

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- | | | | |
|-------------------------------------|---|-------------------------------------|---|
| <input type="checkbox"/> | Coloured covers /
Couverture de couleur | <input type="checkbox"/> | Coloured pages / Pages de couleur |
| <input type="checkbox"/> | Covers damaged /
Couverture endommagée | <input type="checkbox"/> | Pages damaged / Pages endommagées |
| <input type="checkbox"/> | Covers restored and/or laminated /
Couverture restaurée et/ou pelliculée | <input type="checkbox"/> | Pages restored and/or laminated /
Pages restaurées et/ou pelliculées |
| <input type="checkbox"/> | Cover title missing /
Le titre de couverture manque | <input checked="" type="checkbox"/> | Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées |
| <input type="checkbox"/> | Coloured maps /
Cartes géographiques en couleur | <input type="checkbox"/> | Pages detached / Pages détachées |
| <input type="checkbox"/> | Coloured ink (i.e. other than blue or black) /
Encre de couleur (i.e. autre que bleue ou noire) | <input checked="" type="checkbox"/> | Showthrough / Transparence |
| <input type="checkbox"/> | Coloured plates and/or illustrations /
Planches et/ou illustrations en couleur | <input checked="" type="checkbox"/> | Quality of print varies /
Qualité inégale de l'impression |
| <input checked="" type="checkbox"/> | Bound with other material /
Relié avec d'autres documents | <input type="checkbox"/> | Includes supplementary materials /
Comprend du matériel supplémentaire |
| <input type="checkbox"/> | Only edition available /
Seule édition disponible | <input type="checkbox"/> | Blank leaves added during restorations may
appear within the text. Whenever possible, these
have been omitted from scanning / Il se peut que
certaines pages blanches ajoutées lors d'une
restauration apparaissent dans le texte, mais,
lorsque cela était possible, ces pages n'ont pas
été numérisées. |
| <input checked="" type="checkbox"/> | Tight binding may cause shadows or distortion
along interior margin / La reliure serrée peut
causer de l'ombre ou de la distorsion le long de la
marge intérieure. | | |
| <input checked="" type="checkbox"/> | Additional comments /
Commentaires supplémentaires: | | Continuous pagination. |

CANADIAN

PHARMACEUTICAL JOURNAL

VOL. IX, No. 8.

TORONTO, MARCH, 1876.

WHOLE No. XCIII

Ontario College of Pharmacy.

MINUTES OF THE SEMI-ANNUAL MEETING OF THE COUNCIL.

The regular semi-annual meeting of the Council was held on Wednesday, 2nd February, 1876, at 10 o'clock A.M., the following members being present:

Mr. B. Lyman, President; Mr. N. C. Love, Vice-President; Messrs. T. Brendon, C. Brent, W. W. Greenwood, E. Gregory, F. Jordan, H. Miller, J. Roberts, S. Tapscott, W. Walsh, and L. W. Yeomans.

The minutes of the meeting held 4th August were read, and on motion were adopted.

Business arising out of the minutes was then taken up.

Mr. Miller, on behalf of the Committee appointed at the previous meeting to procure amendments to the Pharmacy Act, reported progress. The Committee were requested to prosecute their labours to secure the desired changes. Several members stated that they had urged their representatives in the Provincial Legislature to do what they could to secure the passing of the Bill.

Mr. Gregory reported for the Committee appointed to revise the By-Laws. He stated that the Committee deemed it advisable not to alter the By-Laws until the amendments to the Act have been secured.

The report was accepted, and the Committee instructed to continue in force.

Mr. Gregory having already reported in the JOURNAL on his visit to Boston as representative at the meeting of the American Pharmaceutical Association last fall, he remarked it would not be

necessary for him to take up the time of the Council now ; however, he might say it was well worth the journey to see the rare collection of crude drugs, etc. ; and he also referred to a new drug mill which was exhibited there, "The Enterprise," a most admirable mill. For general use the No. 9 would be found to give the best satisfaction.

Mr. Lyman, who was also present at the same meeting, referred to the various drugs, chemicals, and apparatus, exhibited before the Association. He spoke in the highest terms of the warm reception accorded to them, and alluded to the various entertainments given for the benefit of visitors.

Moved by Mr. W. W. Greenwood, seconded by Mr. F. Jordan, That the thanks of the Ontario College of Pharmacy be tendered to the American Pharmaceutical Association for the very cordial and kind reception accorded to their President and Delegates at the late meeting in Boston.—Carried.

The Secretary was directed to forward a copy of this resolution through Professor Maisch, of Philadelphia.

Moved by Mr. L. W. Yeomans, seconded by Mr. E. Gregory, That By-Law No. 6 be amended by adding the words "and should the examination of the books require any time beyond the day of meeting of Council, the Auditors shall be paid the sum of \$5 per day for such time.—Carried.

The President referred to the subject of the introduction of the JOURNAL to the members of the Quebec Association ; he said that a copy had been sent to each member in that Province, but the high price of \$3 per annum was stated as being the reason why subscribers could not be obtained there.

Moved by Mr. Jordan, seconded by Mr. Greenwood, that the subscription price of the JOURNAL to those not members of the College shall be \$2 per annum, commencing with the next volume of the JOURNAL.—Carried.

Mr. Gregory's notice of motion to change the By-Law relating to examinations in the branch of Practical Dispensing was next taken up, when it was

Moved by Mr. Gregory, seconded by Mr. Yeomans, That the By-Law relating to the value of the marks allowed for Practical Dispensing be amended so as to increase the possible total from 5 to 15, and the proportion of marks necessary for passing from 60 to 70.—Carried.

A drawing of a new diploma for the College was submitted for inspection, by the Committee on Education. Some improvements were suggested, and as it was thought desirable to have a motto in addition to the arms of the College, the members were requested to propose some for the Committee to select from ; and therefore it was

Moved by Mr. Jordan, seconded by Mr. Greenwood, That the

matter of getting up the diploma be referred back again to the Committee.—Carried.

It was agreed that the candidates who had passed the present examination, and were in immediate want of their certificates, might be supplied with the old style; and those who preferred to wait could have the new ones when ready for distribution.

Mr. Yeomans gave notice of motion, That at next meeting of this Council he will bring forward an amendment to By-Law No. 3, advancing the salary of our Registrar to \$500 per year.

The report of the Board of Examiners was read as follows :

REPORT OF THE BOARD OF EXAMINERS.

Your examiners beg to report that the tenth semi-annual examination was held on Monday, the 31st January, and on Tuesday the 1st of February, inst. The attendance was large, the names of no less than forty-four candidates having been handed in to the Registrar, only forty, however, presented themselves on the day of examination.

We regret to have to report that one of the candidates was detected in the dishonorable practice of surreptitiously obtaining information, during the examination, on one of the subjects of examination, for which we felt bound to dismiss him.

We beg to submit the names and ratings of the following candidates, all of whom have obtained the requisite number of marks to entitle them to diplomas :—

		No. of Marks.
1.	A. Higinbotham Bridgewater ...	81.9
2.	A. V. Delaporte Toronto	79.7
3.	T. H. Helson Bowmanville ...	76.7
4.	A. B. Welford Woodstock... ..	76.4
5.	F. V. Dickson..... Toronto	76.0
6.	T. G. Tremayne Brampton	75.5
7.	G. N. Challoner London	75.5
8.	T. Wells Pt. Colborne ...	75.0
9.	A. J. Greenwood..... St. Catharines..	74.2
10.	R. Rowan..... Omemee.....	73.0
11.	O. Collver..... Wellandport ...	72.0
12.	H. Cooke Orillia.....	72.0
13.	A. Vincent Hamilton	71.9
14.	A. I. Thompson Strathroy	70.9
15.	W. Parke Hamilton	70.3
16.	Jacob Karns Stratford	70.1
17.	S. Waterland London... ..	70.0
18.	J. McKinnon..... Beaverton	69.2
19.	C. B. Nimmo Pt. Colborne..	65.2
20.	J. Jeffrey Welland.....	64.6
21.	R. Hunter..... Stratford	64.6

22.	J. R. Seymour	St. Catharines..	63.2
23.	W. Miller	Toronto	63.1
24.	B. S. Taylor.....	Orillia	63.0
25.	R. C. Burtt	Chatham	63.0
26.	J. W. Brown.....	Aultsville	61.3
27.	H. C. Goodman	St. Catharines..	60.6

E. B. SHUTTLEWORTH, }
 L. W. YEOMANS, } Examiners.
 E. GREGORY, }

Moved by Mr. Jordan, seconded by Mr. Tapscott, that the Report of the Board of Examiners be received and adopted.
 Carried.

Mr. Yeomans considered the examination fee at present paid by candidates was altogether too low; the fees for examination by other bodies, such as the College of Surgeons, and the Law Society, were much higher. It was moved and seconded that the sum of ten dollars be the amount of examination fee in the amended Act.
 Carried.

A letter from a rejected candidate, mentioned in the Report of the Board of Examiners, was read. After careful consideration of the case, it was decided to sustain the decision of the Board.

The Treasurer's Report was then read, and on motion of Mr. Brant, seconded by Mr. Miller, was received and adopted.

TREASURER'S REPORT FROM AUGUST 1ST, 1875, TO JANUARY 31ST, 1876 (INCLUSIVE).

Receipts.

Aug. 4, 1875,	To Balance	\$1,296 27
23,	Cash from Registrar ...	98 00
Sept. 4,	“ “	99 15
Oct. 12,	“ “	90 00
Nov. 19,	“ “	106 00
Dec. 18,	“ “	136 00
Jan. 20, 1876,	“ “	177 75
29,	“ “	248 85
		\$2,252 02

Disbursements.

Aug. 4, 1875,	Expenses of August meeting.....	\$ 277 20
4	George Lawrence.....	26 00
11	Mail Printing Company	10 00
	Geo. Hodgetts.....	100 00
	A. Brimston.....	5 90
	K. Miller	50 00
	Monetary Times	63 85
12	Globe Printing Company	12 50
19	Wm. Barry	1 00

Sept.	6	Discount on U. S. Currency Draft... ..	7 46
	10	Monetary Times.....	69 35
	15	Postage.....	25 00
Oct.	1	Monetary Times.....	60 00
	15	Lyman Bros.....	35 12
Nov.	1	Post Office Box Rent	9 20
		George Hodgetts.....	100 00
	9	Monetary Times... ..	60 00
	19	James Bain & Son	2 30
	23	E. B. Shuttleworth.....	175 00
	18	Discount on U. S. Cheque.....	60
	22	Monetary Times	120 00
Jan.	5, 1876,	James Bain	2 00
	10	Post Office	1 50
	17	Hunter, Rose & Co.....	2 50
	18	Monetary Times.....	60 00
	29	Copp, Clark & Co.....	6 25

\$1,282 73

Receipts \$2,252 02
 Disbursements 1,282 73

Balance \$969 29

KENNETH A. MILLER, *Treasurer.*

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

(Signed),

JOHN ROBERTS, }
 WM. WALSH, } Auditors.

On the hospitable invitation of the President, the Council adjourned to Jewell & Dennis's dining rooms to dinner.

On resuming business, the Registrar laid before the Council a copy of the printed proceedings of the American Pharmaceutical Association which had arrived, by express, during the adjournment.

Moved by Mr. Miller, seconded by Mr. Brent, That the thanks of the Council are hereby tendered to the American Pharmaceutical Association for the copy of their proceedings.—Carried.

The Registrar then presented his report :

REGISTRAR'S REPORT.

OFFICE OF THE REGISTRAR,
 Toronto, 2nd Feb., 1876. }

To the Council of the Ontario College of Pharmacy.

GENTLEMEN,—Your Registrar begs to report, that, since the meeting of Council in August, there have been ten applications for registration as Chemists and Druggists under the Pharmacy Act of

1871. Of these, eight have received certificates—the papers in connection therewith are submitted for your inspection. The proof of qualification of the other two not being satisfactory, registration was refused and the fees returned.

The renewals issued during the past six months are as follows: 1 for 1872, 2 for 1873, 3 for 1874, and 119 for 1875, and 2 for 1876. There are sixty-eight members who have not yet paid the fee for the current year, being twenty-one in excess of those in arrear at the corresponding date of last year. The continued depression in business will, no doubt, in many cases, account for this discrepancy. It remains for the Council to direct what steps are to be taken with the defaulters.

