liquid is obtained which will pass through the filters, so that it is impossible to wash the newly formed

compound, which is very soluble in acetic acid, and which separates completely on the addition of a little sulphuric acid or even of sulphate of soda. The tannate of quinia, freed from sulphuric acid, is nearly insoluble in water, but soluble in alcohol. The speaker also believes that the morphia in wine of opium is not precipitated by the little tannin contained in the cinnamon and cloves, as believed by Mr. Delioux de Savignac, for which reason he had proposed to substitute these aromatics by sugar, also to replace opium by its extract.—*Phila. Med. and Surg. Rep.*

AMOUNT OF EXTRACT FROM DIFFERENT DRUGS.—The percentages of extract obtained from different drugs may be stated as follows:—

Extractum Aloes .....	50 per cent.
“ Cardui benedicti .....	34 “
“ Cascarillæ .....	8.5 “
“ Catechu .....	53 “
“ Centaurii minoris.....	25 “
“ Chinæ calisayæ (prepared cold).....	8.5 “
“ Chinæ fuscæ.....	14 “
“ “ (prepared cold).....	15 “
“ Colocynthis .....	32 “
“ Colombo.....	10 “
“ Conii maculati.....	3 “
“ Dulcamaræ .....	16 “
“ Gentianæ.....	27 “
“ Helenii.....	31 “
“ Hellebori niger.....	25 “
“ Hyoscyami .....	1.5 “
“ Ligni campecciani.....	7 “
“ Ligni quassiaæ.....	3 “
“ Myrrhæ.....	50 “
“ Opii.....	51 “
“ Scillæ .....	68 “
“ Pimpinellæ.....	20 “
“ Rad. Glycyrrhizæ.....	20 “
“ Rhatanæ .....	12 “
“ Rhei.....	33 “
“ Sambuci.....	8 “
“ Secalis cornuti.....	14 “
“ Sem. colchici acid.....	25 “
“ Senegæ.....	23 “

PREPARATION OF PURE MURIATIC ACID.—Th. Diez dilutes the crude acid until it has a specific gravity of 1.13, and passes sulphuretted hydrogen through it, whereby arsenic, chlorine, and sulphurous acid are removed, and the ferric chloride is converted into ferrous chloride. Next morning the precipitate is collected upon a double filter, and the acid distilled from a glass retort into a glass receiver, which fits well, but is not luted. Heat is applied, and when the distilling liquid ceases to contain sulphuretted hydrogen, the receiver is changed and the pure acid collected. Towards the close of the operation the receiver is again changed, as the distillate is now apt to contain again traces of ferric chloride, in which case it is reserved for a subsequent purification.—*American Journal of Pharmacy.*

WHOLESALE PRICES CURRENT, -SEPTEMBER, 1872.

