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CANADIAN

PHARMACEUTICAL JOURNAL

VOL. IX, No. 2. TORONTO, SEPTEMBER, 1875. WHOLE No. LXXXVIII

Transactions of Pharmaceutical Colleges and Societies.

ONTARIO COLLEGE OF PHARMACY.

COUNCIL MEETING.

MORNING SESSION.

The first meeting of the Fourth Council of the Ontario College of Pharmacy was held at the rooms of the College, on Wednesday, 4th August, 1875.

Present:—Messrs. Chas. Brent, E. Gregory, F. Jordan, N. C. Love, Benj. Lyman, Hugh Miller, John Roberts, S. Tapscott, Wm. Walsh, and L. W. Yeomans.

The first business brought before the Council was the election of officers, which was by open vote. On motion, Mr. Lyman was unanimously elected President, and Mr. N. C. Love, Vice-President, for the ensuing two years. These gentlemen having returned thanks for the honour conferred upon them, it was moved and seconded that Mr. Hodgetts be re-elected Secretary and Registrar, and Mr. Kenneth Miller, Treasurer. Carried.

The election of Editor of the PHARMACEUTICAL JOURNAL was next taken up. Mr. Yeomans stated that in consequence of increase of work in connexion with this office, in the shape of correspondence, and the enlarged circulation of the JOURNAL during the past four years, he considered that the editor's salary should be increased, and to that end he would move, seconded by Mr. Gregory:

"That Mr. E. B. Shuttleworth be re-appointed editor of the PHARMACEUTICAL JOURNAL, at an increase of salary of $200 per annum, making the salary $700 yearly." Carried.

Moved by Mr. Yeomans, seconded by Mr. Love:

"That Messrs. Roberts and Walsh be auditors for the ensuing two years." Carried.

The minutes of the meeting held 3rd Feb., were read, and, on motion, adopted.

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

REPORT OF THE BOARD OF EXAMINERS.

Your Examiners beg to report that the Ninth Semi-annual Examination was held on Monday and Tuesday, the 2nd and 3rd instant. The examination was much more numerously attended than any which have so far been held under the auspices of the College. The names of forty-three candidates were handed in, but of these only forty were examined, as one gentleman was unavoidably detained by business, and two others, after a short trial, declined the ordeal.

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.	James Clark	Renfrew	89.1
2.	J. E. Shore	London	84.8
3.	T. Comport	Woodstock	83.8
4.	C. E. Bleakley	Toronto	82.8
5.	H. A. S. Turner	Toronto	79.5
6.	R. N. Thurtell	Guelph	79.1
7.	D. B. Mills	St. Catharines.	77.0
8.	J. E. McGarvin	Acton	76.9
9.	A. J. Playter	St. Catharines.	76.5
10.	W. J. Urquhart	Tara	75.5
11.	R. S. Strong	Toronto	75.3
12.	A. J. Peterson	Galt	75.3
13.	T. A. Hewitt	Toronto	75 3
14.	O. L. Armstrong	Orangeville	74.4
15.	A. M. Scott	Woodstock	74.1
16.	G. A. Deadman	Lambeth	74.0
17.	G. M. Anderson	London	72.7
18.	Henry Aldridge	Caledonia	72.7
19.	A. Lakeman	Woodstock	69.3
20.	C. W. Hartman	Aurora	66.4
21.	C. McMichael	Hamilton	66.4
22.	C. McD. Hay	Brantford	65.9
23.	C. D. Daniel	Toronto	65.8
24.	F. A. Brady	Ingersol	64.6
25.	T. W. Coleman	Stayner	63.3

26.	Stinson William Wilson... ..	Kingston.....	63.3
27.	G. H. Golding.....	Brampton	60.0
28.	S. H. Ashton.....	Thorold	60.0
29.	F. H. Laing.....	Windsor	60.0
30.	C. N. Sliter.....	Strathroy	60.0

The gentlemen whose papers in the various branches are particularly worthy, are:

Chemistry—J. Clark, T. Comport.
Pharmacy—J. E. Shore, J. Clark, A. Hewitt, T. Comport.
Materia Medicæ—T. Comport, C. E. Bleakley, R. S. Strong.
Botany—H. A. S. Turner, J. Clark.
Prescriptions—J. Clark, H. A. S. Turner, J. E. Shore.
Dispensing—J. Mills, R. S. Strong, T. W. Coleman.

We would suggest the advisability of increasing the value or rating of Practical Dispensing. At present it is only assigned a value of five, but we consider it one of the most important branches, and entitled to at least twenty marks.

E. B. Shuttleworth.
L. W. Yeomans.
Edm. Gregory.

Moved by Mr. Love, seconded by Mr. Tapscott:

"That the report of the Board of Examiners be received and adopted." Carried.

The Treasurer's report was then read, and on motion of Mr. Brent, seconded by Mr. Walsh, was received and adopted.

TREASURER'S REPORT.

Receipts.

Feby.	4, 1875,	To Balance.....		$671 24
	6	" Cash from Registrar		40 00
March	8	" " "		70 00
April	26	" " "		104 85
May	3	" " "		127 40
	10	" " "		186 00
	17	" " "		207 50
	22	" " "		126 40
	31	" " "		124 00
June	7	" " "		154 00
	14	" " "		224 25
	15	" " "		143 50
July	9	" " "		142 93
	19	" " "		160 00
	29	" Dividend on B. C. Stock		75 00
July	31	" Cash from Registrar		108 00
		" Interest on Deposit to June 30th ...		14 48
				$2,679 55

Disbursements.

Feby.	4, 1875,	By	Expenses of Meeting	289 08
	4	"	Postage	8 00
		"	Geo. Hodgetts	100 00
		"	K. Miller	50 00
	11	"	*Mail* Printing Co	10 00
	22	"	Postage	9 00
	24	"	*Monetary Times*	120 70
March	30	"	*Globe* Printing Co	10 40
	31	"	Postage	25 00
April	17	"	*Monetary Times*	127 60
	17	"	Brown Bros.	29 20
May	10	"	Geo. Hodgetts	100 00
	17	"	Lyman Bros. & Co.	24 95
	25	"	*Monetary Times*	60 35
July	3	"	Hunter Rose & Co.	3 00
	10	"	Postage	10 00
	12	"	*Monetary Times*	69 60
	12	"	Mowat, McClellan & Downey	9 00
	20	"	Copp, Clark & Co.	15 00
	21	"	Appropriation for Prizes	50 00
	21	"	E. B. Shuttleworth	262 40
				$1,383 28

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

Toronto, August 4th, 1875.

E. HARVEY,
NEIL C. LOVE, } Auditors.

The Registrar then presented his report :—

REGISTRAR'S REPORT.

ONTARIO COLLEGE OF PHARMACY,
August 4th, 1875.

GENTLEMEN:—Your Registrar begs to report that since the last meeting of Council there has been 17 applications for registration as chemists and druggists, under the Pharmacy Act, 1871. Of these applicants 16 have been granted certificates, and the papers in connexion therewith are submitted for your inspection. The remaining application will be laid before you for decision.

The number of renewals issued during the past six months is as follows: 3 for 1872, 6 for 1873, 31 for 1874, and 362 for the current year. On reference to the register I find 207 members who have not yet paid the fee for 1875, although their attention has been fre-

quently drawn to the matter in the columns of the PHARMACEUTICAL JOURNAL. I have no doubt the present depression in business is the cause of delay in many instances, but hope that before the next meeting most if not all will be paid.

In accordance with instructions received from the Council I have taken legal action against a number of members for the recovery of their fees; most of them have been paid with costs, two cannot be found, one case has been withdrawn, and several are still unreported. In the case of N. C. Wallace, Woodbridge, which was brought up in court here and defended, the acting Judge was of the opinion that it was not in the jurisdiction of this Court to deal with the case, but would give a decisive answer in a few days. I would ask further instructions from the Council in regard to this suit.

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

3 Renewal Fees, 1872	$12 00
6 do do 1873	24 00
31 do do 1874	124 00
362 do do 1875	1,448 00
17 Registration Fees	68 25
26 Examination do	104 00
37 Associate do	74 00
Balance of do	4 00
Sale of Poison Books	4 35
H. J. Rose	6 00
5 Students Fees	5 00
On account of Costs of Division Court	13 73
	$1,887 33

The Students fees were sent by parties, under the impression that the amendments to the Pharmacy Act were in force, but in each case they were returned.

With regard to the election for Council I have to report that the following gentlemen were nominated as candidates: Messrs. T. W. Bickle, Hamilton; T. Brendon, Brantford; C. Brent, Port Hope; R. Brierly, Hamilton; E. R. Carpenter, Collingwood; A. Christie, Ottawa; E. Gregory, Lindsay; W. W. Greenwood, St. Catharines; George Hodgetts, Toronto; F. Jordan, Goderich; N. C. Love, Toronto; Benjamin Lyman, Toronto; James Mills, St. Catharines; H. Paffard, Niagara; E. H. Parker, Kingston; J. Roberts, Ottawa; C. Stork, Brampton; T. C. Sutton, Windsor; S. Tapscott, Brantford; Wm. Walsh, Peterborough, J. Williams, Brockville; L. W. Yeomans, Belleville.

The nomination was declined by six of the Candidates and four others were ineligible, leaving the following gentlemen elected as members of the Council for the ensuing two years:—Messrs. T.

Brendon, E. Gregory. F. Jordan, B. Lyman, E. H. Parker, S. Tapscott, C. Brent, W. W. Greenwood, N. C. Love, H. Miller, J. Roberts, W. Walsh and L. W. Yeomans.

The papers in connection with the election I beg to lay before the Council.