The suit against Mr. N. C. Wallace, of Woodbridge, I am happy to say, has been decided in favor of the College. An editorial on this case, giving the legal decision, having appeared in the JOURNAL for December, it will not be necessary for me to enlarge upon it here.

I beg to submit the following detailed statement of cash received during the past six months.

1	Renewal Fee, 1872	.....	\$4	00
2	“ “ 1873	.....	8	00
3	“ “ 1874	.....	12	00
119	“ “ 1875	.....	476	00
2	“ “ 1876	.....	8	00
10	Registration Fees	.....	40	00
37	Examination “	.....	148	00
12	Associate “	.....	24	00
	Sale of Poison Books	.....	5	15
			<hr/>	
			\$725	15

The receipts on account of the PHARMACEUTICAL JOURNAL are as follows :

Dr.

To Subscriptions for JOURNAL	.....	\$29	40
“ Advertising Situations Wanted	.....	75	
“ Advertising	.....	208	15
			<hr/>	
			\$238	90

Cr.

By Cash paid Treasurer	.....	\$63	15
“ “ “ “	.....	172	75
“ “ on hand	.....	3	00
			<hr/>	
			\$238	90

The outstanding accounts amount to \$492.50. I have written to each advertiser and hope to receive payment at an early date.

I regret to have to report the death of Mr. Christopher Stork, of Brampton, who has been connected with us since February, 1868, and was one of the Provisional Council appointed by the Legislative Assembly, under the Pharmacy Act of 1871.

Respectfully submitted.

GEO. HODGETTS,
Registrar.

Moved by Mr. Love, seconded by Mr. Tapscott, That the Registrar's Report be received and adopted.—Carried.

The application for Registration of Mr. LeMaitre, of Toronto, was laid before the Council.

On motion of Mr. Miller, seconded by Mr. Tapscott, certificate of Registration was ordered to be granted.

Two renewed applications for Registration were considered, when the decision was arrived at that the provisions of the Act applied only to the Province of Ontario, and it was

Moved by Mr. Brent, seconded by Mr. Gregory, That the papers be returned and Registration refused.—Carried.

Mr. C. B. Nimmo, an associate of the College, presented a claim for the grant of \$1 per week towards his board, whilst attending the course of Lectures of the School of Technology, which was granted.

The Association of Druggists' Clerks, Belleville, made application for the grant to Local Associations. The average attendance for the specified time was not less than seven, and the sum of \$14 was therefore granted to them.

Mr. Gregory read the report of the Board of Examiners' regarding the Student's Department in the JOURNAL, as follows :

MEMORANDA RELATING TO THE STUDENTS' DEPARTMENT.

In August, 1874, there was granted by a resolution of the Council, the sum of fifty dollars to provide prizes for the competitors in the *Students' Department* of the JOURNAL. This grant was repeated at the next meeting in February, 1875. At the meeting in August, 1875, no request for an appropriation was given in, as a balance, sufficient at least to cover the greater part of the ensuing six months, remained unexpended.

For the purpose above stated, there has therefore been received, in all, the sum of \$100. Of this there has been expended \$90.50 for prizes, and \$6.21 for express charges and postages, leaving a balance in hand of \$3.29. Against this there yet remains the prizes for December last, which have not yet been selected by the successful competitors.

The names of the gentlemen who have obtained, and are entitled to prizes are herewith subjoined :

*First Prizes.**Second Prizes.*

1874. Sept.,	G. Inglis, Yorkville.	R. McCormick, Ottawa.
" Oct.,	A. Wilson, Hamilton.	G. Beamish, Cobourg.
" Nov.,	G. Beamish, Cobourg.	G. Maclagan, Lindsay.
" Dec.,	W. M. Robinson.	R. McCormick, Ottawa.
1875. Feb.,	G. Maclagan, Lindsay.	R. McCormick, Ottawa.
" Mar.,	H. A. S. Turner, Toronto.	C. McMichael, Hamilton.
" April,	R. McCormick, Ottawa.	W. W. Stephen, Meaford.
" May,	W. W. Stephen, Meaford.	E. F. Stevenson, Cobourg.
" June,	J. E. Shore, London.	D. B. Mills, St. Catharines.
" July,	A. R. Fraser, Toronto.	J. Clark, Renfrew.
" Aug.,	W. McDonald, Hamilton.	J. Forbes, Fergus.
" Sept.,	A. I. Thompson, Strathroy.	R. McCormick, Ottawa.
" Oct.,	R. McCormick, Ottawa.	W. W. Stephen, Meaford.
" Dec.,	A. B. Welford, Toronto.	A. I. Thompson, Strathroy.

Mr. Gregory stated that, for the present, the Board of Examiners considered it best to discontinue the questions in the *JOURNAL*; it was difficult to get sufficient answers from students to compensate for the labour necessary to get up the series of questions monthly.

Moved by Mr. Roberts, seconded by Mr. Walsh, that the best thanks of the Council be given to the Examiners for conducting the questions in the *JOURNAL* for the past six months. Carried.

A List of Members who have not paid the renewal fee for 1875 was read, and the matter was left in the hands of the Registrar.

The death of Mr. C. Stork was referred to by several members, when it was moved by Mr. Jordan, seconded by Mr. Love, and Resolved, that this Council has heard with deep regret of the death of Mr. C. Stork, of Brampton, who took an active part in the organization of the Canadian Pharmaceutical Society, and afterwards became a member of the Provisional Council of the Ontario College, and the Council hereby tender to his family and friends their heartfelt sympathy with them in their affliction. Carried.

The draft of the proposed amendments as submitted to the Legislature, this Session, was read and commented on at some length. Mr. Yeomans spoke very strongly in favour of the amendments as agreed to by the Council at a previous meeting.

Moved by Mr. Yeomans, seconded by Mr. Roberts, that the old draft be substituted for the new one, and that the Council do their best to enlighten the other members of the College. Carried.

There being no further business the Council adjourned at 4:30.

GEO. HODGETTS,
Sec.-Registrar.

Original and Selected Papers.

SENNA EXTRACTED BY ALCOHOL.*

BY L. SIEBOLD.

I wish to draw the attention of this meeting to a preparation known as "Senna Extracted by Alcohol," which for many years has been employed on the Continent, and has gained much favor as a mild and pleasant purgative. This purified senna, if I may so call it, is obtained by macerating senna leaves for several days in spirit of wine of 60° over proof, and then pressing and drying them; the spirit is recovered from the strained tincture by distillation, and may be used again for the same process. An aqueous infusion of this extracted senna has a purgative action without occasioning any griping, and is so entirely free from any unpleasant taste, that the most fastidious patient need not object to it; indeed, I know of no other aperient which in like manner combines tastelessness with reliable efficacy. It is the principal ingredient in the so-called St. Germain species, a popular remedy, in which it is combined with elder flowers, fennel fruit, aniseed, and cream of tartar.

The fact that an alcoholic extract of senna is devoid of purgative properties was first pointed out by Heerlein, and has been fully confirmed by the researches of Professor Buchheim. Kubly and Dragendorff have also shown that cathartic acid, the active principle of senna, exists in the leaves in combination with calcium and magnesium, and that in this form it is insoluble in strong alcohol, though very soluble in water. Thus it has been generally assumed that senna extracted by alcohol possesses the full purgative action of the drug from which it is made, and this view appears still to prevail at the present time. I have every reason, however, to doubt the correctness of this supposition, as may be seen from the following:—Some years ago I had occasion to take senna frequently and for a long time, and I always found that the action of the extracted leaves was weaker than that of the same senna used in the original state, three drachms of the former being required to produce the same effect as two drachms of the latter. In a number of experiments, subsequently made with the alcoholic extract, I found that this substance when taken alone produced no effect beyond a slight griping, but when taken along with an infusion of the extracted senna, the action of the latter was increased, so as to be equal to

*Read at an evening meeting of the Pharmaceutical Society of Great Britain, and published in the Pharm. Jour. and Trans.

that of the unextracted leaves. An infusion of two drachms of senna exhausted by alcohol taken in conjunction with the corresponding quantity of the alcoholic extract produced the full effect of an infusion of two drachms of the unexhausted leaves, whereas the alcoholic extract, when taken alone, even in much larger quantities, had no purgative action whatever. It appears to me that this alcoholic extract, though not a purgative itself, is capable of exciting peristaltic movements, and thus augmenting the action of the cathartic acid, but whether this effect is due to the chrysophanic acid or to some other constituent of the extract, I am not prepared to decide. My observations have not been confined to my own person, for others, who are in the habit of taking *St. Germain* species as a laxative, have informed me that they require a larger dose of this preparation when made according to the German Pharmacopœia, than they do of the same mixture containing ordinary senna in place of the exhausted leaves.

The tincture obtained by the maceration of senna in strong spirit and subsequent filtration remains clear on the addition of absolute alcohol. After standing for several days the mixture forms a very slight deposit, which is devoid of purgative properties, and gives no indication of the presence of cathartic acid. The extract left after the distillation of the spirit appears to consist mainly of chrysophanic acid and resinous bodies. As several writers have attributed the purgative action of senna partially to a volatile oil, I have repeatedly tried the effects of water distilled from the leaves, but always with a negative result. My experiments lead to the following conclusions:—

1. Strong spirit does not remove any of the active principle (cathartic acid) from senna leaves.

2. The therapeutic action of cathartic acid is assisted by one or more of the constituents yielded by senna to strong spirit, though the latter produce no purgative effect when taken alone.

3. Senna exhausted by alcohol is a reliable and pleasant purgative, but somewhat weaker in its action than the unextracted leaves.

The disgusting flavor of senna and its tendency to gripe render it objectionable to many who would otherwise gladly avail themselves of this useful medicine. Yet by a very simple process this nauseous drug may be converted into a tasteless and pleasant remedy, and it therefore appears surprising to me that so valuable a purgative should have been neglected so long by the medical profession of this country. Perhaps I may hope that the subject which I have had the pleasure of bringing before this meeting will receive the attention of those engaged in compiling a future edition of the "National Pharmacopœia," and that "senna extracted by alcohol," will, before long, take its deserved place in the list of recognized medicines.

TESTING COFFEE.*

BY G. C. WITTSTEIN.

Such is said to be the adulteration of coffee, that frequently the coffee beans, as offered to the public, have nothing but the name to recommend them! Coffee beans also occasionally appear which are composed of hardened flour paste (dough); these, however, usually have sharp edges, not rounded like those of the genuine article, and are easily crushed to a yellowish-grey powder. By boiling with water a pasty mass is obtained, coloured blue by iodine. The smaller kinds of coffee bean are also made to assume the appearance of the better kinds by a process of artful colouring effected in a variety of ways. One method consists in rolling hither and thither a barrel containing the beans, together with a quantity of small leaden balls, a certain amount of the metal, sufficient for the colouring effect, being communicated to the exterior of the beans by the friction. This fraud is detected by treating the beans with dilute nitric acid (sp. gr. 1.10), and, after contact for an hour, decanting, diluting with thrice the bulk of water, and passing hydrogen sulphide through the solution. A green powder is also used, which, according to Lohr, contains in 100 parts, 15 parts of Prussian blue, 35 of lead chromate, 35 of a mixture of clay and gypsum, and 15 of water. This mixture differs from the Chinese colouring for tea, inasmuch as the former contains the injurious lead chromate, the latter turmeric. The tea coloring matter occasionally consists also of indigo, turmeric, and gypsum. The lowest power of a microscope or a good lens will reveal the single constituents of this composition. For more exact determination a quantity of the coffee beans is treated with a considerable quantity of warm distilled water. After two hours this is poured off, and tested for gypsum with barium chloride. Prussian blue is recognized by its change of colour in contact with potash; no alteration if indigo is present. In the latter case nitric acid is found to destroy the colour. The potash solution more or less decomposes and dissolves the lead chromate (turmeric is merely turned brown). Blackening with ammonium sulphide leaves no doubt as to the presence of lead chromate. By roasting, the beans are brought into a condition in which every experiment as regards adulteration is almost rendered futile; grinding makes adulteration an easy matter. When material is scarce for making chicory-coffee, beetroot, carrot, and carrot-like roots are made use of, and in the south of Europe the fig, of which the roasted product is called "corn-coffee." Other substitutes are met with in the shape of "malt," "oak-coffee," and as they are all of a deep brown tint when roasted, their resemblance to the genuine article is considerable. It

* Ding., Polyt. J., ccxv., 84—89; from *Journ. Chem. Soc.*

will easily be seen how, by roasting, most of the constituents of the above coffee adulterants are either altered or destroyed so as to be almost beyond recognition, empyreumatic oils and bitter substances being produced, whereas the raw materials, such as beet, figs, corn, possess no bitter taste.