	£ c.	£ c.
DRUGS, MEDICINES, &c.		
Acid, Acetic, fort.	0 12	@ 0 14
Benzoic, pure.	0 25	0 35
Citric.	1 20	1 20
Muriatic	0 05	0 06
Nitric	0 11	0 15
Oxalic	0 35	0 55
Sulphuric	0 03	0 07
Tartaric, pulv.	0 50	0 50
Ammon, carb. casks.	0 21	0 22
" jars	0 21	0 22
Liquor, 880.	0 20	0 25
Muriate	0 12	0 15
Nitrate	0 45	0 60
Ether, Acetic	0 45	0 50
Nitrous	0 35	0 37
Sulphuric	0 48	0 50
Antim. Crude, pulv.	0 13	0 17
Tart	0 56	0 60
Alcohol, 95 per ct.	1 60	1 72
Arrowroot, Jamaica	0 18	0 22
Bermuda	0 45	0 65
Alum	0 02	0 03
Balsam, Canada	0 47	0 42
Copaiba	0 70	0 80
Peru	3 80	4 00
Tolu	0 90	1 06
Bark, Bayberry, pulv.	0 18	0 20
Canella	0 17	0 20
Peruvian, yel. pulv.	0 42	0 50
" red	2 10	2 20
Slippery Elm, g. b.	0 15	0 20
flour, packets.	0 28	0 32
Sassafras	0 12	0 15
Berries, Cubebs, ground.	0 20	0 25
Juniper	0 06	0 10
Beans, Tonquin	0 62	1 10
Vanilla	28 00	28 00
Bismuth, Alb	3 50	4 00
Carb.	4 10	4 50
Camphor, Crude	0 38	0 40
Refined	0 50	0 55
Cantharides	2 80	3 00
Powdered	2 90	3 10
Charcoal, Animal	0 04	0 06
Wood, powdered.	0 10	0 15
Chiretta	0 20	0 30
Chloroform	1 25	1 65
Cochineal, S. G.	0 80	0 95
Black	1 10	1 20
Colocynth, pulv.	0 50	0 60
Colodion	0 67	0 70
Elatarium	4 50	5 00
Ergot	0 65	0 75
Extract Belladonna.	2 20	2 50
Colocynth, Co.	1 25	1 75
Gentian	0 50	0 60
Hemlock, Ang	1 12	1 25
Henbane,	1 70	2 00
Jalap	5 00	5 50
Mandrake.	1 75	2 00
Nux Vomica.	0 60	0 70
Opium	1 10	—
Rhubarb	7 50	—
Sarsap. Hon. Co.	1 00	1 20
" Jam. Co.	3 25	3 70
Taraxicum, Ang.	0 70	0 80
Flowers, Arnica	0 25	0 35
Chamomile	0 32	0 40
Gum, Aloes, Barb. extra.	0 70	0 80
" good	0 38	0 50
" Cape	0 16	0 20
" powdered	0 20	0 30
" Socot.	0 5	0 80
" pulv	0 60	0 90
Arabic, White.	0 60	0 65
" powdered.	0 50	0 75
" sorts	0 28	0 30
" powdered	0 12	0 50
" com. Gedda	0 13	0 16
Assafetida	0 40	0 42
British or Dextrine.	0 13	0 15
Benzoin	0 48	0 55
Catechu	0 12	0 15
" powdered.	0 25	0 30
Euphorb, pulv.	0 32	0 40
Gamboge	1 05	1 20
Guaicum	0 25	0 38
Myrrh	0 42	0 50

	£ c.	£ c.
DRUGS, MEDICINES, &c.—Contd.		
Sang Dracon.	0 60	0 70
Scammony, powdered.	6 50	6 75
" Virg. "	14 50	—
Shellac, Orange.	0 55	0 60
Gum, Shellac, liver.	0 50	0 52
Storax	0 65	0 75
Tragacanth, flake.	1 10	1 40
" common.	0 35	0 40
Galls	0 27	0 32
Gelatine, Cox's 6d.	1 10	1 20
Glycerine, common.	0 30	0 35
Vienna	0 30	0 40
Prices	0 60	0 75
Honey, Canada, best.	0 15	0 17
Lower Canada.	0 14	0 16
Iron, Carb. Precip.	0 17	0 20
" Sacchar.	0 40	0 55
Citrate Ammon.	1 45	1 50
" & Quinine, oz.	0 56	0 60
" & Strychine "	0 17	0 25
Sulphate, pure	0 08	0 10
Iodine, good	12 50	—
Resublimed	16 25	—
Jalapin	1 40	1 60
Kreosote	1 60	1 70
Leaves, Buchu	0 25	0 30
Foxglove	0 25	0 30
Henbane.	0 35	0 40
Senna, Alex	0 30	0 60
" E. I.	0 12	0 20
" Tinnevely	0 20	0 30
Uva Ursi	0 15	0 15
Lime, Carbolate.	5 50	—
Chloride	0 06	0 07
Sulphate.	0 08	0 12
Lead, Acetate	0 14	0 15
Leptandrin.	0 60	—
Liq. Bismuth.	0 50	0 75
Lye, Concentrated	1 75	2 00
Liquorice, Solazzi.	0 50	0 55
Cassano	0 23	0 40
Other brands.	0 14	0 25
Liquorice, Refined.	0 35	0 45
Magnesia, Carb.	1 oz.	0 20
" "	4 oz.	0 17
Calcined	0 65	0 75
Citrate.	0 45	0 50
Mercury	1 10	1 15
Bichlor	1 00	—
Chloride	1 25	—
C. Chalk	0 60	—
Nit. Oxyd	1 25	—
Morphia Acet	3 80	4 00
Mur.	3 80	4 00
Sulph.	4 00	4 20
Musk, pure grain.	22 00	—
Canton	0 90	1 20
Oil, Amonds, sweet.	0 50	0 52
" bitter.	14 00	15 00
Aniseed.	4 25	4 50
Bergamot, super	5 75	6 20
Carraway	4 00	4 40
Cassia	2 20	2 50
Castor, E. I.	0 15	0 15
Crystal	0 22	0 25
Italian	0 26	0 28
Citronella	1 20	1 50
Gloves, Ang.	1 15	1 50
Cod Liver	1 20	1 50
Croton	1 75	2 00
Juniper Wood	0 80	1 00
Berries	6 00	7 00
Lavand, Ang.	0 90	1 00
Exotic.	1 40	1 60
Lemon, super:	5 00	5 50
ord.	3 20	3 40
Orange	5 25	5 50
Origanum	0 65	0 75
Peppermint Ang.	13 00	14 40
" Amer.	3 25	3 50
Rose, Virgin	6 50	7 00
" good	5 00	5 50
Sassafras	1 15	1 40
Wintergreen	6 00	6 50
Wormwood, pure.	4 00	6 50
Ointment, blue.	0 76	0 80
Opium, Turkey.	7 20	7 50
pulv.	9 50	10 00