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

To Subscriptions for Journal	$8 50
" Advertising Situations wanted	0 50
" Advertising	24 00
	$33 00
By paid for 3 Copies Journal, Aug. 1871	1 50
" " Treasurer	31 50
	$33 00

The amount of Accounts outstanding is $516 65.

In May last I obtained permission from the Post Master General to avail myself in advance, of the provisions of the new Post Office Act, as regards the mailing of the PHARMACEUTICAL JOURNAL, at the reduced rate of one cent per pound to all places in Canada and the United States, thereby affecting a considerable saving in the item of postage.

In conclusion, I would say that the College is fast becoming a power for good to the profession throughout the Province, and is regarded with much better feelings than at its inception four years ago. The number of Students coming forward for examination has been steadily increasing each year, the numbers being as follows: 1871-2—15; 1872-3—29; 1873-4—35; 1874-5—74. These annual examinations will do more than anything else to elevate the profession to its proper position in public estimation, and it is to be hoped that the College will soon be in a position to afford greater facilities and advantages to the Students than heretofore.

Respectfully submitted.

GEORGE HODGETTS,
Registrar.

Moved by Mr. Jordan, seconded by Mr. Roberts, that the Registrar's Report be received and adopted. Carried.

The Auditors Report was received and adopted on motion of Mr. Gregory, seconded by Mr. Walsh.

REPORT OF AUDITORS.

To the President and Council of the Ontario College of Pharmacy.

GENTLEMEN.—Your auditors appointed by the Ontario College of Pharmacy for the purpose of examining all the books in connection, have gone thoroughly into them, and would beg to report.

They have found the books kept in a very neat, orderly, and correct manner, and must congratulate the Treasurer and Registrar on the success of their efforts, they must also congratulate the College upon the healthy state of its finances, notwithstanding the fact "which must be apparent to all" that the JOURNAL for some reason has been a continual source of expense since the start, a fact which your auditors regret, as they think with a little management, instead of being a source of expense it would be one of profit. The balance on hand last February was $671 24, since which time the receipts have been, including interest on monies invested, $2,008 31 and the expenditure $1.388 28, leaving a net profit of over six hundred dollars. Your auditors find on looking over the accounts due for advertising in the JOURNAL that they amount to the considerable sum of $516 65, which they think is rather a large amount to have outstanding, and would recommend that steps be taken for the collection of same. The receipts of the JOURNAL since last meeting have only amounted to $33 00, and the expenditure to nearly $700.

All of which is respectfully submitted.

August 3rd, 1875. E. HARVEY, NEIL C. LOVE, } Auditors.

Moved by Mr. Miller, seconded by Mr. Jordan, that Messrs. Gregory, Shuttleworth, and Yeomans be Examiners as heretofore. Carried.

The Council then adjourned to meet in the afternoon, and on invitation of the President, to partake of his hospitality in the shape of an excellent dinner, which was served at Jewell's Rooms on Colborne Street.

AFTERNOON SESSION.

On resuming business, the application for registration of Mr. W. H. Boulee, New Hamburg, was laid before the Council, and the Registrar directed to write for further evidence of qualification.

The application for registration of Mr. Olivant was refused, and he was informed that he must pass the examination.

The application for registration of Mr. Robert Brydon, of Newbury, was read, but on motion of Mr. Yeomans, seconded by Mr. Brent, was refused.

The advisability of bringing before the Legislature, at its next meeting, the amendments to the Pharmacy Act was discussed, when it was moved by Mr. L. W. Yeomans, seconded by Mr. Walsh, that a committee consisting of Messrs. Lyman, Miller, Love, and Shuttleworth be appointed to urge upon our Local Legislature the necessity of amending the present Pharmaceutical Act. Carried.

The question of the proposed amendments to the Pharmacy Act was next brought forward. The various clauses of the Act, as printed in the JOURNAL, were taken up *seriatim* and discussed. A full concurrence in the general scope and interest of the proposed

measure was expressed, but several trifling alterations in the text were suggested to the Committee on Legislation. The first change had reference to Sec. I., and would debar apprentices from receiving the JOURNAL, except they become regular subscribers. Sec. IV. was amended so that the term "satisfactory evidence" might be held to mean "the certificate of a regular pharmaceutical chemist." The term of service of examiners mentioned in Sec. V. was fixed at two years. Sec. IX. was altered by striking out the words "certificate of proficiency," leaving the word "diploma." The remaining sections were approved of, and the strongest hopes were expressed that the measure would be urged upon the Legislature next session.

In view of the increase of work in connection with the office of Secretary and Registrar, it was moved by Mr. Miller, seconded by Mr. Brent, that the Registrar's salary be increased from $400 to $500 per annum. Carried.

The revising and remodelling the By-laws was brought up by the President, and on motion of Mr. Roberts, seconded by Mr. Brent, the following gentlemen were constituted a committee on By-laws: Messrs. Gregory, Tapscott, Walsh, and the Registrar. Carried.

Mr. Walsh said that he would much prefer if Mr. Shuttleworth would take his place on this committee, and this was so arranged.

Moved by Mr. F. Jordan, seconded by Mr. Tapscott, that Mr. E. Gregory be appointed to represent this College at the meeting of the American Pharmaceutical Association in Boston, this fall, and that he renew the invitation to that Association to meet in Toronto in 1877, and that if Mr. Saunders of London attends the same meeting he be also empowered to act as a representative of this College. Carried.

Moved by Mr. Yeomans, seconded by Mr. Walsh, that the sum of fifty dollars be appropriated to pay the expenses of our delegate in attendance at meeting of American Pharmaceutical Association, in Boston, this year. Carried.

Moved by Mr. Roberts, seconded by Mr. Brent, 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.

Mr. Yeomans gave notice of motion for a By-Law to provide for payment of $5.00 per day to remunerate auditors for their time and services required beyond day of meeting of College.

Moved by Mr. E. Gregory, seconded by Mr. Brent, that in case candidates present themselves oftener than twice under Article 5 of our By-laws, the usual fee shall be again paid by them to the Registrar. Carried.

Mr. Gregory gave notice of motion of change in By-law relating to examinations, so as to raise the ratings of competitors at the examination, in the branch of Practical Dispensing, from a possible

total of five to a possible total of fifteen marks, at the same time raising the number of marks necessary to pass in a like percentage.

The subject of Pharmaceutical education was then discussed by the several members, and various schemes were brought up but nothing definite was arrived at, the matter being left in the hands of the following Committee: The President, Vice-President, and Editor.

The President spoke as to the advisability of extending the circulation of the JOURNAL amongst the members of the Quebec Association. . He stated that there was no journal published in the Lower Province, and thought that if a specimen copy were forwarded to each member it would be the means of securing subscribers for it. The matter was left for the President to decide.

Letters from a number of students who have been attending classes for the past three months were read and referred to the Committee on Education.

The issuing of a Diploma similar to the one in use by the Quebec Association, was referred to the same Committee.

The Registrar was directed to continue the suit against Mr. N. C. Wallace, of Woodbridge.

Moved by Mr. Roberts, seconded by Mr. Brent, that the Examining Board be requested to prepare, and publish a Syllabus of the course of study necessary to be pursued in order to the passing the examination of this College. Carried.

Considerable discussion was had respecting the system of granting a percentage on prescriptions to medical men, when Mr. Jordan moved, seconded by Mr. Miller, that we discountenance in every way the giving of percentages on prescriptions to medical men, as being not only wrong in principle, but immoral in its tendency. Carried,

A vote of thanks was tendered to the President for his kindness in entertaining the Council at dinner.

Council adjourned at 6 p.m.

GEORGE HODGETTS,
Secretary and Registrar.

Original and Selected Papers.

UNPROFITABLE READING.*

BY JOSEPH INCE.

By reading is here included and understood whatever enters into the mode of preparation adopted in a course of study.

There are too distinct kinds of intellectual improvement: book-learning, derived from a printed page; and technical knowledge, drawn in part from literary sources, and largely from practical observation. With the first—popularly termed classical education—we have nothing here to do; it is with the union of the practical and the literary with which we are concerned. Both may fail, not so much, nor half as much, from want of application as from unprofitable labour.

The essentials of all successful reading may be briefly stated, as they commend themselves for adoption, and are universally acknowledged. Order is heaven's first law and the student's hope. It implies systematic work, thoughtfulness, and a clear head; it implies, also, continuous, well-regulated exertion; and that it begets a love for work itself is an experience to which there is no exception.

Order is a mental quality—the power of effecting an equal distribution of efforts and ideas; system is the same power applied to mechanical arrangement. The two should be made one, and both may be infinitely strengthened by cultivation. Lastly, there is the old English term called labour, without which all other virtues, major and minor, are ineffectual. This labour, with its intellectual order and its mechanical system, is weakened by certain well-intentioned practices that have been adopted in good faith, chief of which, as far as my judgment goes, is the time wasted in taking notes. I would venture to appeal against this unwise habit, which is still existent. In the cumberous old days of scholarships, when years were spent on Latin verse and protracted processes of learning were accepted as proof of diligence, the learner gazed with pride on his folio manuscript of annotations; but in this age of admirable text-books their use has been superseded.

I regret that during nine long years of classical, not of pharmaceutical study, two hours every day were de-utilised in this unprofitable toil.

A subject fresh to the compiler is not likely to be correctly noted; attention is distracted from the lecturer, whilst in physical

* From the Chemist and Druggist.

and experimental subjects the value of the illustrative demonstration is lost in the vain attempt to catch the *ipsissima verba* of a sentence. A single experiment done afterwards by the learner's own hands, or a plant dissected in confirmation of a botanical allusion, is a far more reliable mode of recollection than a page of disjointed and hastily compiled memoranda.