A simple method of testing coffee is to shake it with water; if pure it remains floating for an hour together, whereas chicory sinks. There, are however, occasionally exceptional cases in which pure coffee has been known to sink after a quarter of an hour's standing. The author has never observed an exceptional case. An infusion of burnt chicory, diluted with much water, and treated with potassium bichromate, undergoes no visible change. In the case of coffee, a deep brown tint is assumed, causing a resemblance to porter. This reaction is owing to the presence of tannic acid, and is observed therefore in the case of either raw or roasted coffee. It will be observed, however, that the test is valueless as regards the detection of chicory in coffee.

To detect chicory in coffee, the decoction is diluted with eight times its bulk of water, filtered, and the dilution increased to twelve parts. If the decoction contains pure coffee, on adding to thirty drops of it two drops of concentrated hydrochloric acid, boiling for a few seconds, then adding fifteen drops of a solution of one part of potassium ferrocyanide in eight parts of water, and boiling as before, the solution becomes first green, then dark green. Six drops of potash are next added, and the whole is boiled for two minutes, the solution becoming first brown and finally clear pale yellow, with a slight dirty yellow precipitate. With chicory alone, the solution finally remains brown and turbid, and after long standing a precipitate falls, the supernatant fluid retaining its brown colour. With a mixture of 24 drops of coffee and 6 of the chicory decoction, a final brown turbid solution is obtained. A decoction of coffee of average strength contains 1 per cent, and of great strength barely 2 per cent of the dry soluble matter. The evaporation residue consists of a deep brown, shining, varnish-like mass, reeling quite dry to the touch after two days. If the ordinary substitutes are present, however, this residue becomes sticky after one or two hour's standing and quite damp in twenty-four hours.

ALLEGED DISCOVERY OF ONE OF THE LOST BOOKS OF HERMES, B.C. 1552.

The *Scientific American* contains a notice of the recent translation of a papyrus of one of the alleged books of Hermes, said to have been written about the time of Moses. The following particulars will be found interesting:—

Fifteen hundred years before the birth of Christ, at a period when the Israelites were still in bondage in Egypt, Hermes, a king of that country, and surnamed "Trismegistus," or thrice great, translated, from engraved tables of stone long before buried in the earth, certain sacred characters said to have been written thereon by the first Hermes, the Egyptian god Thoth or Thuti. The books thus produced were deposited in the temples; and the reputation of the king as a restorer of learning lived in history up to the time of the alchemists of the middle ages, who looked upon him as the "father of chemistry," while his name still exists in our word "hermetical," commonly applied to a seal through which nothing, however subtle, can pass. Hermes's writings, according to Clemens Alexandrinus, who described them in chronicles written two hundred years after Christ, consisted of forty-two books, all of which were held by the Egyptians in the highest veneration. They treated of rules by which the king was to govern, of astronomy, cosmogony, and geography, of religion and of priesthood, and of medicine. On the last-mentioned subject six books are known to have existed. Though many scrolls have been found treating on all of the above topics, the Hermetic writings have remained undiscovered; and hence their very existence has repeatedly been denied, and the tradition considered as one of the many curious myths which overhang the ancient history of mysterious Egypt.

During the winter of 1872-3, Mr. Ebers, the noted German archæologist, while residing in the vicinity of Thebes, learned from an Arab of the existence of a papyrus scroll, found between the bones of a mummy, some fourteen years previous, by a person since dead. By dint of a large offer, Ebers obtained the scroll from the Arab. It consisted of a single sheet of yellow-brown papyrus, of the finest quality, over sixty feet in length and about eleven inches broad. The writing was clearly executed in red and black inks; the paper was in perfect condition, and the entire work was in a state of remarkable preservation. Hurrying to Leipsic, Ebers at once began the deciphering of his treasure; and the results of his studies are now given to the world, with the announcement that the work is, beyond question, one of the long lost six Hermetic books of medicine.

The age of the manuscript was determined by the study of the forms of the characters, by a calendar which is found in the book, and by the occurrence of the names of kings, all of which show the

period of writing to be the year 1552 B.C., at which time, it is interesting to note, Moses was just 21 years old. A translation of the script also confirms the origin of the work, since (as was the custom of the Egyptians, in order to give greater authority to their writings) it is ascribed to the god Thoth or Thuti, who, as we have already mentioned, was the first Hermes.

By the aid of photo-lithography, a *fac simile* of the papyrus has been prepared; and it is now published, together with notes, by Ebers, and a translation of some portions. A copy of this rare and important work has lately been received at the Astor Library, in New York. The script is of the hieratic form, which was one of the four distinct graphic systems used by the Egyptians. It was devised as a shorter method of inscribing the hieroglyphics, and bore about the same relation to those symbols as our written letters do to printed characters. In this form the great body of Egyptian literature has reached us; and in order to translate it, it is first necessary to resolve the hieratic contractions into their corresponding hieroglyphics. The first page of the scroll opens thus: "The book begins with the preparation of the medicines for all proportions of the body of a patient. I came from Heliopolis, with the Great Ones from *Het-aat*, the Lords of Protection, the Masters of Eternity and Salvation."

The preface continues somewhat in the same strain through the page. On the second leaf is found the extract given above, introduced by a kind of charm, which the physician is to bear in mind while administering the doses. The following translation is literal;

"Chapter treating of the taking of medicine. The medicines approach. The expulsion of everything is accomplished from my heart, from my limbs. Powerful are the charms. On the medicines. Beginning: I think of the time when Horus and Set were conducted to the great Hall of Helipolis, so that counsel might be taken on the Hodes of Set and Horus. * * * Words which are spoken on the taking of medicines in their regular order, and frequently." Then follow the extracts above, and some more recipes, of which the following are specimens: "Caraway seed 1-64 drachme; goose fat, $\frac{1}{8}$ drachme; sycamore fruit, $\frac{1}{8}$ drachme; beer, 1 tenat."

Ebers translates but two pages literally, and gives a synopsis of the balance of the book. The chapter headings are peculiar. The initial chapter consists mainly of recipes and the preparation of medicine; then follow chapters on salves for removing the *uhan*; catalogues of the various uses of the *tequem* tree; medicines for alleviating the accumulation of urine, and diseases of the abdomen; "the book of the eyes;" medicaments for preventing the hair turning gray, and for the treatment of the hair; salves for strengthening the nerves, and medicines for healing the nerves; medicines, for curing diseases of the tongue; medicines for the removal of lice and fleas; medicines for ears hard of hearing; "the secret book of the

physician;" "the science of the beating of the heart;" and "the knowledge of the heart, as taught by the priestly physician Nebseht."

The difficulties in the path of the translator in the shape of technicalities are of course very great; and probably for this reason, he reserves the complete translation of the book for future publication, when it will be issued with notes, etc., obtained by further study. One extract is given, however, to show the general style of directions to the physician. It reads as follows:

"Rules for the *re-het*, that is, suffering in the pit of the stomach. (Pylorus or cardia). When thou findest anybody with a hardening of his *re-het*, and when eating he feels a pressure in his bowels (*chet*), his stomach (*het*) is swollen, and he feels ill while walking, like one who is suffering with heat in the back, *tau nu peht*, then look at him when he is lying outstretched, and if thou findest his bowels hot and a hardening in his *re-het*, then say to thyself: This is a liver complaint, *sepu pu n merest*. Then make thyself a remedy according to the secrets in botanical knowledge from the plant *pa chestet* and from scraps of dates. Mix it and put it in water. The patient may drink it on four mornings to purge his body. If after that thou findest both sides of his bowels (*chet*), namely, the right one hot and the left one cool, then say of it: That is bile. Look at him again, and if you find his bowels entirely cold, then say to thyself: His liver (?) *merest* is cleansed and purified; he has taken the medicine *sep nef sep*, the medicine has taken effect."

In view of the direction to look at the patient "when lying outstretched," it is curious to note that (according to Diodorus) the priestly physicians of Egypt are said by Diodorus to have formed their diagnosis principally on the position which the patient assumed in bed.

The book is one of the most valuable contributions to our knowledge of the arts of the ancient Egyptians that has ever been discovered; and the clear manner in which it is written, and its freedom from the nonsense or gibberish usually accompanying so-called charms, serve still further to enhance its archæological importance. It will elicit the deepest interest in every civilized country, and will, we trust, give new life to the science of Egyptology, from the study of which, from the revelations which yet may be expected from the ancient tombs of Egypt, it may be hoped that a clue will be found to the rediscovery of those arts which died with the wonderful people who practiced them.

PILOCARPINE AND THE ESSENTIAL OIL OF JABORANDI.*

BY E. HARDY.

The author finds that the best method of preparing pilocarpine, the alkaloid to which the physiological action of *Pilocarpus pennatifolius* is due, is to make an infusion of jaborandi leaves, evaporate to a syrupy consistence, mix with an excess of magnesia and evaporate to dryness. This mixture is then treated with chloroform and afterwards with water; the chloroform is evaporated in a vacuum, the water also evaporates and the pilocarpine is obtained free, as a syrupy mass, which is soluble in water and in alcohol, and forms crystallizable salts with hydrochloric, nitric and sulphuric acids.

When the leaves of *Pilocarpus pennatifolius* are submitted to distillation with water they yield an essential oil that may be easily collected. Ten kilograms of leaves gave 56 grams of the crude oil. This essential oil has a complex composition; it contains a hydrocarbon boiling at 178°C .; a substance passing over at 250°C ., and a third product which distils at a still higher temperature, and forms after a time a colourless and transparent solid mass. The latter two bodies have not yet been studied by the author.

The hydrocarbon boiling at 178°C ., which the author call pilocarpene, is a colourless transparent mobile liquid, having a peculiar and rather agreeable odour. It is rather lighter than water, its specific gravity being 0.852, and it deviates polarized light to the right, its rotary power being $+1.21$.

The composition of this body corresponds with the formula $\text{C}_{10}\text{H}_{16}$. It forms with hydrochloric acid a solid and a liquid bihydrochlorate, $\text{C}_{10}\text{H}_{16}\cdot 2\text{HCl}$. These are obtained by passing a current of dry hydrochloric acid into pilocarpene free or mixed with ether. The solid hydrochlorate is a colourless transparent crystalline body, melting at 45.5°C . It crystallizes immediately upon the addition to its saturated solution of a crystal of hydrochlorate of turpentine. With solution of perchloride of iron it gives the successively rose, red and blue coloration characteristic of bihydrochlorates. The author has ascertained that the monohydrochlorate, or artificial camphor, is not produced in the reaction. The essential oil of pilocarpus is very analogous with the essential oil of citron. It does not appear to have any physiological action.

* *L'Union Pharmaceutique*, vol. xvi., p. 365 in *Pharm. Jour. and Trans.*

INCOMPATIBLES.*

Compound infusion of cinchona with compound infusion of gentian.

Infusions generally with metallic salts.

Tinctures made with strong alcohol, with those made with weak alcohol, and with infusions and aqueous liquids.

Essential oils with aqueous liquids, exceeding one drop to fʒ i.

Fixed oils and copaiba with aqueous liquids, except with excipients [or emulsifying agents].

1. Two salts in solution may form, by the interchange of their acids and bases, two insoluble salts which are precipitated.

2. When two salts in solution form, by the interchange of their acids and bases, a soluble and an insoluble salt, the latter will generally be precipitated (ex., chloride of barium and sulphate of sodium), [a better example, which is often prescribed, would be: sulphate of zinc and acetate of lead. This of course throws down sulphate of lead], or may form, with the soluble salt, a double salt [as iodide of potassium and bichloride of mercury].