DRUGS, MEDICINES, &c.—Cont'd	¢	¢
Orange Peel, opt.	0 30	0 36
" good	0 12½	0 20
Pill, Blue, Mass.	0 80	0 85
Potash, Bi.chrom	0 23	0 27
Bi-tart	0 30	0 32
Carbonate	0 14	0 20
Chlorate	0 65	0 70
Nitrate	10 50	11 00
Potassium, Bromide	1 40	1 60
Cyanide	0 75	0 80
Iodide	11 50	11 75
Sulphuret	0 25	0 35
Pepsin, Boudault's	oz 1 50	—
Houghton's	doz 8 00	9 00
Morson's	oz 0 85	1 10
Phosphorus	0 75	0 85
Podophyllin	0 50	0 60
Quinine, Pelletier's	—	2 25
Howard's	2 35	—
" 100 oz. case	2 35	—
" 25 oz. tin	2 30	—
Root, Colombo	0 13	0 20
Curcuma, grd	0 12½	0 17
Dandelion	0 17	0 20
Elecampane	0 16	0 17
Gentian	0 10	0 12½
" pulv	0 15	0 20
Hellebore, pulv	0 17	0 20
Ipecac	2 20	2 30
Jalap, Vera Cruz	1 10	1 25
" Tampico	0 90	1 00
Liquorice, select	0 12	0 13
" powdered	0 15	0 20
Mandrake	0 20	0 25
Orris	0 20	0 25
Rhubarb, Turkey	2 80	3 00
" E. I.	1 10	1 20
" pulv	1 20	1 30
" 2nd	0 90	1 00
" French	0 75	—
Sarsap, Hond	0 40	0 45
" Jam	0 88	0 90
Squills	0 10	0 15½
Senega	1 35	1 50
Spigelia	0 40	0 45
Sal, Epsom	2 25	3 00
Rochelle	0 30	0 35
Soda	0 02½	0 03
Seed, Anise	0 13	0 16
Canary	0 05	0 05
Cardamom	3 50	3 75
Fenugreek, gd	0 09	0 10
Hemp	0 06½	—
Mustard, white	0 14	0 16
Saffron, American	2 00	2 50
Spanish	16 00	17 00
Santonine	9 00	10 00
Sago	0 08	0 09
Silver, Nitrate	Cash 14 85	16 50
Soap Castile, mottled	0 11	0 14
Soda Ash	0 04	0 05
Bicarb. Newcastle	6 00	6 25
" Howard's	0 14	0 16
Caustic	0 05½	0 00
Spirits Ammon, arom	0 25	0 35
Strychnine, Crystals	2 20	2 50
Sulphur, Precip	0 10	0 12½
Sublimed	0 03½	0 05
Roll	0 03	0 04½
Vinegar, Wine, pure	0 55	0 60
Verdigris	0 35	0 40
Wax, White, pure	0 75	0 80
Zinc Chloride	oz 0 10	0 15
Sulphate, pure	0 10	0 15
common	0 06	0 10
<b>DYESTUFFS.</b>		
Annatto	0 35 @	0 60
Aniline, Magenta, cryst	3 00	4 00
liquid	3 00	—
Argols, ground	0 15	0 25
Blue Vitrol, pure	0 09	0 10
Camwood	0 06	0 09
Copperas, Green	0 01½	0 02½
Cudbear	0 16	0 25
Fustic, Cuban	0 02½	0 04
Indigo, Bengal	2 40	2 50
Madras	2 95	1 10
Extract	0 30	0 35