The time that lies at the disposal of most of us is of so limited a nature that it is wisdom to economise it to the utmost. And can the student hope that his best *memoria technica* will be ator equal the instructions of a well-digested manual?

Note-taking, except the merest headings, is to be deplored as representing the maximum of trouble with the minimum of result. But if there be a gain in seizing *currente calamo* a lecturer's expressions, let me strongly urge the use of shorthand, and say from personal knowledge that its difficulties have been enormously overrated. Three months with one hour's daily application will smooth its opening embarrassments; and three months more at the same rate will give facility in practice. Pitman's system is readily acquired, and its characters are not difficult to decipher. I put my six months' phonography against nine years irksome note-taking, and I have not the courage to estimate the saving in pure weariness.

But if this dreary custom of taking notes forms the first illustration of unprofitable reading, there is another which appears closely in the track. I feel sure that a student does himself injustice who follows too implicitly one book, because even a many-sided teacher contracts a mannerism both of expression and of thought; because he is strong in some points and weak in others, and because his teaching bears more or less distinctly the traditional impress of his own school. It is, moreover, no imaginary danger that a beginner may attach undue importance to a stereotyped mode of explanation, and may thus unwisely limit the range of his conception. He is tempted to believe in no other prophet than the one through whom he first learnt the rudiments of his faith. It is manifestly impossible that one writer should, like a living kaleidoscope, reflect every combination of light and colour. This is an unreasonable expectation, and he who would eschew unprofitable reading must gather his information from varied sources. A Professor, speaking from an academic chair, is compelled in great measure to be the exponent of a certain curriculum. He acts wisely and from necessity, for he is bound, as a public man, to present his young audience with such a classified arrangement of facts and theories as he may deem most instructive.

Nothing more distinguishes our modern period than the simplicity and excellence of these prepared discourses, but obviously each man *does* approach his subject with strong individual leanings, and that is the very secret of his strength. One reasons lucidly about chemical equations; a second explains the theory of the phosphorus acids in an unequalled manner; a third justifies the reputation of

Owen's College by the conciseness of his descriptions and the skill by which so many facts are presented in so small a space. Neither one man, still less one book, can wander into these different paths all leading to a common road, but the learner, while exclusively he follows none, will lessen his labour and not increase it by comparing, combining, and collating the separate instructions which men can give. This, which I have often done for others, I devoutly wish others would accomplish for themselves, a sentiment which leads directly to a theory long and conscientiously entertained. Technical study has three stages of development, the learning or the storage; then the storage classified; and last, the practical application.

To enter with advantage on our own special branch, the student should have done with his preliminary education, and not be hampered with the rules of English composition, his decimal fractions, or the Latin verbs. Then let him learn and store, by lecture courses, by printed books, by laboratory work, by experiment, by field excursions, by conversation, friendship, and sparingly by scientific meetings. Quickly comes the second stage—the time ripe for classification; then, and not before, the mode of learning changes, not the act, and the task before the learner is to investigate his stores. Let him boldly take his accumulated rough or neatly copied memoranda, and consign them to oblivion; and with his better knowledge and acquired experience let him work out his own digest of things worthy of rememberance. Plan there must be, for the mind cannot without superhuman effort recollect a mass of miscellaneous facts; and plan there must be, if the third stage, that of practical application, is to be attained.

May we not say with truth that it is on the right use of this second period that the future hangs? May we not say that the more the facts and the greater the storage, the better and more philosophic will be the summary? May we not add that where in youth there has been this storage, and subsequent orderly arrangement, we may predict with confidence a successful present issue, and an awakened pleasure in these pursuits such as is destined to endure?

THE ADMINISTRATION OF PHOSPHORUS.*

BY C. MEHU.

The author states that during the past ten years his attention has been devoted to the different modes of administering phosphorus. The problem he has striven to resolve has been the obtaining

*A copy of the original paper was communicated to this journal by the author, but in this article advantage has been taken of a translation which appeared in the Pharm. Jour. and Trans.

of pharmaceutical preparations having a constant richness in phosphorus, and capable of indefinite preservation. In the present paper he passes in review the numerous methods which, during the past few years, have been suggested in France, England, and the United States, for the administration of free phosphorus, and as the results of his earlier researches upon the subject have been adopted as the basis of the phosphorated oil British Pharmacopœia, the opinions of so competent a critic will, without doubt, be of interest to the readers of this journal.

The first preparation referred to is the phosphoretted resin, containing 4 per cent. of phosphorus, proposed by Mr. Gerrard* at an evening meeting of the Pharmaceutical Society of Great Britain. The preparation of this resin Dr. Méhu considers to be extremely dangerous, and nearly impracticable in the vessels usually available in a pharmacy, it being necessary to agitate during some time a vessel heated to 200°C., containing phosphorus and resin in a state of fusion. He states, also, that during the operation a portion of the phosphorus passes into the amorphous insoluble state. Dr. Méhu is of opinion, moreover, that phosphoretted resin is unsuited to most pharmaceutical uses for the following reasons: The resin is supersaturated with phosphorus at a high temperature, and in cooling the active element separates into solid fragments—fine they may be, but still solid. It being necessary to pulverize the resin before it can be used, the air oxidizes this divided phosphorus much more easily in the time taken up by this operation than in the few moments phosphorated oil is exposed whilst being added to a mixture. The direct pulverization of ordinary phosphorus for incorporation with a pill mass is not more defective, and gives as good results. Moreover, phosphoretted resin has been observed by Dr. Pile† to become red under the influence of light; this is what might have been expected, by reason of the incomplete solution of the phosphorus. The preparations of phosphorus, which are solid at ordinary temperatures, appear all to have a similar tendency. When made into an emulsion, phosphoretted resin rapidly deposits at the bottom of the bottle, and the deposit becomes red; the preparation, in consequence of the great density of the phosphorus (=1·8), cannot long preserve its homogeneity. Submitted to the action of alcohol, phosphoretted resin abandons nearly all its phosphorus as a fine powder; scarcely anything but the resin dissolving, unless the proportion of alcohol be very considerable.

Dr. Méhu considers that for similar reasons the use of solid phosphorus ought to be proscribed from pharmacy. A vigorous shaking of a mixture containing solid phosphorus well divided can only diminish the dangerous inconveniences attending its use, but

*Pharm. Jour. [3], Vol. iv., p. 441.
†Pharm. Jour. [3), Vol. iv., p. 880.

never totally remove them. Non-saturated solutions, in his opinion, alone present the phosphorus in an extreme state of division, and allow of a certain and regular administration. It should always be remembered that phosphorus does not fuse below 44.2° C., that is, at a temperature above that of the human body, and that only as much can be absorbed as is dissolved. The experiments of Réveil and Personne have proved that large pieces of phosphorus can be swallowed with impunity by dogs.

To avoid the inconvenience in preparing phosphoretted resin, Mr. Abraham* has proposed to substitute balsam of tolu for the resin. But as this preparation is no more soluble in the stomach or fusible at the temperature of the human body than Mr. Gerrard's, Dr. Méhu does not consider it presents any marked practical advantage over phosphoretted resin.

Phosphoretted wax, melting at about 60° C., is, in Dr. Méhu's opinion, not more advantageous; since, although it is more easily made into pills than the preceding preparations, these pills pass through the digestive organs without modification or sensible loss of weight.

With respect to the use of amorphous phosphorus, as suggested by Mr. Postans,† the author remarks that the action of amorphous phosphorus, *free from all trace of crystallizable phosphorus*, is much disputed. If it were not excluded through inertness, red phosphorus could be manipulated in the pilular form as well as any other powder upon which the air exercises no sensible action.

Mr. J. Williams has proposed the use of a solution of twelve grains of phosphorus in nine fluid ounces of glycerine and nine fluid ounces of alcohol;‡ the solution would consequently contain one-twelfth of a grain of phosphorus to the fluid drachm. By dissolving the phosphorus in the glycerine, moderately heated, and then adding the alcohol heated to the same temperature, Mr. Williams obtains a solution which is free from the strong acidity always present in an alcoholic solution necessarily prepared at a much higher temperature, and due to the conversion of the phosphorus into oxygen compounds. But Dr. Méhu points out that as, according to Mr. Williams' own admission, this solution of phosphorus in alcohol and glycerine deposits after a time a part of its phosphorus, it has the fault common to all supersaturated solutions, such as the 2 per cent. phosphorated oil of the Codex, namely, that it cannot be kept of uniform strength, its richness in phosphorus strength varying with time and temperature. The alcohol has a tendency to evaporate and the glycerine to absorb atmospheric moisture, and these two effects hasten the precipitation of the phos-

*Pharm. Jour. [3], vol. iv., p. 549.

†Pharm. Jour. [3], vol. v., p. 363.

‡Pharm. Jour. [3], vol. v., p. 210.

phorus. Further, the addition of this solution to an aqueous liquid causes the immediate precipitation of the solid phosphorus.

Referring to Mr. Williams' plan of estimating the phosphorus in solution by means of a solution of bichloride of mercury, Dr. Méhu remarks that the property possessed by phosphorus of converting this salt into protochloride of mercury, is also enjoyed by hypophosphorus acid and other oxidized products of phosphorus.

The author states that Dr. Routh has proposed phosphoretted spermaceti as a preparation suitable for the administration of phosphorus, but without publishing any experience to justify his recommendation. Dr. Méhu finds that it is easy to dissolve in spermaceti, melted at about 70° C., 2 per cent. of its weight of phosphorus, and that the solution agitated during cooling in a hermetically closed flask forms a fairly homogeneous preparation; but it reddens with extreme facility when exposed to the action even of diffused light. During the winter months the effect is very perceptible after a few hours. Even when containing only 1 per cent. of phosphorus, phosphoretted spermaceti is rapidly colored by light. Moreover, this preparation has the disadvantage of other solid preparations, that it is necessary to pulverize it before it is used; neither does it melt at the temperature of the body. The author, therefore, considers that it presents no advantages over the resin and other solid preparations.