3. When two salts in solution do not give rise to an insoluble salt, no precipitate will result, though there may be decomposition.

4. An acid will decompose a salt—

(a) If the acid added be more fixed, or more soluble than that of the salt.

(b) If the acid added can form an insoluble or a less soluble compound with the base of the salt.

(c) If the acid added possess a greater affinity for the base of the salt.

(d) If the acid of the salt be gaseous.

5. Alkalies decompose salts of the metals proper and of the alkaloids, and precipitate their bases, or the base may be soluble in excess of the alkali.

6. Metallic oxides combine with acids to form salts.

7. Vegetable substances containing tannic or gallic acids precipitate albumen, vegetable alkaloids, and most of the metallic oxides, and form, with salts of iron, inky solutions. Substances containing tannic acid also precipitate gelatine.

8. Glucosides (as digitaline, solanine, etc.) are incompatible with free acids especially when hot, or emulsions.

As a general rule, the following substances should be prescribed alone, and are best given in simple solution :

Acid. hydrocyanic dil.

Potassii bromid.

Acid. nitro-hydrochlor. dil.

Potassii iodid.

Antim, et pot. tart.

Potassii permanganas.

*From "Lessons on Prescriptions and the Art of Prescribing," by W. H. Griffiths, Ph. D. etc. Extract published in *New Remedies*.

Liq. calcis.	Potassi acetat.
Liq. potassæ.	Zinci acetat.
Liq. potassii arsenitis.	Morphiæ acetat.
Liq. ferri pernit.	Morphiæ hydrochlor.
Tinct. ferri chlor.	Quiniæ sulphat.
Tinct. iodinii.	[Argenti nitrat.]

The following instances of individual incompatibility are mentioned:

Acid Hydrocyanic. Dil.—This is not unfrequently prescribed with alkalies; a cyanide of the metal is thus formed, which is, however, not less active than the acid itself.

Acid. Phosph. Dil. may be prescribed with syrup of the phosphate of iron; if, however, it be combined with syrup of *pyrophosphate* of iron, the mixture becomes solid.

Acid. Sulph. Dil.—The substances with which this acid is incompatible can be inferred from the foregoing rules. There is one combination, however, to which Dr. Griffiths directs attention, viz.: the insoluble sulphate of lead, which results from its use with any of the lead salts.

Acid. Tannic. may be prescribed with the protosalts of iron, but not with the per-salts. Galls and gallic and tannic acid are said to be incompatible with infusions and decoctions containing alkaloids, but tannates of alkaloids are by no means inert; tannate of morphia will induce sleep, and tannate of emetia will cause vomiting.

Acid. Tartaric.—This acid was formerly much used in making saline draughts. Now if bicarbonate of potassium be added to a solution of tartaric acid, bitartrate of potassium is thus formed, and at once precipitated; but if the tartaric acid be added to the potassium salt, no such untoward circumstance will occur.

Alum is incompatible with alkalies and their carbonates; with tannic acid and preparations containing it; with tartrates, salts of lead, lime, and baryta, etc.

Antim. et Pot. Tart.—Acids, alkalies, and their carbonates, and some earthy and metallic preparations cause precipitates with tartar emetic, but these precipitates are soluble in excess of caustic alkalies. If tartar emetic be combined with astringent vegetable infusions an insoluble tannate of antimony will result. I may here mention that tartar emetic is often, and with perfect propriety, prescribed with sulphate of magnesia.

Argenti Nitrat.—It is almost unnecessary to say, that this salt should not be dissolved in undistilled water or in vegetable infusions.

Argenti Oxidum.—This substance is incompatible with many organic substances. On account of its influence on the mucous membrane of the stomach, it might possibly occur to a practitioner that it would be a valuable addition to creosote in special cases of vomiting. The result of such a combination would be spontaneous

combustion. [Explosions frequently occur by mixing silver oxide or nitrate with excipients containing sugar.]

Ferri et Ammoniae Citras.—This salt is sometimes prescribed in effervescence. In such a case the iron salt must be put into the citric-acid solution, and not into that of the bicarbonate of potash; if the latter course were adopted, carbonic acid would be given off, with the probable effect of bursting the bottle. This salt is often prescribed with tincture of orange [peel] alone; it will be well to remember that unless *some* water be added, it will be insoluble in this menstruum.

Ferri et Pot. Tartr. may be prescribed with alkaline carbonates.

Hydrargyri Perchloridum [corrosive sublimate] is incompatible with vegetable preparations containing albumen, or tannin. It is precipitated by alkalies, alkaline sulphurets, iodides, tartar emetic, etc.; in fact, there is hardly anything with which it is advisable to combine corrosive sublimate, except chloride of ammonium, which increases its solubility, and decoction of sarsaparilla.

Hydrargyri Subchloridum [calomel].—Care should be taken not to order calomel in combination with any preparation containing a trace of prussic acid. Innocuous as calomel itself is, comparatively speaking, it is converted by prussic acid into bichloride and cyanide of mercury, two virulent poisons. [It should not be given in mixtures containing other salts, as chlorides, carbonates, etc.]

Plumbi Acetas is incompatible with nearly everything except distilled water. It may be given in combination with opium. If common water be added to liquor plumbi subacetatis, carbonate of lead will be thrown down.

Potassii Iodidum should not be prescribed with sweet spirits of nitre, acid preparations, or those containing starch. In fact, iodine and iodides should be prescribed with as few additions as possible. Iodide of potassium decomposes nearly all metallic salts.

Calumba.—When we desire to combine salts of iron with a vegetable tonic, calumba may be chosen, as it contains no tannic or gallic acid. [The same is true of quassia and gentian.]

Camphora forms soft masses with gum resins. It destroys the odor of musk. [It should not be given in substance, as it is apt to cake in the stomach and produce ulcerations.]

Caryophyllum.—Cloves contain tannin, and hence should not be prescribed with iron salts.

Tinct. Cascarillæ.—This preparation is not infrequently prescribed with dilute mineral acids; the combination is, however, objectionable, as floccules soon float through the mixture. If it is desirable to combine an acid with cascarilla, the infusion of that drug should be selected.

Tinct. Cannabis Indicæ.—If this or other spirituous solutions of resinous substances be added to water, the resin will be precipitated.

Tinct. Guaiacia.—The addition of nitric ether to this preparation causes the formation of an unsightly bluish-grey mass.

Chloroform will not remain mixed with weak spirits or with glycerine. [The latter, however, by proper manipulation, and especially by the intervention of alcohol, may be made to dissolve considerable quantities of it.]

Belladonna, Hyo cyamus, and Stramonium.—It has long been known that caustic fixed alkalies decompose the alkaloids of these agents. Runge demonstrated the fact long ago. Carbonates and bicarbonates of the alkalies may be prescribed with preparations of these drugs.

Opium.—The older text-books contained a long list of substances which were supposed to be incompatible with opium; most of these are not now considered as improper combinations. Tincture of opium is not infrequently prescribed with acetate of lead; a decomposition takes place, resulting in the formation of acetate of morphia and insoluble meconate of lead.

Quiniæ Sulphas is often prescribed in combination with infusion of roses, and a turbid and unsightly mixture results.

THE PURIFICATION OF CARBON DISULPHIDE.*

Ordinary carbon disulphide (CS_2) has a very disagreeable odor, owing to the presence of some hydrogen compounds which are formed during the preparation of the product by the action of nascent hydrogen on the carbon disulphide. Beside this, the compound often contains free dihydric sulphide (H_2S). In order to set the carbon disulphide free from the impurities, it is well shaken up with mercury; but this *modus operandi* is a tiresome one, and the product is not well cleaned.

The following method was found to be the best for cleaning impure carbon disulphide. The impure product is well mixed in a high glass with some lead nitrate (Pb_2NO_3) and with a small quantity of metallic lead; when the salt turns dark, the liquid is poured into another glass with a fresh quantity of lead-salt, and so on until the salt remains nearly white while mixed with the liquor. The carbon disulphide is then placed in a retort, and distilled over into a well-cooled receiver.

During these experiments, a peculiar phenomenon was observed; when the salt was mixed in the crystalline form with carbon disulphide during 10-15 minutes, the crystals were covered with a silver-like precipitate. If these crystals, placed on filtering paper, are examined through a microscope, they have a very beautiful appearance.

* Chemical News.

FACTITIOUS BALSAM TOLU.*

BY RICH. V. MATTISON, PH. G.

Having recently occasion to purchase some Balsam Tolu, a small quantity was ordered of a house well-known for the high standard of drugs sent out by them; the article was received in 1 lb jars, bearing the label of the house which had placed it in the same.

The sample, upon examination, was found to be of a light brown color, with a pronounced odor of the drug, but in consistence rather softer than as usually met with in the market.

Upon the addition of alcohol to a portion of the mass, it was discovered to be but partially soluble in that menstruum, the drug, upon being washed several times successively with warm alcohol and these washings filtered and evaporated, yielding but 26 per cent of soluble matter.

To a portion of this residue oil of turpentine was added without any observable effect.

To another portion water was added, and the mixture boiled; with a like result.

To another portion ether was added, the whole slightly warmed, the solution filtered and the residue washed upon a filter with ether, the filtrate, upon being evaporated, yielded 63 per cent of "a balsam prepared from the bark of *Liquidambar Orientale*," which, upon being treated with hot petroleum benzin, yielded a copious deposit of crystals of styracin upon cooling. The residue upon the filtrate was then examined, and found to consist almost entirely of bark and charred ligneous matter, amounting to nearly 11 per cent. of the drug.

The high price of this article, at present, leads us to be careful in the selection of this drug, the sample under inspection costing \$3.90 per lb, and consisting in greater part, about 75 per cent., of charcoal and a drug costing less than a tenth of the price of Balsam Tolu.

The moral it points is two-fold: First, that wholesale druggists should be careful in selecting drugs, which afterward go to the retail trade or manufacturers, with their label attached. Second, that the retailer must not rely implicitly upon any house offering drugs, but examine for himself such articles as may be offered from time to time, before they are allowed to go into the preparations of the Pharmacopœia. Indeed, a wholesome system of drug garbling is sadly needed before such drugs as are to be found generally averaging the market, are fit for the dispensing counter.

In the present instance, the extreme price only makes it more aggravating to the consumer, yet, doubtless, makes this particular article more tempting to the importer.

*Read at a Meeting of the Philadelphia College Pharmacy, and published in the Amer. Pharm. Jour.

ON A NEW PROCESS FOR PHOSPHORUS PILLS.*

BY ELI LILLY.

Finding serious objections to all the processes brought forward for phosphorus pills, I was induced to search for a process which should be at once safe, easily managed, protecting the phosphorus from oxidation during the operation, and insure solubility of the pill when taken into the stomach.

I present the following formula, which I think covers all these points, my opinion being based on the manufacture of many thousands of these pills during the last four or five months, with favorable reports from many pharmacists and physicians.

Take of

Syrup U. S. P.....	260 parts.
Wheaten flour.....	340 parts.
Phosphorus	6 parts.

Weigh the syrup in a stout, sound bottle of sufficient capacity to hold one-fourth more than the amount of syrup used. Place the bottle in a water-bath, and raise the temperature to 150° F. Drop the phosphorus into the warm syrup, and, as soon as melted, close the bottle with a close-fitting cork; take it from the bath, and, holding it upright, give it a gently whirling motion until the phosphorus is divided into small globules, when it must be violently shaken till cold. Having the flour finely sifted and placed in a mortar, pour in the mixture of syrup and phosphorus, and rapidly form the mass, which, when completed, may be packed down in small, glazed earthen jars, and tin foil placed under the covers to retain the moisture and exclude the air.

Pills made from this mass weighing 1 grain will contain 1-100 grains phosphorus, and 2 grains 1-50 grain phosphorus.

A portion of the flour in the above formula may be replaced with extract nux vomica, sacch. carb. iron, etc., if such combinations are to be made, of course observing to mix them in *fine powder* with the flour before adding the syrup.