DYESTUFFS—Continued.	0 05½	0 06½
Japonica	0 05½	0 06½
Lacdye, powdered	0 33	0 38
Logwood	0 02	0 03
Logwood, Camp	0 02	0 3½
Extract	0 10	0 14
" 1 lb. bxs	0 14	—
" ½ lb. "	0 15	—
Madder, best Dutch	0 15	0 17
2nd quality	0 14	0 16
Ouercitron	0 03	0 05
Sumac	0 06	0 08
Tin, Muriate	0 10½	0 12½
Redwood	0 05	0 06
<b>SPICES.</b>		
Allspice	0 11½ @	0 12
Cassia	0 38	0 40
Cloves	0 15	0 16
Cayenne	0 18	0 25
Ginger, E. I.	0 12	0 14
Jam	0 20	0 30
Mace	1 75	1 75
Mustard, com	0 20	0 25
Nutmegs	1 15	1 20
Pepper, Black	0 22½	0 23
White	0 40	0 42
<b>PAINTS, DRY.</b>		
Black, Lamp, com	0 07 @	0 08
refined	0 25	0 30
Blue, Celestial	0 08	0 12
Prussian	0 65	0 75
Brown, Vandyke	0 10	0 12½
Chalk, White	0 01	0 01½
Green, Brunswick	0 07	0 10
Chrome	0 16	0 25
Paris	0 30	0 35
Magnesia	0 20	0 25
Litharge	0 07	0 09
Pink, Rose	0 12½	0 15
Red Lead	0 07	0 08
Venetian	0 02½	0 03½
Sienna, B. & G.	0 10	0 15
Umber	0 07	0 10
Vermillion, English	1 25	1 30
American	0 25	0 35
Whiting	0 85	0 90
White Lead, dry, gen	0 08	0 09
" No. 1	0 07	0 08
" No. 2	0 05	0 07
Yellow Chrome	0 12½	0 35
" Ochre	0 02½	0 03½
Zinc White, Star	0 10	0 12
<b>COLORS, IN OIL.</b>		
Blue Paint	0 12 @	0 15
Fire Proof Paint	0 06	0 08
Green, Paris	0 30	0 37½
Red, Venetian	0 07	0 10
Patent Dryers, 1 lb tins	0 11	0 12
Patty	0 03½	0 04½
Yellow Ochre	0 09	0 12
White Lead, gen. 25 lb. tins	2 30	—
" No. 1	2 10	—
" No. 2	1 90	—
" No. 3	1 65	—
" com	1 30	—
White Zinc, Snow	2 75	3 25
<b>NAVAL STORES.</b>		
Black Pitch	5 00 @	5 25
Rosin, Strained	5 25	—
Clear, pale	7 80	—
Spirits Turpentine	0 70	0 75
Tar Wood	5 00	5 25
<b>OILS.</b>		
Cod	0 60 @	0 62
Lard, extra	0 95	—
No. 1	0 90	0 95
No. 2	0 85	0 90
Linsced, Raw	0 82½	0 90
Boiled	0 87½	0 90
Olive, Common	1 15	1 35
Salad	1 80	3 30
" Pints, cases	4 20	4 40
" Quarts	3 60	3 00
Seal Oil, Pale	0 80	0 80
Straw	0 70	0 75
Sesame Salad	1 50	1 55
Sperm, genuine	2 15	2 40
Whale, refined	2 90	3 25