Dr. Routh has also indicated neat's-foot oil as a good solvent of phosphorus,* but he has omitted to specify its particular advantages, probably, Dr. Méhu thinks, because he is not acquainted with any. But Dr. Méhu states that in his experiments he has found that animal oil gives only mediocre results. Further commercial neat's-foot oil is so variable a product that it cannot prudently be used for a preparation the constant composition of which is indispensable.

In the preparation of phosphorated cod-liver oil, Dr. Méhu does not recommend the direct solution of the phosphorus in the cod-liver oil by the aid of heat; but that a sufficient quantity of oil of almonds, containing 1 per cent. of phosphorus, be added to the cod-liver oil to bring it up to the richness in phosphorus required.

Phosphorated ether is open to the serious objection that by its too rapid volitalization free solid phosphorus is deposited. Further, whilst it is difficult to obtain ether free from water and alcohol, its solvent power with respect to phosphorus will vary with the proportions of each of those bodies present. On the other hand, phosphorated ether will not mix with water; introduced into an emulsion or draught it quickly deposits solid phosphorus, and a similar deposit of solid phosphorus is to be feared when phosphorated ether is introduced into the stomach in capsules.

*Pharm. Jour. [3], Vol. iv., p. 965.

With respect to the so-called solution of chlorophosphide of arsenic, obtained by allowing hydrochloric acid to react upon phosphorus and arsenic in a fine state of division,* Dr. Méhu says that such a mixture is neither a solution of free phosphorus nor of chlorophosphide of arsenic, but a hydrochloric solution of variable composition containing oxygen products of arsenic and phosphorus. This preparation is, in his opinion, unworthy of any attention.

Phosphide of zinc, Dr. Méhu thinks, cannot be considered a medicament presenting free phosphorus to the system.

Dr. Méhu shares the opinion of Mr. Martindale,† that the previous heating of oil of almonds to 300° F. is not a precaution absolutely necessary in the preparation of phosphorated oil of good quality; but he adds that his recommendation of this preliminary heating had for its object the rendering of the preparation unalterable by light. That it has this effect he has proved by the preservation of flasks of oil containing 1 per cent. of phosphorus, exposed to the light during seven years, without manifesting the slightest turpidity or depositing a trace of red phosphorus. At the Pharmaceutical Congress in St. Petersburg he exhibited, for comparison, phosphorated oil unaltered which had been prepared six years with previously heated oil of almonds, and some prepared with the same kind of oil not previously heated. The phosphorus in the latter was almost entirely precipitated in the state of red phosphorus, although the solution, like the former, had been kept in a vessel sealed at the lamp.

Mr. Ashburton Thompson has stated‡ that the phosphorated oil is an unsatisfactory preparation, because when exposed to the air the phosphorus which it contains readily oxidizes. Dr. Méhu points out that this oxidation, which is common to all preparations containing free phosphorus, may be prevented by the addition of a few drops of ether. The same result may be attained by the use of a small quantity of oil of turpentine, but such an addition may be objectionable, since oil of turpentine acts as an antidote to phosphorus. Dr. Méhu states that he has kept phosphorated oil to which a very small quantity of ether has been added, for months, in bottles opened every day, without the oil undergoing any sensible alteration.

Dr. Méhu supplements his criticisms by some details as to what he has found to be the best mode of preparing phosphorated oil. Pure oil of sweet almonds, slightly colored, limpid, free from admixture with oil from plum and peach kernels sometimes present in commercial oil, is the oil he prefers to use. This oil is heated in a porcelain capsule. At a temperature near 150° C. it is very perceptibly decolorized, and this decoloration is more marked as the temperature rises, but it is not entirely persistent after cooling. The

*Pharm. Jour. [3], Vol. iv., p. 965.
†Pharm. Jour. [3], Vol. iv., p. 902.
‡Pharm. Jour. [3], Vol. iv., p. 965.

decoloration is a sign of the good quality of the oil; for the red-tinted oils, extracted from the seeds of various species of Rosaceæ, are very slightly decolorized. The color is injurious to the appearance of the product, although not to the solvent or keeping properties of the oil. The oil after being raised to a temperature of from 200° to 250° C., is left to cool partially, and then filtered still hot through paper. The vessel into which it is received should be scrupulously dry and clean. This oil will dissolve about one eightieth of its weight of phosphorus, but it is recommended not to dissolve more than 1 per cent., so as to avoid all danger of supersaturation. A ground-stoppered flask is then filled to nine-tenths of its capacity with the oil, and 1 per cent. of its weight of phosphorus added. The phosphorus, cut under water and weighed after drying with a fine linen cloth, should be perfectly transparent and free from either red or white phosphorus. The flask is placed up to the neck in a boiling water-bath; and when sufficiently heated it is closed, and after the temperature has risen to about 70° or 80° C. the bottle is well agitated until the solution of the phosphorus is complete. Dr. Méhu does not operate upon more than a kilogram of oil at a time, so that the agitation may not be too difficult. When the flask has cooled, if it be opened in the dark, the oil presents a beautiful phosphorescence and emits luminous vapours. A few drops of ether poured upon the stopper at the moment of opening the bottle suffices to prevent this oxidation and the phosphorescence.

Most fixed oils dissolve nearly one-eightieth of their weight of phosphorus; castor oil, however, dissolves only one part in one hundred and twenty at ordinary temperature. Experiment has shown that with arsenious acid the results are different, castor oil dissolving three parts in a thousand, whilst oil of almonds dissolves scarcely one part. Dr. Méhu's experiments have shown also that the essential oils which contain no oxygen, alone prevent the phosphorescence of phosphorated oil; oxygenated essential oils do not possess that power.

The pharmaceutical form which, in Dr. Méhu's opinion, lends itself best to the continued administration of phosphorated oil is that of capsules containing one milligram. He also gives the following formula for an emulsion:

Phosphorated Oil (1 per cent.).....	0·10 gram.
Syrup of Gum.....	30·00 "
Distilled Peppermint Water.....	30·00 "

Pour the 30 grams of syrup of gum into a bottle of 60 grams capacity, and by slightly shaking cause it to moisten the entire interior of the bottle. Introduce the phosphorated oil (as many decigrams as the emulsion should contain milligrams of phosphorus), shake well and pour in the peppermint water. The bottle should be shaken, before administering a dose, to render the emulsion perfectly homogeneous.

THE USE OF PHOSPHORUS.*

Mr. Thompson, as given in the London *Medical Record*, concludes, from a number of experiments and observations:—

1. That solutions of phosphorus in virgin vegetable oils are not safe, and should, therefore, be entirely rejected.

2. That the solid form is not a perfectly safe mode of administering phosphorus; it may, however, be employed, but should never be presented to the empty stomach.

3. That the administration of zinc phosphide should be attended by the use of an acid at the same time.

The dose of phosphorus seems to vary considerably with the formula employed. The toxic effects of the drug, such as burning pain in the epigastrium, hepatic pain, tenderness of the gums, nervous symptoms, etc., are all fully described, and should be carefully noticed before attempting to prescribe phosphorus. A large experience of the action of the drug in many and various conditions has enabled the author to point out exactly the earliest symptoms necessitating its discontinuance. "Apart from any specific power which it may possess, phosphorus may subserve two distinct ends, at least, according to the manner in which it is administered. It may stimulate, and it may nourish." This seems to be an entirely original observation, and one for which he distinctly claims priority

In cases of typhus, where there is muttering delirium or incipient coma, the stimulating effects of phosphorus, when given in sufficiently large doses, are very marked. Mr. Thompson asserts that it should be given in such cases, not by rule, but until the patient either recovers or dies, persons in want of phosphorus being able to take far more with impunity, than those not in want of it.

Of the therapeutic uses of phosphorus, the author gives us not merely opinions, but has illustrated his remarks by a series of carefully recorded cases that will well repay perusal. He alleges that he has established, by a series of forty-one consecutive cases, what has been known of isolated cases since the time of Lobel, 1805, viz., that phosphorus is curative of some forms of neuralgia (briefly the ataxic and catarrhal acute). It is in these distressing and troublesome cases, where frequently other remedies have failed, that phosphorus seems to exert such a marked influence, and no one will now be justified in condemning a case as incurable until he has studied this monograph and tried the remedy in the manner suggested.

* Phila. Med. and Surg. Report.

PLANT NAMES.

The titles given by our ancestors to distinguish one plant from another—before they were marshaled by Linnæus into battalions of orders and species, distinguished by the number of their stamens and construction of pistils, or arranged into more natural families by Lindley and the later botanists—are often extremely poetic. There is a wealth of imagery and fanciful allusions, "playing with words and idle smiles," in them, which is something very interesting to trace out. Some plants are named, like the "Eye-bright," according to the "doctrine of signatures"—*i.e.*, the notion that the appearance of a plant indicated the disease which it was intended to cure: "The black-purple spot on the corolla proved it to be good for the eyes," said the medical science of the day. Next comes the similitudes.

> "The Day's-eye," whose leaves spread,
> Shuts when Titan goes to bed.