It is necessary, if *small* quantities are to be made, to return the bottle containing the phosphorus and syrup to the water-bath two or three times during the shaking, before finally allowing it to cool; but with 12 troy ounces or more of syrup it is unnecessary.

The advantages of this process consist in the practically perfect sub-division of the phosphorus at a low temperature, which insures safety with ordinary care, producing a mass easily worked, a pill rapidly dried and firm for coating, with so small an amount of oxidation throughout as to be insignificant. The pills, on being

*From the American Journal of Pharmacy.

powdered in the dark, exhibit uniform luminosity, showing the thorough distribution of the phosphorus.

Finally, let the operator who proposes to test this process for himself, adhere to the directions I have endeavoured to make plain, and I believe he will find, as I have, a simple way out of his phosphorus pill troubles.

FOSSIL AND VEGETABLE WAX.

The substitution of fossil and of vegetable wax, in place of the higher priced beeswax, assumes constantly increasing proportions. One factory alone, that of J. F. Otto, in Frankfurt on the Oder, produces upwards of 100,000 lbs. of *ceresin* annually. This is the name of the purified product obtained from ozokerite, an impure fossil wax, found chiefly near the large coal-beds of Drohobiez and Boryslaw in Galicia, upon the northern slope of the Carpathian mountains, also in Transylvania, and in the lowlands of Moldavia, at Gresten in Austria, near Newcastle in England, and in Texas. The crude substance, freed by fusing from the sand, clay and other earthy impurities, is of a deep-brown color with greenish tint, has a spec. gr. of 0.940-0.970, exhales a benzine-like odor, and in hardness, fracture and—when warm—pliability entirely resembles beeswax. It is very combustible, with difficulty soluble in alcohol and ether, but easily soluble in oil of turpentine. It is purified and bleached by means of Nordhausen sulphuric acid (the manufacture of which has received a large impetus of late in consequence of the increased demand) and in its purest form is principally used as a substitute or adulterant for paraffin and wax, and is largely consumed by perfumers (for pomades), laundrymen, cloth-finishers and others. Considerable quantities are said to have been imported into this country, and some of our friends may no doubt have already made its acquaintance unknowingly. There can be no doubt that it is an excellent substitute for wax, even for pharmaceutical purposes, as it is reported to retard or entirely prevent rancidity in ointments, and it is well worth while to test its merits for such uses critically. When pure, its melting point is as high as 83°-84° C. (=181.4 to 183.2° F.) while wax melts at about 68° C. (155° F.) and it may therefore be used to increase the hardness of fatty or waxy substances melting at lower temperatures.

Vegetable wax is obtained from various plants, but the principal source of it is the wax-palm (*Ceroxylon Andicola*, Humb.) growing in the Andes of South America. Upon the rings left on the trunks and branches, after the leaves have fallen off, there

appears an exudation of a wax-like substance which is called *car-nauba*, and is collected by the natives. The annual crop collected in Brazil is estimated at 2,000,000 lbs., half of which, mixed with tallow, is used by the natives in the preparation of candles and tapers. When purified and bleached, it burns with a white and luminous flame, has a faintly aromatic odor and fuses at $75^{\circ}\text{--}76^{\circ}\text{C.}$ ($=167^{\circ}\text{--}168^{\circ}\text{F.}$).

TABLE SHOWING THE PERCENTAGES OF WATER CONTAINED IN GLYCERINE OF DIFFERENT DENSITIES.*

The following table, based upon new determinations, has been constructed by Champion and Pellett :

Spec. Grav. at 15°C.	Degrees of Baume.	Per cent. of Water.	Spec. Grav. at 15°C.	Degrees of Baume.	Per cent. of water.
1.2640	31.2	0.0	1.2350	28.6	11.0
1.2625	31.0	0.5	1.2335	28.4	11.5
1.6212	30.9	1.0	1.2322	28.3	12.0
1.2600	30.8	1.5	1.2307	28.2	12.5
1.2585	30.7	2.0	1.2295	28.0	13.0
1.2572	30.6	2.5	1.2280	27.8	13.5
1.2560	30.4	3.0	1.2270	27.7	14.0
1.2545	30.3	3.5	1.2255	27.6	14.5
1.2532	30.2	4.0	1.2242	27.4	15.0
1.2520	30.1	4.5	1.2230	27.3	15.5
1.2505	30.0	5.0	1.2217	27.2	16.0
1.2490	29.9	5.5	1.2202	27.0	16.5
1.2480	29.8	6.0	1.2190	26.9	17.0
1.2465	29.7	6.5	1.2177	26.8	17.5
1.2455	29.6	7.0	1.2165	26.7	18.0
1.2440	29.5	7.5	1.2150	26.5	18.5
1.2427	29.3	8.0	1.2137	26.4	19.0
1.2412	29.2	8.5	1.2125	26.3	19.5
1.2400	29.0	9.0	1.2112	26.2	20.0
1.2390	28.9	9.5	1.2100	26.0	20.5
1.2375	28.8	10.0	1.2085	25.9	21.0
1.2362	28.7	10.5			

* *Moniteur Scientifique in New Remedies.*

PHYSIOLOGICAL AND THERAPEUTICAL ACTION OF GELSEMIUM.*

Berger (*Centralblatt für die Med. Wissenschaften*, No. 43, 1875) concludes as follows as to the physiological effects of this drug upon cold and warm-blooded animals respectively. When given to animals of the former kind, gelsemium causes cessation of motion and paralysis of the motor centres of the brain, paralysis of the function of respiration, and increase, followed by depression, of the reflex action of the spinal cord. The excitability of the peripheral motor nerve, and also that of the muscles, is diminished, together with the frequency of the heart's action. The administration of the same drug to warm-blooded animals causes paralysis of the motor centres of the brain, which is preceded by a stage of excitement and paralysis of the respiratory centre in the medulla oblongata. Sensibility remains unimpaired, while reflex irritability is at first increased and finally diminished. Its influence upon the heart's action is not very marked, the slight diminution in the frequency of the pulse appearing to be due to the irritation of the origin of the vagus in the medulla by the imperfectly aerated blood. Large doses cause a moderate diminution of the blood-pressure; and when death occurs it is always due to paralysis of the respiratory function. In order to form an opinion as to its therapeutic worth, gelsemium was given to many patients suffering with neuralgic affections of peripheral and central origin. In all these cases the results obtained were in the highest degree unsatisfactory, and it must not be forgotten that the instances of fatal poisoning on record stand in marked contrast to the slight narcotic effects of the drug.

*Medical Times.

CLARIFYING LIQUORS.—The following description of a powder for clarifying liquors and removing the fusel oil is given in *Dingler's Journal*. It is the invention of Franz Plattner, of Dittersdorf, in Bavaria. After the digestion of the proper ingredients for the manufacture of any given liquor with common potato whiskey is finished, and a sufficient quantity of so-called farina sugar has been added, the liquor is decanted or racked off, and to every eight litres there are added one ounce of pure starch, one-half ounce of prepared albumen in an extremely fine powder, and one half ounce of milk-sugar: the whole is well shaken several times and left standing for twenty-four hours. At the end of this time the liquor thus prepared is so clear that it requires no filtering, has a peculiar lustre, and is so free from every trace of fusel oil that it is superior in firmness and flavour to any imported from France and Holland.—*Wine Trade Review*.

Editorial.

REGULATIONS OF THE BOARD OF EXAMINERS.

At the meeting of the Council, last August, the Board of Examiners were requested to draw up and publish an enumeration of the subjects and subdivisions of subjects with which candidates should be required to be acquainted. A consideration of this matter has engaged the attention of the members of the Board, but owing to the uncertain progress of pharmaceutical legislation, they were not able, until lately, to come to any definite conclusion. Of all the schemes which were discussed, none appeared to be so good as that of adopting, *verbatim*, the regulations relating to the "Minor" examination, held under the Pharmacy Act of Great Britain. Considering the relation of this Province to the mother country; and possible relations which might exist between this Society and that at home; and also the advantage of having uniform standards in both places, this plan has been adopted. The ground at present covered by our examinations here is very similar to that of the "Minor" in Great Britain, and any changes which have been made relate, principally, to the phraseology of the regulations. The new arrangement will also meet the anticipated changes in legislation, and will not require further alteration or modification, in case the proposed amendments become law.

A communication with reference to this subject was sent to Thomas Hyde Hills, Esq., President of the Pharmaceutical Society of Great Britain. To this a courteous reply was received, the bearing of which is stated in the following extract from the published Transactions of the Society.

"The President also read a letter he had received from Mr. Shuttleworth, on behalf of the Legislation Committee of the Ontario College of Pharmacy, asking for a copy of the regulations of the Society in connection with the examinations, as it was felt very desirable in Canada that the status and qualification of chemists and druggists there should be as nearly as possible assimilated to those of chemists and druggists in Great Britain, with a view to an interchange of certificates at some future time. He had replied, saying that he had requested the Secretary to send a copy of the "Calendar," which contained all the information desired, and adding his own opinion that the Ontario College could not do better than follow the footsteps of the Pharmaceutical Society of Great Britain, which

course would facilitate the carrying out of the suggestions of an "interchange of certificates," when the time was ripe to discuss the subject."

We append a copy of the regulations referred to, and would also inform intending candidates that by applying to the Registrar or to the editor of this journal, that they may obtain the same in circular form, together with a list of text-books, advice to students, and other useful information.

EXTRACT FROM THE REGULATIONS OF THE BOARD OF EXAMINERS OF THE
ONTARIO COLLEGE OF PHARMACY.

The following form the subjects of examination:—

Chemistry.—To recognise the ordinary chemicals used in medicine. To possess a practical knowledge of the processes by which they are produced, the composition of such as are compound, and explain the decompositions that occur in their production and admixture, by equations or diagrams. To determine practically, by means of tests, the presence in solution of the chemicals in common use, and explain the reactions which occur in each case. To possess a general knowledge of the laws of chemical philosophy, and a practical knowledge of the means of determining specific gravities, densities, and temperature, and of the instruments appertaining thereto, and the physical and chemical constitution of the atmosphere.

Pharmacy.—To recognise the preparations of the Pharmacopœia which are not of a definite chemical nature, and have well-marked physical characters, such as extracts, tinctures, powders, &c. ; to give the proportions of the active ingredients, and possess a practical knowledge of the processes, and the principles of the processes, by which they are made, and of the best excipients and methods of manipulation for forming emulsions, pills, &c.

Materia Medica.—To recognize specimens of roots, barks, leaves, fruits, resins, gums, animal substances, &c., used in medicine ; give the botanical and zoological names of the plants, &c., yielding them, and the Natural Families to which they belong ; name the countries and sources from which they are obtained; the officinal preparations into which they enter, and judge the quality and freedom from adulteration or otherwise of the specimens.

Botany.—To recognize the more important indigenous plants used in medicine. To possess a general knowledge of the elementary structure of plants, and the structure and distinctive characters of roots, stems, leaves, and their parts. To name and describe the various parts of the flower.

Prescriptions.—The candidate is required to read without abbreviation autograph prescriptions; translate them into English; and render a literal as well as an appropriate translation of the directions for use. To detect errors, discover unusual doses, and have a general knowledge of Posology ; also to render in good Latin ordinary prescriptions written in English.

Practical Dispensing.—To weigh, measure, and compound medicines ; write the directions in concise language in a neat and distinct hand ; to finish and properly direct each package.

FRADULENT DISPENSING.

The English public have been having something of a sensation over the matter of some dispensing frauds recently brought to light at Sheffield. The main facts of the case have already appeared in some of our city papers, but may be briefly recounted as follows :

In the quarterly report of Mr. Allen, borough analyst of Sheffield, it was stated that as considerable anxiety existed in the minds of some of the inhabitants as to the care and accuracy of the druggists of the town in making up physicians' prescriptions, it was thought desirable to decide the matter by analysis. To this end a number of prescriptions were sent out calling for full doses of some rather expensive remedies capable of ready and accurate estimation in a mixture. The drugs chosen were iodide of potassium, sulphate of quinine and spirit of nitrous ether. Eight prescriptions, requiring moderate doses of the first of these, were correctly dispensed, but of three others, in which 120 grains of the iodide were called for, only one was correctly dispensed, the others showing, on analysis of the mixtures, 122 and 76 grains, respectively. Of three quinine mixtures one was found to contain but two-thirds of the required amount. Another lot of three mixtures showed in one case a deficiency of one-fourth. The endeavour to estimate the amount of spirit of nitrous ether furnished in complex mixtures does not appear to have been successful.

As might be expected, the publication of this report furnished capital which the English press were not slow to improve. The *Times* calls attention to "very startling revelations;" the *Globe* thinks that "an example should be made of men so utterly selfish and reckless;" the *Standard* considers it "impossible to exaggerate the heinousness of the offence;" the *Telegraph* characterizes the matter as "disgraceful;" The *Morning Advertiser*, speaking from a lofty pedestal of severe morality, concludes its homily by depicting a monster deliberately falsifying the intent of a medical man, and retarding the recovery of a fellow-creature. "The very notion is terrible and shocking." True enough; but what shall we say of the picture drawn by the *Daily Telegraph* :—"It is a horrible and dreadful thing to think of the mother sitting up all night by the cot of her little one, and giving it, with her own tender hand, its nourishment and medicine, trusting—poor thing!—that the potent

remedies will do their work, while the whole time the potion is valueless, and the chemist, to make a wretched profit of some two-pence or three-pence on an ounce bottle, has with cold blooded deliberation, sacrificed the little innocent, happy life to his own miserable greed." This is frightful indeed; to kill a baby for two-pence is, in truth, "an hellish thing," even in the county of baby-farming and Dotheboy's Hall.

To leave our contemporary and come back again to common sense, we may continue our narrative by stating that for some reason or other—probably a mistaken leniency—the Health Commission of Sheffield at first declined to prosecute the offenders, but strangely enough thought it proper to warn *all* the local druggists of their liability to prosecution. As thirteen out of the twenty prescriptions sent out were correctly dispensed, it seems somewhat unjust to threaten *all* the druggists. This course may, however, have been suggested by that sagacious commissioner who volunteered the information that "not many of the druggists made their own quinine."

It is also a manifest injustice that the report of the analyst did not specify by name the druggists whose medicines were found deficient. As a consequence of this the entire local community of druggists have fallen under a ban, and the many are made to suffer for the sins of the few. This state of things has elicited from the Sheffield Pharmaceutical Association an earnest and angry remonstrance, which, in all probability, will result in the publication of the names of the guilty parties.

To give our own opinion on this matter, we must say that though we have no knowledge of such fraudulent practices as those referred to, nor do we believe them to exist to any considerable extent, yet we cannot see why there may not be a few black sheep in the community of druggists, as well as in all others. It is, moreover, quite possible that some, if not all, of the deficiencies in the quantities of the remedies furnished might be accounted for by deficient quality, chargeable to the manufacturers, and in part, to the vendors. In any case, we do not wish to say one word in justification of such a disgraceful occurrence, no matter how it may have originated. Though we cannot see the matter in the same light as our sensational contemporaries, and, were we to give our own personal opinion, might even be bold enough to say that were druggists

wicked enough to keep back all the medicines which are ordered, the patients, taken all in all, would be none the worse off, yet this has no bearing on the question, which is one of simple honesty and dishonesty, and should be so regarded and dealt with.

TENTH SEMI-ANNUAL EXAMINATION.

The attendance at the late examination was the same as that held previously, but the percentage of those who passed was somewhat lower than before—27 out of 40, against 30 out of 40. The degree of proficiency shown was scarcely up to the average, nor were any of the candidates successful in obtaining a very high number of marks. The gentlemen who obtained the highest numbers were Mr. A. Higinbotham, of Bridgewater, and Mr. A. V. Delaporte, of Toronto; to these the first and second prizes were respectively awarded.

It will be noticed that according to an amended by-law, ten additional marks will in future be awarded to the branch of Practical Dispensing, which heretofore received only five marks. This is a very just and necessary change. The maximum number of marks obtainable in all the subjects will be also raised from 100 to 110, and the percentage necessary to pass from 60 to 70. This will have the effect of raising the standard in a ratio proportional to these numbers, or from 60·00 to 63·63.

We append, as usual, the written questions submitted to the students:

PHARMACY.

EXAMINER—MR. SHUTTLEWORTH.

1. What is the specific gravity of a liquid, one fluid ounce of which weighs 525 grains?
2. Describe methods for powdering the following substances Camphor, Phosphorus, Nux Vomica, Vanilla, Asafœtida.
3. Name the ingredients in *Ext. Coloc. co.*, and state in what respect this preparation differs from *Pil. Coloc. co.*
4. What are the characteristics, ordinary impurities, and tests of *Sp. Ætheris Nitrosi*?
5. Describe the mode of preparing *Ung. Hydrarg. Nitratis*, and state the ordinary causes to which failure may be attributed.
6. What solvents, and mode of manipulation are best suited for preparing a solution of Phosphorus for internal administration?
7. What is the proportion of active ingredient in *Sp. Camphore*;

Liq. Plumbi Subacet. Dilut : Inf. Ergotæ : Tinct Veratri Viridis : Vin. Antimoniale ?

8. How would you estimate the quality of Chloroform? name the common impurities in this preparation.
9. In what respects do the official directions for conducting the process of percolation as stated in the B. P. and U. S. P. differ from one another. State which you regard as preferable, and give reasons.
10. Recognize Specimens and answer verbal questions regarding them.

MATERIA MEDICA.

EXAMINER—MR. YEOMANS.

1. Copaiba:—Name plant from which obtained, habitat, manner of collection, and adulterations.
2. Arsenic:—What are its medicinal properties; name its official preparations with dose of each.
3. Anthelmintics:—Name the medicines belonging to this class of remedies, the manner of administration and dose.
4. Name twelve Acids official in the B.P., with medicinal properties, and dose.
5. Give three vegetable, and three mineral emetics, with dose.
6. Give three refrigerant, three stimulating and three hydragogue diuretics with dose.
7. Ferrum:—Name its preparations official in the B.P.
8. Give source, medicinal properties, and dose, of the following, viz : Ergot ; Ext. Cannabis ; Sem. Colchicum ; Fol. Hyosciamus ; Conium.
9. Give official names of plants from which the following remedies are obtained, mentioning the parts used and habitat : Scammony ; Nux Vomica ; Catechu ; Belladonna ; Veratrum Viride ; Senega ; Jalap ; Asafœtida ; Aconite ; Senna.
10. Recognise samples and answer questions respecting same.

CHEMISTRY.

EXAMINER—MR. SHUTTLEWORTH.

1. State, by symbols, the composition of the following substances:—Salt of Tartar ; Glauber's Salt ; Epsom Salt ; Blue Vitriol ; Red Precipitate.
2. State the source, composition, chemical and physical properties, and common impurities of *Spiritus Rectificatus*.
3. Chlorate of potassium has the formula $KClO_3$; how many grains of oxygen may be obtained from a pound of the salt ?
4. Give the strengths, (percentage HNO_3), and specific gravities of the various commercial and officinal kinds of nitric acid.
5. A liquid gives with hydrochloric acid a white precipitate, part of which is blackened by ammonia and part dissolved ; what metal or metals may be present ?
6. Describe the present sources and modes of production of carbonate of potassium, in the various states in which it is met with in commerce, or required for use as a chemical reagent.
7. Give tests for chlorine, iodine and bromine.
8. What general chemical changes take place in the preparation of soaps? Give instances, from the B.P., of potassium, sodium, ammonium, calcium, and lead soaps.
9. Name instances in which salts are purified by crystallization. State

conditions most favorable to the production of large and regular crystals, and also small and granular crystals.

10. Recognize specimens and answer verbal questions regarding them.

BOTANY.

EXAMINER—MR. YEOMANS.

1. Name the principal sorts of buds, and explain how the position of these affect the arrangement of branches.

2. Give description of multiple and primary roots, with two examples of same; also explain the difference between these and secondary roots.

3. Name the principal kinds of subterranean stems and branches, and explain how you would distinguish between these and roots.

4. In the classification of plants explain difference between classes and orders: genus and species.

5. Name three principal kinds of simple fruit.

6. When roots stop growing, does the absorption of moisture increase or decrease? Give reason for it.

7. Upon what do plants live? Indicate how you would prove your answer correct.

8. In what part of the plant, and when is the work of assimilation carried on?

9. Name three principal kinds of *determinate* and some of *indeterminate* inflorescence; name the essential organs of a flower.

10. Describe sample plants and answer verbal questions.

PRACTICAL DISPENSING.

EXAMINER.—MR. GREGORY.

The following prescriptions are to be compounded:—

1. R. Res. Podophyl. grs. vi.
Leptandrin grs. vi.
Pulv. Ipecac. grs. ii.
Ext. Hyosciam grs. ii.

Ft. pil sex. One at bed time each night.

2. R. Ext. Belladon. grs. x.
Hyd. Nit. Oxid. ℥i.
Adipis ℥i

Ft. ung.

3. R. Tinct. Calumb. ℥ss.
Tinct. Capsici ℥i.
Acid Nit. Mur. Dil. ℥i.
Aquæ ad ℥viii

Ft. mist. Cap. coch mag. bis terve in die.

PRESCRIPTIONS.

EXAMINER—MR. GREGORY.

1. Translate the following Prescription into English:—

Recipe—Radiciſ Armoraciæ contuſſæ, uncias duas,
Seminis Sinapiſ,
Radiciſ Valerianiæ, ana drachmas duas,
Radiciſ Rhei, incisæ, ſemiunciam.

Infunde in Vini Hiſpanici octarios duos sæpe agitetur, et coletur,
cochlearia duo magna quarta quaque hora ſumenda.

2. Write a prescription in unabbreviated Latin for a six ounce mixture, to be composed of one and a half drachms of Tinct. Hyosciamus, four drachms Acetate of Potassa, two drachms Syrup of Saffron, and the requisite quantity of Aniseed Water. Two or three teaspoonfuls to be taken two or three times a day, or as occasion may require.

3. Point out errors, if any, in the following Prescription :—

Re.—Ant. Pot. Tart., grs. ii.
 Morph. Acet., grs. xii.
 Acid. Hydrocyan, Dil., ℥iiss.
 Vin. Ipecac, ℥ss.
 Syr. Scillæ, ℥j.
 Ammon. Sesquicarb. ℥iv.
 Aquæ ad ℥viii.

A tablespoonful every third hour.

4. How much of Scheele's acid is equal to twenty minims Acid Hydrocyan, Dil., B. P. ?

5. Give full Latin and English for the following contractions, and give measure in ounces and parts of an ounce for those which indicate quantity :—Omn. hor., omni. bhor., repet., mic. pan., mor. dict., cochmag., coch. ampl., coch. med., coch. parv., cyath., pocul., p.r.n.

6. The following articles are ordered by Physicians in solution ; how much of each can be dissolved in an eight ounce mixture consisting principally of water :—Ammon. Sesquicarb., Ammon. Phosphas, Plumb. Acet., Magnes. Sulph., Argent. Nit., Sodæ Boras ?

7. Give average dose for an adult of the following :—Chloral Hydrat., Acid. Nit-Hydrochlor Dil., Plumb. Acet., Ext. Aloes., Hyd. Perchloridi., Stychnia., Pil. Hydrarg., Podophyllin., Scammon. Res., Tinc. Can. Ind.

8. Enumerate the various methods of extemporaneously coating pills, and give a short description of one of those methods.

9. Are the undermentioned substances compatible or incompatible with each other ? and what will be the effect of mixing them in solution ? Lime Water with Carbonate of Potassa ; Sulphate of Zinc with Acetate of Lead ; Iodide of Potassium with Liq. Arsenicalis ; Tincture Ferri Perchlor. with Tinct. Gentian.

10. Give a list of the Poisons which are forbidden to be sold without registration by the Pharmacy Act.

LADY PHARMACISTS.