The "Hell's-weed" (the dodder), which strangles the plant to which it attaches itself. The "Columbine," so called because in reversing the flower the curved nectaries look like the heads of doves *(colombes)* sitting close together in a nest. There is a whole garden full of plants sacred to the Virgin Mary, generally because they flower at some period connected with "Our Lady's" days—the Visitation, the Assumption, the Birth, the Baptism, Purification—such as the "Lady's Smock," "Lady's Mantle," "Lady's Fingers," Lady's Slipper," "Lady's Tresses," the pretty little green Ophyrs with a twisted stem. The "Virgin's Bower" begins to blossom in July, when the Feast and Visitation occur, and is in the fullest flower at the Assumption in August. The "Lady's Bedstraw" belongs to no particular month, but has a very particular story for its name. The different plants were summoned to come and form a litter for the Virgin and Child in the stable at Bethlehem. They all made excuses, one after the other: some were so busy, some declared themselves too insignificant, some too great, or it was too early or too late for appearing. At last this pretty little white star offered herself, humbly, for the place; and she was afterwards rewarded for her virtue by her flowers being turned to a golden yellow. "St. John's Wort," "St. Peter's Wort," flower about the time of their respective saints' days. The "Star of Bethlehem," "Rose of Sharon," "Joseph's Walking-stick," "Jacob's Ladder" (the beautiful Solomon's seal), are apparently incidental fancies. The "Holy Ghost Flower" (the Peony) flowers, of course, at Whitsuntide. A series of traditions connected some peculiarity in a plant with an event in Bible-history. The "Knot-grass," *polygonum persicum*, has a large black spot on its smooth leaves, caused by a drop of blood falling from our Saviour, at the time of the cru-

cifixion, on one of the plants which grew at the foot of the cross. The "Judas-tree" is that on which the wretched traitor hanged himself in his misery; rather an unsafe stand to choose, but then it broke under his weight, we are told. The cross was made of the wood of the aspen or trembling poplar, and its leaves have been smitten by the curse of perpetual, quivering restlessness ever since. The "Virgin's Pinch" is the black mark on the persicary. "Job's-tears," so called "for that every grain resembleth the drops that falleth from the eye."

ARTIFICIAL COLORING OF FLOWERS.*

The *Journal of the French Central Society of Horticulture* has some curious observations on the artificial coloring of natural flowers. Flowers naturally of a violet color, when exposed to the fumes of a cigar assumes a green tint—all the more decided in proportion to their original brightness. This is well exemplified in the case of the violet *Thlaspi* or *Iberis umbellata*, and of the *Julienne* or *Hesperis matronalis*. The alteration of the colour is due to the ammonia of the tobacco.

Starting from this point the Italian professor, L. Gabba, makes a series of experiments to determine the effect of ammonia on the colours of various plants. Pouring a little ammonia into a plate and placing a funnel over it, the professor inserts the flower in the tube of the latter. In this way blue, violet and purple flowers become of a fine green color; deep carmined-colored flowers, such as pinks, become black; white blossoms yellow, and so on. But the most curious effects are produced on parti-colored flowers, such as red and white, when the former color is changed to green and the latter becomes yellow. Another remarkable example is that of the Fuchsias with white and red flowers, which becomes yellow, blue and green. When the colors have been thus changed, if the blossom be dipped in pure water it will retain the artificial color for several hours, and will afterwards return gradually to its natural tint. Another curious observation by Prof. Gabba is that Asters, which are naturally without scent, acquire an aromatic odor under the influence of ammonia. The same flowers, of a violet color, become red when sprinkled with water containing nitric acid. If inclosed in a wooden box and exposed to the action of hydrochloric acid gas, they will in six hours become of a fine carmine color; preserving the color if first dried in a dark place and kept dry in the shade.

*From the American Garden.

Editorial.

THE MIDSUMMER EXAMINATION.

Since the organization of the College the interest taken in the examinations has steadily increased, and the attendance has also grown proportionately larger. At the first examination, held in August, 1871, only five candidates presented themselves, while last month, this number was multiplied eight times—forty-three entering their names. At first the examination was regarded as an irksome ordeal—a requirement of the law especially designed for the annoyance and confusion of apprentices. We are pleased to notice that it is now viewed in quite a different light. To pass the examination is now a matter of choice rather than of compulsion. Indeed the greater number of candidates do not take advantage of the diploma, as far as its legal value will allow, but hold it merely as a mark of distinction, and as an honourable evidence of their ability.

Taken collectively, the students are much more intelligent and better educated—both in regard to general and special education—than they were formerly. In this respect they will compare very favourably with the candidates at the examinations at the Medical Schools, nor in point of intelligence do they lose at all by the comparison. There is, however, still room for improvement in the branches of study comprised under what we term an "English education" In arithmetic and geography there is a marked deficiency, but should the proposed amendments to the Pharmacy Act become law, next session, the institution of a preliminary examination, to be passed before an apprentice is indentured, will remedy this defect.

We append, as usual, the questions proposed at the examination:

PHARMACY.

Examiner—MR. SHUTTLEWORTH.

1. Explain in detail and with as much exactness as possible, the differences between the weights and measures of the British and U. S. Pharmacopœias.
2. What weight of *Acidum Sulphuricum*, *Liquor Plumbi Subacetatis*, *Liquor Ferri Perchloridi Fortior*, *Spiritus Tenuior*, and *Syrupus* might be put into a bottle which holds exactly one Imperial pint of water at the

standard temperature and pressure? (answer to be given in ounces and decimal parts thereof.)

3. Give the officinal characters and tests of the following preparations: *Aqua Destillata, Adeps Præparatus, Spiritus Rectificatus, Hydrargyri Iodidum Viride.*
4. State the impurities commonly occurring in *Liquor Ammoniæ Fortior, Potassii Iodidum, Chloroformum*, and *Creasotum.*
5. State what you know about volumetric analysis.
6. Name the ingredients in the following preparations: *Confectio Sennæ, Decoctum Sarzæ, Co., Tinct. Cinchonæ, Co., Ung. Simplex.*
7. How would you prepare a solution of opium containing all the morphia but deprived of narcotina and odorous matter? What British and U. S. official or officinal preparations correspond with such a preparation?
8. Describe the mode of preparing *Liquor Potassæ.*
9. State the proportion of the active ingredient contained in *Pil. Hydrargyri, Pulv. Ipecac Co., Tinct. Opii, Liq. Atropiæ.*
10. Recognize specimens and answer verbal questions respecting them.

MATERIA MEDICA.

Examiner—MR. YEOMANS.

1. Elaterium. From whence is it obtained? What are its properties and dose?
2. Name the source and give dose and operation of Gum Myrrh, Gum Gamboge, Balsam Copaiba, Balsam Tolu?
3. Name the leading preparations of Potassium with dose and operation.
4. Name the Essential Oils of the British Pharmacopœia with dose and operation.
5. 1st. Name the Leaves of the British Pharmacopœia. 2nd. At what period should they be collected.
6. 1st. Give the several kinds of officinal Aloes. 2nd. Name source from whence procured. 3rd. Give operation and dose.
7. What means would you apply to detect adulteration in the following: Gum Opium, Pulv. Ipecac, Manna.
8. Give dose and operation of Pepsine, Podophyllin, Jalapine, Piperine.
9. How would you arrive at the commercial value of Cinchona. Give the Alkaloids in it, with their dose and operation.
10. Give name and dose of samples and answer oral questions.

CHEMISTRY.

Examiner—MR. SHUTTLEWORTH.

1. (*a*) State the number of elements generally recognized as metals; (*b*) Name the forms in which metals are commonly found in nature; arrange the following metals in the order of their (*c*) density, (*d*) fusibility, (*e*) malleability—*Platinum, Silver, Copper, Iron, Lead.*
2. What do you understand by the terms *quantivalence*, or *atomicity of the elements?*
3. Give the names of the compounds indicated by the following formula: HCN: H_3PO_4: Fe_2Cl_6: $KHC_4H_4O_6$: $CHCl_3$.
4. How would you prepare saturated aqueous solution of SO_2? State the density, percentage strength, and officinal name of the resulting preparation.

5. State the source, formula, chemical and physical properties and common impurities of glycerin.
6. Describe the process of preparing iodide of iron; the action which takes place; and name the conditions generally regarded most favorable to the preservation of *Syrupus Ferri Iodidi.*
7. Give tests for sulphuric, nitric, hydrochloric, carbonic and acetic acids.
8. Describe in detail the method of conducting Marsh's test for the detection of arsenic.
9. State the yield of biniodide of mercury obtainable from equivalent quantities of the officinal ingredients.
10. Recognize specimens and answer verbal questions regarding them.

BOTANY.

Examiner—MR. YEOMANS.

1. What do plants feed upon?
2. What do you understand by the terms Acaulescent, Apetalous, Suffrutescent, Culm?
3. Name some of the different forms of Primary, Secondary and Aerial Roots, giving examples.
4. Explain the following terms descriptive of forms of leaves, giving sketch, Ovate, Peltate, Crenate Serrate, Cleft, Entire Cuspidate, Perfoliate.
5. Explain difference between Determinate and Indeterminate inflorescence, giving three examples of each.
6. What Organs are deficient in a Sterile and a Fertile flower?
7. Give the parts of a perfect flower with their relative position.
8. Give difference between simple and compound Pistil, with example of each.
9. Describe sample Flowers and answer questions upon them.
10. Recognize sample plants, and answer questions about same.

PRACTICAL DISPENSING.

Examiner—MR. GREGORY.

The following prescriptions are to be compounded:—

1. R. Ext. Belladon., grs x.
   Hyd. Nit. Ox., ℥i.
   Adipis, ℥i.
   Ft. Ung.
2. R. Ol. Morrhuæ, ℥ss.
   Ft. Emuls., S. A., ad ℥viii.
   SIG. *Coch. mag. ter in die.*
3. R. Pil. Coloc. Co., grs., xxiv.
   Pulv, Aloes Socot., grs. xii.
   Ferri Sulph., grs. xii.
   Ft. Pil. xii., *quarum æger sumat duas pro re nata.*

PRESCRIPTIONS.

Examiner—MR. GREGORY.

1. Translate the following prescription into English:—
   Recipe. Saponis Medicinalis, drachmas quatuor.
   Gummæ Ammoniaci, drachmas duas.
   Extracti Aconiti.

Extracti Conii, ana, drachmam cum semisse.
Massæ Pilulæ Aloes cum Myrrha, drachmam.
Contunde in massem equalem, et divide in pilulas granarum quatuor. Capiat binas mane nocteque, augendo unam quotidie donec quindecem vel viginti, sumantur in die.

2. Write a prescription in full Latin for twelve powders, one to be administered twice ôr thrice in the day, each powder to contain four grains of Rhubarb, one of Mercury with Chalk, one grain of Carbonate of Potassa, and half a grain of Cinnamon.
3. Correct any errors that may be discovered in the following prescription :—

R. Pot. Brom. ʒij.
Pot. Bicarb. ʒij.
Pot. Nit. ʒij.
Pot. Iodid. ʒi.
Vin. Sem. Colchici. ʒss.
Aquæ ad, ʒxii.
Sig. Coch. mag. ter in die.

4. Translate into English, and give full Latin for the following contractions: –Mit., Mitt., febr., abs. febre., febr. dur., ads. febre., altern hor., hor. decub., hor. som., aq. bul., aq. ferv.
5. Give the approximate fluid measure of a tea-cup, a wineglass, a tablespoon, a dessertspoon, a teaspoon, and a drop.
6. What is the average dose for an adult of each of the following remedies:—Acid Carbol., Argent. Nit., Hyd. Biniodid., Hyd. Subchlor., Ol Croton., Santonin., Vin. Sem. Colchici, Tinct. Camph. Co., Tinct. Opii.
7. Name a good excipient for Pills of Croton Oil, of Balsam of Copaiba, of Quinine, of Camphor.
8. If bottles containing the following substances were left unstopped, and so exposed to the air, in what way would each suffer? and would they become weaker or stronger? Laudanum, Hydrocyanic Acid, Camphor, Sesquicarbonate of Ammonia, and Chloride of Zinc.
9. What are the proper antidotes to be applied in cases of poisoning by Arsenic, Paris Green, Strychnia, Laudanum, and Corrosive Sublimate.
10. Give a list of those Poisons, sales of which are required to be registered by the Pharmacy Act of 1871.

EFFECT OF PARIS GREEN ON VEGETATION.

Since the publication of an article on this subject in our last issue we have seen a report of some experiments conducted by Mr. McMurtrie, Chemist to the Agricultural Department at Washington, in which the points involved in the item referred to were made the special subjects of investigation.

With regard to the possibility of arsenic accumulating in the soil to such an extent as to injure or kill vegetation, it was found that until the quantity of Paris green amounted to 145·6 grams

(about $5\frac{1}{8}$ ounces) per cubic foot of soil; or 906 pounds per acre—calculating for a depth of one foot—the effect on vegetation was not apparent, but that greater quantities than this produced correspondingly injurious results.

The experiments were made on measured quantities of soil with which definite weights of Paris green had been mixed. Fifteen flower pots, of uniform size, were filled with these mixtures, and ordinary peas, of the same kind, and, as nearly as possible, of the same size, were planted therein. The plants were grown under conditions exactly similar, except in regard to the quality of the soil.

It is altogether unlikely that so large a quantity as 900 pounds of Paris green would ever be applied to one acre of land, and even were so large an amount present it would gradually disappear, under the influence of natural solvents, and in time, be altogether removed. The rotation of crops would also prevent the rapid accumulation of arsenic, as it may be presumed that potatoes would not be grown upon the same soil more than once in four or five years.

In order to determine another important point—whether plants can assimilate arsenic and thus become poisonous, the peas, and indeed the entire plants, were examined for this element, but not the slightest trace could be detected. Potatoes obtained from plants which had been treated with Paris green were also subjected to Marsh's test, but the testimony of Mr. McMurtrie is strongly corroborative of that of Professor Croft, of University College, who some time last winter sent to the Toronto *Globe* a communication containing the results of experiments made on potatoes treated with Paris green. The plants had been plentifully drenched with this substance, and the haulms—which could not be thoroughly washed—yielded, as might be expected, traces of arsenic, but the tubers, which had been well washed and peeled, gave not the slightest trace.

We have received from Professor Croft a letter relating to this subject, and particularly alluding to the article which appeared in our last number. Professor Croft thinks Davy's experiments open to objection, and promises, if time allows, to repeat them. Exception is also taken to the experiments of Drs. Snodgrass, Howland, and Brainerd, as reported at the last meeting of the Fruit Growers' Association. These gentlemen treated beets with Paris green, and afterwards found evidence of the presence of arsenic, but it is

doubted whether this may not have been mechanically adhering Paris green rather than absorbed arsenic.

We hope at a future time to lay before our readers a record of any further experiments which Professor Croft may be pleased to make on this important subject.

DAMAINA.

Following closely on Jaborandi is the new drug Damaina, the first notice of which appeared lately in the *Virginia Medical Monthly*. The writer, Dr. Caldwell, of Baltimore, says that the drug is possessed of remarkable aphrodisiac powers, increasing the sexual appetite, as well as exercising a powerful influence over the urino-genital organs of both sexes, and promoting the flow of urine. The remedy has been largely employed in Mexico, and instances are given of men, long past the ordinary term of virility, who, under the influence of Damaina have become the veritable fathers of children. The plant from which the drug is collected has not so far been referred to any definite botanical source, but is said to grow on the western coast of Mexico. It bears dark green leaves, resembling those of *Coptis trifolia*, with small white flowers, the leaves possess a marked aromatic odour and taste, peculiar and pungent, very similar to many of the *Labiatæ*. Another variety of Damaina, having yellow flowers and larger leaves, is spoken of as being often used, but possessing less activity than the white blossomed kind. In the *Pacific Medical and Surgical Journal*, Dr. McQuestin confirms the statements above alluded to, and speaks very highly of the efficacy of the plant in cases of sexual debility, or lethargy of the sexual organs. The leaves only are employed, one ounce of which, infused in a pint of water, is the ordinary quantity administered daily. The effects are manifest in a few days, and the results are described as being all that could be desired, far exceeding those following the use of phosphorus, ergot, cantharides, strychnia, or other drugs with which we are acquainted.

Since writing the above we have seen in the *Philadelphia Medical and Surgical Reporter* an article in which the editor of that journal gives the result of his experience with a quantity of the extract obtained from Dr. Caldwell. The extract contained alcohol

to the extent of one or two fluid drachms in each dose. In two instances a dessertspoonful of the extract was administered to healthy men, three times a day, for three days. No appreciable result followed, save slight stimulation from the alcohol. In three cases a continued course of the extract was administered to three persons suffering from exhaustion of the generative powers. After a three weeks trial two of them report no improvement, the third has not yet been heard from.

The editor of the journal referred to thinks this experience sufficient to enable him to record his belief "that Damaina is useless or nearly so." We think a little more extended observation is necessary before conclusions so decided are formed. We do not, however, forget the exploded cancer cure, Cundurango, and think it quite probable that Damaina may belong to the same category. The mystery which surrounds the botanical source of the plant, and the difficulty of procuring samples of the leaves, while the fluid extract may be had for the asking, are considerations which tend strongly to this conclusion.

MEETING OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.

The twenty-third annual meeting of this Association will be held on September 7th, at Odd Fellows Hall, corner of Berkeley and Tremont streets, in the City of Boston. It is hoped that this assembly will be a success, and we have little doubt but these hopes will be realized as our American friends generally make their arrangements so complete as to render failure an impossibility; in this respect we presume the congregation at "the hub of the universe" will prove no exception. We are pleased to note that Mr. Edmund Gregory, of Lindsay, has been chosen as the representative of our college, and we think no better selection could have been made.

By an omission which was quite unintentional, and for which we are sorry, an article, on Ferrous Sulphide, by Prof. Babcock, which appeared in the June number of this JOURNAL was not credited to the *Laboratory*, the periodical in which it originally appeared.

Editorial Summary.

OIL OF MAIZE.—It is not generally known that the grain of Indian corn contains a considerable quantity of fixed oil. It appears, however, from some remarks by Mr. P. L. Simmonds, editor of the *Journal of Applied Science*, that this is the case, and that the amount present varies from six to twelve per cent. Corn of Southern growth contains less oil than that of northern latitudes. The Tuscarora—a variety much esteemed for table use when in the green state—contains little or no oil. Rice corn contains the most, pop-corn ranks next, Canada corn third, and brown corn next. There is a curious difference observable in the mode of distribution of the oily and glutinous parts of Indian corn, the Southern variety always having it on the sides of the elongated seed, while the starch projects quite through the grain to its summit, and by its contraction in drying, produces the peculiar pit or depression in this variety of grain. The Burden corn, which contains a very fine white oil, is still more remarkable for this arrangement. Indian corn is much more digestible by man after extrication of the oil, though not so fattening to animals that can digest oil. The uses of oil in Indian corn are manifold. It is obviously to protect the grain from rapid decomposition in the soil from long-continued wet, and to retain a portion of food until needed by the young plant, as the oil is uniformly the first portion of the grain taken up, It serves to keep meal from souring readily, as flint corn meal will keep sweet for years, even when put in large quantities, while the Tuscarora meal will sour in a short time. The oil, when yellow, shows its colour through a transparent epidermis, or hull. The Golden Sioux, a twelve-rowed variety, is colored by the oil, in which variety the oil is transparent and colorless, and the epidermis being also free from color, the meal is white.