However great may be our respect for the Council of the Pharmaceutical Society of Great Britain, we certainly must confess that our estimate of the gallantry of that body is by no means high. Some years ago, when the admission of lady-students to the laboratory of the Society was under discussion, a decision adverse to the interests of the fair was arrived at. This closed the avenue of instruction, but did not prevent Miss Isabella Skinner Clarke from attending lectures at a rival institution, and, at the last pharma-

ceutical examination held under the Pharmacy Act, passing, very creditably, the "Major" examination. This conferred the right to assume the title of "Pharmaceutical Chemist," and to conduct business in Great Britain, but did not imply membership in the Pharmaceutical Society—a privilege which is only to be obtained by election. Therefore, to this gate of admission did Miss Isabella Skinner Clarke betake herself, but although her vigorous knocking created much alarm and confusion, so that like the monks of Sevilé, the Council "knew not in that extremity to which of all their saints they should vow themselves," yet the gate opened not, and the lady remains without—simply because she is a lady.

Not so with our friends of the newly-formed Pharmaceutical Society of Ireland, the Council of which admits females on the same terms as male creatures; nor not so with ourselves of the gallant Ontario College of Pharmacy, which not only admits, but is proud to rank amongst its members, those of the gentler sex. Let the lady-pharmacists of unappreciative Great Britain make a note of this, nor longer "waste their sweetness on the desert air."

STUDENTS' DEPARTMENT.—This department will, for the present, be discontinued. The usual appropriation for prizes has not been made by the Council, as it was thought that the number of competitors was too limited to justify the outlay of time and money.

Obituary.

CHRISTOPHER STORK.

The subject of this notice was born in Yorkshire, England, and, about twenty-five years ago, came to this country. He ultimately settled in Brampton, where he built up a business from a small beginning, and, by untiring industry, succeeded in securing a competence. For many years he took an active interest in municipal and other affairs relating to the country. In 1863 he was elected a member of the Council of Brampton, and in the same year was

appointed Reeve. These offices were held during a series of years, and during this period the prosperity and finances of the town were much improved. He also took an active interest in military matters, and held the post of captain in the 36th Battalion.

In the organization of the Canadian Pharmaceutical Society Mr. Stork took a leading part, and was one of the first members elected outside of Toronto. In 1871 he was named in the Pharmacy Act as one of the founders of the present College, and was also appointed a Provisional Councillor thereof, an office which he held during the succeeding term.

Since about a year ago deceased had not been in the enjoyment of his usual health. At that time he had a serious illness, from which he never thoroughly recovered. On the afternoon of Saturday, January 22nd, he complained of feeling rather unwell, yet appeared to be in excellent spirits and quite cheerful. He retired to bed, and shortly afterwards was visited by his wife, who found him apparently asleep, and so left him. Returning, however, in a short time, with a cup of tea, the lady remarked that her husband did not appear to breathe, and on examination it was found that he calmly slept the sleep of death, and had passed away without the slightest struggle.

Deceased was buried with military honors, and his funeral was one of the largest ever seen in Brampton, Revs. Messrs. Edgar, Jolliffe, Stobo, Pringle and Learoyd, taking part in the services, and all the business places of the town being closed.

Editorial Summary.

APPLICATION OF SALICYLIC ACID IN SURGERY.—In a paper in the *Lancet*, Dr. Will, Assistant-Surgeon to the Aberdeen Royal Infirmary, reports very favourably of his experience with this acid, and considers it an agent of extreme value in a large class of cases. He has not found it to possess the irritant properties attributed to it by Mr. Callender and Sir W. Jenner. In order to determine this point by a crucial experiment, a very nervous and susceptible patient was selected and a granulating surface was dusted with the pure acid. Neither pain nor smarting were experienced, and, next morning the patient said he had been easier than usual. The absence of irritant properties to any marked degree, and the freedom

from odor, constitute the chief advantages of salicylic acid over carbolic acid. As salicylic acid is sparingly soluble in water a concentrated solution cannot be employed, but, as frequently pointed out in this journal, the addition of borax and the employment of heat, furnish solutions of sufficient strength. Twenty grains of the acid will be taken up by an ounce of water if fourteen grains of borax are added. For an ordinary solution, to be used as a dressing, one part of acid to 300 of water will be found useful. The following yield ointments adapted to a large number of cases, especially those of rodent ulcers: (1) Salicylic acid, $\frac{1}{2}$ to 1 drachm; white wax, 1 drachm; paraffin, 2 drachms; almond oil, 2 drachms; (2) Salicylic acid, $\frac{1}{2}$ to 1 drachm; sperm oil, $1\frac{1}{2}$ drachms; oil theobroma, $5\frac{1}{2}$ drachms; (3) Salicylic acid, $\frac{1}{2}$ to 1 drachm; sperm oil and paraffin, of each $1\frac{1}{2}$ drachms; oil theobroma, 2 drachms; oil of almonds, 1 drachm. A simple and useful ointment, answering admirably in some skin affections, is formed of $\frac{1}{2}$ to 1 drachm of acid to 7 drachms of simple ointment. In eczematous affections a similar preparation—1 drachm acid to 7 drachms of lard—has been found more efficacious than any other application. For burns, and as a substitute for carron oil, 2 drachms of acid to 8 ounces of olive oil has been employed with marked advantage.

TELLURIUM AS A PROBABLE IMPURITY IN BISMUTH.—Some time ago Mr. C. Ekin published in the *Pharm. Jour. and Trans.* a note in which he called attention to an apparent effect of the administration of bismuth carbonate by which a most disagreeable odor of the person and breath was produced. The publication of this note has resulted in the accumulation of evidence of a similar character. From this it appears that many persons have observed the same effect, and the statement is advanced that as tellurium produces the same result, and as this metal is often present in bismuth, the odor is to be attributed to that metal. Sir James Simpson recorded a case (*Edin. Med. Jour.*, Dec. 1854,) of a divinity student who inadvertently got a dose of tellurium, which was followed by the evolution of such a persistent odor that, for the remainder of the session, the student had to sit apart from his fellows. In a sample of subnitrate of bismuth, of which this disagreeable effect was remarked, tellurium was found to be present. Further investigation is necessary before a definite conclusion can be arrived at.

POISONING BY CONIUM.—At a meeting of the Philadelphia College of Pharmacy, Professor Maisch read a paper made up of notes on divers matters pertaining to pharmacy, etc., written by X. Landerer, of Greece, and in which the author alludes to his being accidentally poisoned by chewing some fresh leaves of *Conium Maculatum*. The attendant symptoms were giddiness, headache, and

great feebleness. Despite this, M. Landerer was forced to walk in a circle around the centre table until he became so exhausted that he fell down. Vomiting supervened, and the administration of lemonade coffee and carbonic acid water completed the recovery. This symptom of turning round in a circle is characteristic of conium, and from this circumstance the plant derives its name, but still the fact is not generally recognized. The author thinks that the death of Socrates is not justly attributed to hemlock, but rather to some narcotic poppy, or opium.

ERGOTININE, A NEW ALKALOID OF ERGOT.—M. C. Sanret (*Comptes Rendus*, in *Pharm. Jour. and Trans.*, Jan. 1st,) announces the discovery of a new alkaloid in ergot, which he proposes to designate *ergotinine*. The process for its production is complicated, the product very small, and the so-called alkaloid extremely alterable. We are not told of the composition of this body, or its therapeutical relations, or whether the medicinal effects of ergot are in any wise to be attributed to it. The statement is hazarded that the instability of the alkaloid explains the rapid alteration of powdered ergot. As our knowledge of this new substance is, so far, exceedingly limited, conclusions of this kind seem premature. The composition of ergot is little understood, and affords a fertile field for investigation.

PRESENCE OF OXALIC ACID IN TARTARIC ACID MOTHER LIQUORS.—In an exhaustive series of notes on Tartaric acid, read before the Chemical Society by Mr. R. Warington, (*Journ. Chem. Soc.*), it is stated that old tartaric acid liquors have sometimes been observed to deposit crystals, which, on investigation, have turned out to be oxalic acid. The author has on several occasions noticed this, but is unable to account for it. It is not easy to detect this acid when so associated, even when it is known to be present. In order to settle this point it will only be necessary to dissolve oxalic acid in a solution of tartaric acid containing alum; all the ordinary tests afford negative results.

CONSUMPTION OF DRUGS IN JAPAN.—From the *Pharm. Jour. and Trans.* we learn that the trade in drugs with Japan is of no inconsiderable proportions. The annual importation of iodide of potassium amounts to 20,000 pounds; that of sulphate of quinine, 60,000 ounces. Potash was imported, during 1874, to the value of \$12,000, while mercurial preparations, soda, borax, ammonia, magnesia, chloride of lime, the corrosive acids, and various kinds of drugs of vegetable origin were largely consumed.

SPECIFIC GRAVITY OF PLATINUM AND IRIDIUM.—The authority before mentioned alludes to a note lately presented to the French Academy by MM. Sainte-Claire Deville and H. Debray, giving the result of a research carried out in order to determine the density of platinum and iridium. The experiments were attended with considerable difficulty, but the results agreed closely in indicating 21.5 as the specific gravity of the former metal, and 22.4 that of the latter.

Varieties.

WATER AND ITS INHABITANTS.—The quality of water in relation to its fauna and flora has been the subject of investigation by some of the French Academicians. In substance, the results seem to prove that water in which animals and plants of higher organization will thrive is fit to drink; and on the other hand, water in which only the infusoria and lower cryptogams will grow is unhealthy. If the water become stagnant and impure aquatic plants of the higher order will languish and disappear, and the half-suffocated fish will rise near the surface and crowd together in parts where there may still be a little of the purer element trickling in, and if driven from these places they soon die. *Physa fontinalis* will only live in very pure water, *Valvata piscinalis* in clear water; *Limnæa ovata* and *Planorbis marginatus* in ordinary water; and finally, *Cyclas cornea* and *Bithynia impura* in water of middling quality; but no mollusk will live in corrupt water. Plants also exercise a reactive influence on the quality of water. The most delicate appears to be the common water cress, the presence of which indicates excellent quality. Veronicas and the floating water weeds flourish only in water of good quality. The water plantain, mints, loosestrife, sedges, rushes, water lillies, and many others, grow perfectly well in water of moderately good quality. Some of the sedges and arrowheads will thrive in water of very poor quality. The most hardy or least exacting in this respect is the common reed, or *Phragmites communis*.—*Scientific American*.

RAPID PROCESS FOR THE DETECTION OF LEAD IN THE TIN LINING OF VESSELS.—M. Fordos.—Place, with a tube plunged in pure nitric acid, a slight layer of acid upon any part of the tinning, selecting by preference the thickest parts. Both metals are attacked, forming stannic oxide and nitrate of lead. After a few minutes, heat slightly to expel the last traces of acid, and allow to cool; then touch the pulverulent spot produced by the acid with a tube dipped in a solution of five parts of iodide of potassium in 100 of water. The iodide has no action upon the oxide of tin, but with the nitrate of lead it reacts, forming yellow iodide of lead, and showing the presence of even a small quantity of this metal. The surface of the tinning must be carefully cleansed before applying the nitric acid, and the acid should not penetrate to the iron or copper which forms the body of the vessel, as the reaction might thus be complicated. *Chem. News*. [Lond.], April 30, 1875, from *Compt. Rend.*

WHOLESALE PRICES CURRENT.—MARCH, 1876.