CALIFORNIAN BORAX.—The *Oil Paint and Drug Reporter* speaks of the decline in the price of refined borax in England, during the past year, and says that no better evidence of the substantial character of the Californian product could be given than its effect on the London market. At the beginning of 1874 the price of refined borax was £100 per ton, but at the present time it can be purchased for about half that sum. The following statements from the *Alta California* may be taken with some discount for the enthusiasm of that journal, but are, no doubt, in the main correct:—"The great borax lake will afford a very large business. Very

extensive works are now nearly completed for the refining and purifying of this borax for shipment. Millions of tons of crude borax are in sight in this immense deposit. Stimulated by the action of the railroad company, the Borax Company have put up large works, and will soon be prepared to turn out from twenty-five to fifty tons of pure borax per day. This will add largely to the frieghts of the railroad. The deposit of borax is simply unlimited. It covers an area of eighteen miles in length by six to eight miles in width, covered with crude borax from three to five feet thick. The crude material will average from 20 to 40 per cent. Ten thousand men would not take out the deposit in fifty years, and it is constantly increasing."

ANTIGALACTAGOGUE PROPERTIES OF ERGOT.—From an article in the *Philadelphia Medical and Surgical Reporter* we learn that a Russian physician, Dr. Schtscherbinenkoff has contributed to the *Centralblatt for Chirurgie* some interesting observations which were made during an epidemic of ergot poisoning in the district of Simbirski. One of the leading symptoms was that of the diminution or complete arrest of milk in lactating women. The same result was found to occur in cows that had been fed on meal which contained ergot, or that had been littered with carelessly threshed wheat which still contained some affected ears. Acting on this hint, Dr. S. employed ergot as a remedy in cases of threatened abscess of the breast, and carried it out in many cases with great advantage. He also found it useful in cases of swelling of the breast accompanied by fever, as well as those cases where it is required to arrest the secretion on account of weaning the infant. As much as a drachm of ergot was administered daily, for a week, without unpleasant results following.

THE SUPPLY OF REDWOOD *(Siquoia Sempervirens.)*—Should all other resources fail, the supply of this dye-wood in California is not likely to be very quickly exhausted. One county, Sonora, exports annually about 20,000,000 feet; but even at this rate of decrease, and supposing no new growth to take place, the supply would last for fifty years, as it is estimated that there are one thousand millions of feet now growing. Humboldt county cuts annually some forty million feet; but this would not exhaust the supply, though the same amount were taken each year for 7,600 years. Considering the fact that these counties do not contain one quarter of the timber trees of the State, there need be no apprehensions of the immediate failure of the crop of redwood.

HARDENED PAPER.—The European journals speak of the application of solution of chloride of zinc for rendering paper hard and tenacious. Unsized paper is saturated with the solution, and, when dry, is found to be quite altered in its sensible properties. Paper pulp mixed with the chloride solution, and then formed into sheets or slabs, may be turned to account in many ways, as in the manufacture of combs, buttons, handles, and other articles for which hard rubber is now employed. It has also been employed for roofing purposes, and is capable of many useful applications in the construction of houses and furniture, as by the use of a mould, or pattern, an unlimited number of casts might be very cheaply produced.

CULTIVATION OF NUTMEGS IN JAMAICA.—According to Mr. R. Thompson, Colonial Botanist, Jamaica, *(Journal of Applied Science)*, the cultivation of the nutmeg tree is very successfully carried on on that island. A number of plants have been supplied, and about 2,000 are now under propagation at the Bath Gardens, and will shortly be ready for distribution. A fine nutmeg tree growing in the vicinity has a crop of about 4,000 unusually large fruits. At present prices, this quantity—calculating ninety nuts to the pound—will realize about twenty-two dollars. However, this crop appears to be considerably above the average, as five dollars is the usual value of the annual produce of one tree. The nutmeg begins to bear about the seventh year, and the price of the fruit depends largely on the size, or number to the pound. Large nutmegs count about eighty to the pound.

NEW INSECTICIDE.—A writer in the *Industrie Blatter*, of Berlin, proposes as a substitute for *Pyrethrum roseum* and *carneum*, and, perhaps, other *pyrethra* which are now sold as insecticides, the wild rosemary, marsh cistus, *Ledum palustre*, a plant growing in the north of Europe. This plant is said to destroy fleas, bed-bugs, lice, beetles and their larvæ, and many other insects. An alcoholic tincture of the plant, to which a little glycerine has been added, is said to drive away mosquitoes from any surface to which it has been applied. It is also said to be a remedy for mosquito bites. The fresh plant is best for all these purposes, but then dry is also effective. We would suggest a trial of the powder, or a preparation of the plant, as a substitute for Paris green, for the destruction of the potato beetle.

ADULTERATION OF LINSEED OIL WITH COD-LIVER OIL.—It is said that this adulteration is now frequently practiced. The admix-

ture may be detected by treating ten parts of the suspected oil with three parts of commercial nitric acid, placed in a glass cylinder and well stirred with a glass rod. The mixture is then allowed to stand and separate. If the oil is pure it will assume a dirty yellowish-green colour, and the layer of acid will be of the same hue, but a shade brighter. If cod-liver oil be present, the upper layer will have a dark-brown or black colour, and the under layer of acid will become orange-yellow or yellowish-brown.

REMEDY FOR TOOTHACHE.—In a late number of the *Practitioner* Dr. Duckworth relates his experience with a remedy which, though not well known, is not altogether new. Instant relief from pain which had withstood all the ordinary remedies was experienced by the patient holding in his mouth for a few minutes a solution of bicarbonate of sodium of a strength of thirty grains to the ounce of water.

MODE OF PREPARING STICKS OF FUSED ALUM AND SULPHATE OF COPPER.—It is not necessary that either of these salts be run into moulds, as the crystals may be partially fused in a porcelain dish, and when of a pasty consistence, the mass may be turned out upon a warm slab and rolled out into sticks of any length and thickness. For this method we are indebted to Mr. W. Steffen, *(Pharm. Centralblatt.)*

Students' Department.

Answers to the following questions must be sent in so as as to be received by the editor before the twentieth of each month. Competitors must be engaged in the drug business, not being proprietors or having passed examination, and must furnish, with the answers sent, their real names and addresses. Answers to each of the questions must be written on *separate sheets* or slips of paper, and must be followed by the name and address of the competitor. It is trusted that all answers sent will be the *bona fide* work of competitors, and that no assistance will be sought except such as is afforded by books. Any attempt to copy *verbatim*, or in part, from any published work, will impair or altogether nullify any value which might otherwise have been assigned to such answer.

The same competitor may not carry off more than one First Prize and one Second Prize during the term of six months.

Answers requiring calculation and involving fractions must be given in decimals, which need not be carried beyond the third place.

The following books are offered this month as prizes:

FIRST PRIZES.	SECOND PRIZES.
PARRISH'S *Pharmacy.*	GRAY'S *First Lessons in Botany.*
GARROD'S *Materia Medica.*	WITTSTEIN'S *Pharmaceutical Chemistry.*
GRAY'S *Manual of Botany.*	ROSCOE'S *Chemistry.*
FOWNES' *Chemistry.*	PAREIRA'S *Selecta e Præscriptis.*
ATTFIELD'S *Chemistry.*	*British Pharmacopœia.*
SQUIRE'S *Companion to the Pharmacopœia.*	*U. S. Pharmacopœia.*
BENTLEY'S *Manual of Botany.*	KAY-SHUTTLEWORTH'S *Principles of Modern Chemistry.*
REDWOOD'S *Supplem't to the Pharmacopœia.*	PRESCOTT'S *Proximate Organic Analysis*

Successful competitors may select from any of the above works, and, on notifying the Editor, the book selected will be forwarded by post.

Contestants may forward their answers by book post, at the rate of two ounces for one cent, provided the rules be adhered to of leaving open the ends of the package, or cutting a strip off each end of the envelope; not enclosing any matter which could be deemed correspondence; and endorsing the packet "*Manuscript. By Book Post.*"

Address *Can. Pharm. Jour.*, Box 517, TORONTO.

QUESTIONS.

1. *Chemistry.*—Three volumes of hydrogen and one volume of nitrogen are contained in two volumes of gaseous ammonia—Calculate the specific gravity of the latter, giving the sum by which the result is obtained.

2. *Pharmacy.*—State the proportion of active ingredient in each of the officinal preparations of opium, and its alkaloids.

3. *Materia Medica.*—Arrange the Tinctures, Wines and Spirits of the *Pharmacopœia* into groups with similar doses—giving dose; Give the Powders of the *Pharmacopœia* with dose, operation, and use of each.

4. *Botany.*—(1) Give special forms of leaves; (2) explain what is meant by union and consolidation of parts in calyx and corolla, giving instances of each; (3) state office performed by the ovule in the vegetable economy; (4) of what does it consist; (5) name, and give instances of the four principal kinds.

5. *Prescriptions.*—Write a prescription, in full Latin, for twelve powders, one to be administered twice or thrice in the day, each powder to contain four grains of Rhubarb, one of Calomel, one of Carbonate of Soda, and half a grain of Cinnamon.

6. *Dispensing.*—What are the errors of dose, compatibility, &c. in the following presciption:—

Liq. Bismuth ʒij
Acid. Mur. Dil ʒi
Tincture Hyoscyam. ʒij
" Nux Vomic ʒv
Aquæ ad ʒviii.

Coeh. mag. ter in die.

LAST MONTH'S QUESTIONS.

Dispensing.—The white powder was Carbonate of Zinc. A Carbonate is easily known by its effervescence with the mineral acids. If this experiment be conducted in a test tube, and a little of the resulting gas be conducted into a vessel containing Lime water, the production of Carbonate of Lime will confirm the opinion already formed. The confirming tests for Zinc are Hydro-sulphate of Ammonia, which throws down a white precipitate, and Ammonia and Potash, which throw down white gelatinous precipitates, soluble in excess. If Carb Zinc is heated before the blow pipe with Nitrate of Cobalt, the resulting mass is green. Our young friends should not fail to try these reactions for themselves. Take nothing for granted. There is no teacher like experience. If there is no blow pipe in the store, make one out of a tobacco pipe and a piece of rubber tubing. There is but little need for expensive apparatus.