	¢	c.	¢	c.	
Drugs, Medicines, &c.—Cont'd					
Orange Peel, opt.	0	35	0	36	
" good	0	15	0	20	
Pill, Blue, Mass.	1	10	1	20	
Potash, Bi-chrom	0	16	0	18	
Bi-tart	0	33	0	35	
Carbonate	0	14	0	20	
Chlorate	0	30	0	35	
Nitrate	8	00	9	00	
Potassium, Bromide	7	0	7	5	
Cyanide	0	60	0	7	
Iodide	3	50	3	50	
Sulphuret	0	25	0	35	
Pepsin, Boudault's	oz.	1	40	—	
Houghton's	doz.	8	00	9	00
Morson's	oz.	0	85	1	10
Phosphorous	1	10	1	20	
Podophyllin	0	50	0	60	
Quinine, Pelletier's	—	—	2	45	
Howard's	2	¢5	—	—	
" 100 oz. case	2	02	—	—	
" 25 oz. tin	2	02	—	—	
Root, Colombo	0	13	0	20	
Curcuma, grd	0	12½	0	17	
Dandelion	0	17	0	20	
Elecampane	0	16	0	17	
Gentian	0	08	0	10	
" pulv	0	15	0	20	
Hellebore, pulv	0	17	0	20	
Ipecac	1	50	1	60	
Jalap, Vera Cruz	9	0	1	15	
" Tampico	0	70	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	10	2	25	
" E. I.	0	75	0	90	
" pulv	1	60	1	10	
" 2nd	0	60	0	70	
" French	0	75	—	—	
Sarsap., Hond	0	60	0	65	
" Jam	0	95	1	00	
Squills	0	10	0	15½	
Senega	1	00	1	10	
Sal, Spigelia	0	25	0	30	
Epsom	2	50	3	00	
Rochelle	0	30	0	32	
Soda	0	07½	0	02½	
Seed, Anise	0	13	0	16	
Canary	0	16	0	17	
Cardamon	2	09	2	10	
Fenugreek, g'd	0	08	0	09	
Hemp	0	06½	—	—	
Mustard, white	0	14	0	16	
" American	0	65	0	75	
" Spanish	10	00	11	00	
Santonine	8	50	8	75	
Sago	0	08	0	09	
Silver Nitrate	Cash	14	85	16	50
Soap, Castile, mottled	0	11	0	14	
Soda, Ash	0	03½	0	05	
Bicarb. Newcastle	4	75	5	00	
" Howard's	0	14	0	16	
Caustic	0	05½	0	05½	
Spirits Ammon., arom	0	35	0	35	
Strychnine, Crystals	2	00	2	20	
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	70	0	80	
Zinc Chloride	oz	0	10	0	15
Sulphate, pure	0	10	0	15	
" common	0	06	0	10	
DYE STUFFS.					
Anatto	0	35	@	0	60
Aniline, Magenta, cryst	2	65	2	80	
" liquid	2	00	—	—	
Argols, ground	0	15	0	25	
Blue Vitrol, pure	0	09	0	10	
Camwood	0	07	0	08	
Coppers, Green	0	01½	0	02	
Cudbear	0	16	0	25	
Cuban	0	03	0	04	
Fustic, Bengal	2	40	2	50	
Madras	0	85	0	90	
Extract	0	26	0	30	

DYE STUFFS—Continued.					
Japonica	0	07	0	08	
Lacdye, powdered	0	33	0	38	
Logwood	0	01½	0	03	
Logwood, Camp	0	02	0	03	
Extract	0	12½	0	13	
" 1 lb. bxs.	0	15	—	—	
" ½ lb. "	0	14	—	—	
Madder, best Dutch	0	11	0	12	
2nd quality	0	10	0	11	
Quercitron	0	03	0	05	
Sumac	0	06	0	08	
Tin, Muriate	0	10½	0	12½	
Redwood	0	05	0	06	
SPICES.					
Allspice	0	11½	@	0	12
Cassia	0	26	0	28	
Cloves	0	55	0	60	
Cayenne	0	20	0	25	
Ginger, E. I.	0	19	0	20	
Jam	0	30	0	30	
Mace	1	40	1	60	
Mustard, com	0	20	0	25	
Nutmegs	1	15	1	25	
Pepper, Black	0	20	0	21	
White	0	31	0	32	
PAINTS, DRY.					
Black, Lamp, com	0	09	@	0	10
" 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	07½	0	08	
Venetian	0	02½	0	03½	
Sienna, B. & G	0	07	0	08	
Umbur	0	07	0	10	
Vermillion, English	1	25	1	30	
" American	0	25	0	35	
Whiting	0	1	0	14	
White Lead, dry, gen	0	08½	0	09	
" No. 1	0	07	0	08	
" No. 2	0	05	0	07	
Yellow Chrome	0	12½	0	35	
Ochre	0	02½	0	03	
Zinc White, Star	0	10	0	12	
COLORS, IN OIL.					
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	
Putty	0	03½	0	04½	
Yellow Ochre	0	08	0	12	
White Lead, gen. 25 lb. tins	2	45	—	—	
" No. 1	2	20	—	—	
" No. 2	1	95	—	—	
" No. 3	1	70	—	—	
" com	1	30	—	—	
White Zinc, Snow	2	75	3	25	
NAVAL STORES.					
Black Pitch	3	90	@	4	25
Rosin, Strained	3	30	4	25	
Clear, pale	5	75	7	25	
Spirits Turpentine	0	50	0	53	
Tar Wood	3	90	4	25	
OTLS.					
Cod	0	65	@	0	70
Lard, extra	1	10	1	10	
No. 1	1	05	1	10	
No. 2	0	90	0	95	
Linseed, Raw	0	55	0	58	
Boiled	0	59	0	52	
Olive, Common	1	05	1	10	
Salad	1	80	2	30	
" Pints, cases	4	20	4	40	
" Quarts	3	25	3	50	
Seal Oil, Pale	0	77	0	75	
Straw	0	62½	0	65	
Sesame Salad	1	30	1	35	
Sperm, genuine	2	55	—	—	
Whale refined	2	55	—	—	

WHOLESALE PRICES CURRENT.—MARCH, 1876.

DRUGS, MEDICINES, &c.		\$ c.	\$ c.	DRUGS, MEDICINES, &c.—Contd.		\$ c.	\$ c.
Acid, Acetic, fort.		0 13	0 14	Sang Dracon		0 60	
Benzoic, pure		0 22	0 27	Scammony, powdered		5 50	6 00
Citric		1 05	1 15	" Virg.		14 50	—
Muriatic		0 03½	0 05	Shellac, Orange		0 70	0 75
Nitric		0 10	0 13	Gum, Shellac, liver		0 52	0 55
Oxalic		0 16	0 20	" Storax		0 40	0 45
Sulphuric		0 03	0 05	" Tragacanth, flake		1 10	1 75
Tartaric, pulv.		0 49	0 50	" common		0 53	0 65
Ammon, carb. casks		0 21	0 22	Galls		0 22	0 30
" jars		0 22	0 23	Gelatine, Cox's 6d.		1 15	1 20
Liquor, 880.		0 24	0 28	Glycerine, common		0 18	0 23
Muriate		0 14	0 15	" Vienna		0 25	0 28
Nitrate		0 45	0 60	" Prices		0 60	0 75
Æther, Acetic		0 45	0 50	Honey, Canada, best		0 16	0 17
Nitrous		0 40	0 42	" Lower Canada		0 14	0 16
Sulphuric		0 50	0 50	Iron, Carb. Precip.		0 18	0 22
Antim. Crude, pulv.		0 15	0 17	" Sacchar		0 40	0 55
Tart		0 52	0 60	Citrate Ammon		1 40	1 50
Alcohol, 95 per ct.	Cash	2 19	0 00	" & Quinine, oz.		0 52	0 55
Arrowroot, Jamaica		0 18	0 22	" & Strychine		0 20	0 25
Bermuda		0 50	0 65	Sulphate, pure		0 08	0 10
Alum		0 02½	0 03½	Iodine, good		3 90	4 20
Balsam, Canada		0 33	0 38	" Resublimed		5 10	5 50
Copaiba		1 15	1 20	Jalapin		1 25	1 50
Peru		2 90	3 20	Kreosote		2 40	2 50
Tolu		3 25	3 50	Leaves, Buchu		0 22	0 32
Bark, Bayberry, pulv.		0 18	0 20	" Foxglove		0 25	0 30
Canella		0 17	0 20	" Henbane		0 35	0 40
Peruvian, yel. pulv.		0 35	0 50	" Senna, Alex		0 27	0 60
" red "		1 60	1 70	" " E. I.		0 14	0 20
Slippery Elm, g. b.		0 18	0 20	" " Tinnevilly		0 20	0 30
" flour, packets		0 28	0 32	" Uva Ursi		0 15	0 17
Sassafras		0 15	0 18	Lime, Carbolate	brl	5 50	—
Berries, Cubebs, ground		0 20	0 25	" Chloride		0 05	0 06
" Juniper		0 06	0 10	" Sulphate		0 08	0 12½
Beans, Tonquin		0 62	1 10	Lead, Acetate		0 14	—
Vanilla		14 00	23 00	Leptandrin	oz.	0 60	0 60
Bismuth, Alb		2 50	2 75	Liq. Bismuth		0 50	0 60
" Carb.		2 65	2 90	Lye, Concentrated		1 30	1 50
Camphor, Crude		0 23	0 35	Liquorice, Solazzi		0 50	0 55
" Refined		0 40	0 45	" Cassano		0 23	0 40
Cantharides		1 85	1 90	" Other brands		0 14	0 25
" Powdered		2 00	2 10	Liquorice, Refined	1 oz.	0 35	0 45
Charcoal, Animal		0 04	0 06	Magnesia, Carb.		0 20	0 25
" Wood, powdered		0 10	0 15	" " 4 oz.		0 19	0 20
Chiretta		0 23	0 30	" Calcined		0 65	0 75
Chloroform		0 50	1 55	" Citrate	gran.	0 60	0 75
Cochineal, S. G.		0 58	0 70	Mercury		1 10	1 20
" Black		0 75	0 90	" Bichlor		1 30	1 50
Colocynth, pulv.		0 60	0 65	" Chloride		1 50	1 70
Collodion		0 70	0 80	" C. Chalk		0 65	0 70
Elaeterium	oz	3 20	4 00	" Nit. Oxyd		1 70	1 90
Ergot		0 70	0 75	Morphia Acet		3 00	3 20
Extract Belladonna		1 80	1 90	" Mur.		3 00	3 20
" Colocynth, Co.		1 25	1 75	" Sulph.		3 20	3 40
" Gentian		0 50	0 60	Musk, pure grain	oz	25 20	—
" Hemlock, Ang		0 00	0 95	" Canton		10 60	1 20
" Henbane,		3 00	3 20	Oil, Almonds, sweet		0 45	0 47
" Jalap		5 00	5 50	" " bitter		14 00	15 00
" Mandrake		1 75	2 00	" Aniseed		4 25	4 50
" Nux Vom.	oz	0 40	0 50	" Bergamot, super		6 00	6 50
" Opium		1 40	1 50	" Caraway		3 20	3 50
" Rhubarb		5 00	5 50	" Cassia		2 00	2 25
" Sarsap. Hon. Co.		1 00	1 20	" Castor, E. I		0 12½	0 14
" " Jam. Co.		3 50	4 00	" Crystal		0 22	0 25
" Taraxacum, Ang		0 70	0 80	" Italian		0 26	0 28
Flowers, Arnica		0 17	0 25	" Citronella		1 95	1 15
" Chamomile		0 8	0 32	" Cloves, Ang		3 75	3 80
Gum, Aloes, Barb. extra		0 70	0 80	" Cod Liver		1 50	1 60
" " good		0 40	0 50	" Croton		1 40	1 50
" " Cape		0 16	0 20	" Juniper Wood		0 82	1 00
" " powdered		0 20	0 30	" " Berries		2 75	3 00
" " Socot		0 50	1 35	" Lavand, Ang	oz.	0 00	1 00
" " pulv		1 00	0 00	" " Exotic		1 25	1 00
Arabic, White		0 38	0 60	" Lemon, super		3 80	4 00
" " powdered		0 60	0 75	" " ord.		3 20	3 25
" " sorts		0 9	0 24	" Orange		3 00	0 75
" " powdered		0 42	0 50	" Origanum		0 65	0 75
" " com. Gedda		0 13	0 16	" Peppermint Ang.		15 00	16 00
Assafœtida		0 25	0 30	" " Amer.		4 50	5 50
British or Dextrine		0 13	0 15	" Rose, Virgin		8 50	7 75
Benzoïn		0 35	0 75	" " good		7 00	8 75
Catechu		0 12	0 15	" Sassafras		0 75	0 90
" powdered		0 25	0 30	" Wintergreen		4 40	6 00
Euphorb, pulv		0 35	0 40	" Wormwood, pure		4 00	1 90
Gamboge		1 00	1 20	Ointment, blue		1 10	6 50
Guaiacum		0 45	1 00	Opium, Turkey		6 25	9 00
Myrrh		0 50	0 80	" pulv.		8 50	—