Prescriptions.—The only excessive dose is that of Liq. Pot. Arsenitis. The dose of Conf. Opii is full, but not excessive; and consequently beyond the dispenser's jurisdiction. There is no instance of incompatibility in the prescription. Liq. Pot. Arsenitis is not incompatible with Conf. Opii. The mixture may be inelegant but all the ingredients are compatible.

E. G.

ORDER OF MERIT.

Maximum Number of Marks = 60.0.

No.	NAME.	Chemistry.	Pharmacy.	Materia Medica.	Botany.	Prescriptions.	Dispensing.	Total
1	W. McDonald, Hamilton	9	10	9	10	8	9	55
2	John Forbes, Fergus	7	8	8	9	10	9	51
3	"Aloes," Pembroke	7	10	10	9	7	7	50
4	R. McCormick, Ottawa	10	10	*c*	7	7	9	43
5	F. P. Shannon, Colborne	9	9	10	10	4	0	42
6	J. Parker, Bowmanville	8	7	*c*	6	8	10	39
7	E. D. Martin, Milton West	7	7	*c*	9	6	7	36
8	"Ferri," London.....	7	8	*c*	5	8	8	36
9	A. J. Thompson, Strathroy	6	10	*c*	8	8	0	32
10	"Aurantium," Pembroke	5	7	*c*	5	4	0	21

The FIRST PRIZE is awarded to Mr. W. McDONALD, Hamilton; the SECOND PRIZE to Mr. GRAY ("Aloes"), Pembroke.

Mr. Yeomans reports that most of the answers received in Materia Medica were copied, either entire or in part, from Owen's Conspectus. This shows perceptibly in the rating, and we hope this expedient will not be again adopted.

Books and Pamphlets.

A Report on the Hygiene of the United States Army, with Descriptions of Military Posts. War Department, Surgeon-General's Office, Washington, U. S. A., 1875.

This report, which extends over five hundred and sixty-nine pages, comprises the returns made by the various surgeons in charge of the numerous military posts scattered throughout the United States. The information in these reports is classed under the following general heads: 1. On the food of the Army, its quantity, quality, and mode of preparation; diet of sick, etc. 2. Duties of medical officers on scouting parties and expeditions; nature and amount of medical supplies required. 3. Personal cleanliness of the men; regulations in regard to bathing. 4. On military punishments, and their effect on the health and morale of the soldier.

In addition to this there are very full and complete meteorological tables, covering a period of four years. These were compiled and completed under the direction of Assistant-Surgeon J. J. Woodward, and furnish very valuable indications for the medical geography of the country. On this subject there are reports from over two hundred posts, scattered from Alaska to Florida, giving a range of all climates, altitudes, and soils, with the hygienic and endemic influences peculiar to such. The effects of high altitudes and mountain climates upon lung diseases are, in some instances, particularly treated of, and the general conclusion is arrived at that altitude and a rarified atmosphere are not, *per se*, beneficial in cases of phthysis, but that it is the dryness of the air, the exercise, and the out-door life which produce good results in those cases which are "able to stand it."

Taken in detail and as a whole the report is a very exhaustive and complete one, and will furnish much valuable information to those interested in the subjects of which it treats. The work is in quarto form, and is illustrated with seventy-six wood cuts, and a large number of lithographs, maps, etc.

Plain Directions for the Care of the Sick, by a Fellow of the College of Physicians of Philadelphia, and Physician to several of the Charitable Institutions of the same City. New York, 1875.

This little work, comprising some seventy-two pages, was originally designed for gratuitous distribution among the sick. The expenses incident to the publication were borne by a generous friend to those in distress. In the case of the present edition, the Mutual Life Insurance Co. stand in the stead of the kind donor, and present to each of their policy holders a copy of the work. The book pro-

mises to be very useful, and contains a great amount of valuable information on the care of the sick, on diet, ventilation, &c. The plan of arrangement was suggested by Florence Nightingale's "Notes on Nursing;" of which work a free use has been made. The matter is well classified, and rendered easily available by conspicuous typographical headings and a copious index.

Plain Directions for Accidents, Emergencies, and Poisons. New York, 1875.

The origin and authorship of this book are similar to that of the work noticed in the preceding paragraph. The first seventy-four pages are devoted to plain directions as to what should be done in cases of accidents and emergencies. This information is conveniently classified under the headings: Asphyxia (which includes the following modes: *drowning, hanging, suffocation by carbonic acid, burning charcoal, coal, gas; foreign bodies in the throat, foul air in drains, &c.),* Sunstroke, Accidents from Lightning, Shock, Fainting, Shock from Bathing, Burns and Scalds, Contusions, Fractures and Dislocations, Wounds, Bites, Foreign Bodies in the Eye, Nostrils, Ear, &c., Frost Bites, Chilblains, Convulsions.

The remaining fifty-two pages are devoted to Poisons, of which a very complete and scientific enumeration is made. The treatment in each case is given in sufficient detail, and yet in so concise a manner as to be quickly understood.

We consider this little book to be one of the handiest and most useful which we have ever seen.

Annual Report of the College of Pharmacy of the City of New York, and Fourth Annual Report of the Alumni Association. New York, 1875.

This Report shows the College to be in a flourishing condition. The number of students attending the winter session was 161, and of forty-eight who went up for examination, thirty-seven were found duly qualified to receive the degree of "Graduate in Pharmacy." The museum and library have, during the year, received many valuable additions, amongst which may be noted a tolerably complete herbarium, embracing 3,300 specimens.

The Report also contains that of the Board of Pharmacy of the city and county of New York. From this we learn that, during 1874, 104 candidates were examined, of whom 33, or about one-third, were rejected. It will be remembered that this Board is empowered to license pharmacists and their assistants doing business in the district, and that the examination must be passed ere this can be done.

On Spasmodic Urethral Stricture. By F. N. Otis, M.D. New York: G. P. Putnam & Sons, 1875. 8vo. pp. 15.

Reprinted from the *Archives of Dermatology.*

Sur les Differents Modes D'Administrer le Phosphore : par le Docteur C. Mehu. Paris.

For this interesting paper we are indebted to the author. A summary of the chief points of interest will be found in another part of this journal.

Untersuchungen aus dem Pharmaceutischen Institute in Dorpat. Von Ed. Marquis.

This paper, which is on the Sarsaparillas of Commerce, has already appeared in the August number of this journal, page 14.

Vergleichende Untersuchungen der Wichtigeren im Handel Vorkommenden Sorten des Galbanum und Ammoniakgummis; von Edward Hirschsohn.

For this and the preceding paper we are indebted to Professor Dragendorff, of Dorpat, Russia.

Varieties.

For Removing Freckles.—In answer to a correspondent the editor of the *Druggists' Circular* says:—"The use of corrosive sublimate for the above purpose is not without objection, on account of the danger of having a deadly poison lying around upon the toilet table along with so many harmless substances; but it is largely put up and sold for the purpose named. Probably if applied with caution to a *sound* skin, no injurious effect would be produced, provided the solution is sufficiently dilute. The preparation below is one of the most desirable forms for the exhibition of this agent.

Gowland's Lotion.

Take—Sweet almonds (blanched)..... 1 ounce.
Bitter " " ..... ½ "
Bichloride of mercury .....15 grains.
Alcohol..... 2½ drachms.
Water sufficient to make 1 pint.

Make an emulsion of the almonds with the water, strain, add the mercurial salt dissolved in the spirit, and make the whole measure one pint by the addition of water, if necessary. This lotion has also been largely used in obstinate eruptions and glandular swellings. Simple solutions of citric acid are, it is said, often quite effective in the removal of freckles, but in some cases they fail, when a preparation similar to Gowland's is resorted to.

Freckle Lotion.

Take—Citric acid ..... 3 drachms.
Rose water.....12 fl. ounces.

To apply both of these lotions it is only necessary to moisten a sponge or the fingers with them, and to wet the skin by gentle rubbing."

Oil of Orris (*Oleum Iridis Florentinæ*) was, until recently, manufactured in Paris, and at present by Schimmel & Co., of Leipzig. According to Hager it has the following properties: At the ordinary temperature it is a pea-yellow solid, resembling the basilicon ointment ("Phar. Germ.") in colour and consistence. It is lighter than water, fuses at 38° to 40° C. to a transparent liquid, and commences to congeal at about 28° C. Two drops of the fused oil dissolve in 10 or 12 drops of warm stronger alcohol, and the solution does not separate at a medium temperature. Three drops of the oil and 20 to 25 drops of concentrated sulphuric acid carefully heated to 30° C., yield a clear red-brown liquid, which, after ten minutes, dissolves in 7 c. c. of 90 per cent. alcohol, with a light violet colour, gradually becoming darker. Two drops of a solution of the oil in petroleum benzin evaporated spontaneously leave a residue, which, with a magnifying power of 50 to 100 diameters has a ramifying appearance after a few hours, and shows distinct crystals after a day. One part of orris oil yields, with 3,000 to 4,000 parts of weaker alcohol, a solution of which a few drops put upon a handkerchief develop a persistent odor of violet.—*Phar. Cent. Halle, in Am. Jour. Pharm.*

On the State of Cantharidine in Vesicating Insects.—M. Beguin has endeavoured, by the use of acetic ether, and also by means of chloroform, to discover the state in which the active principle of cantharides exists in those insects. After having treated a quantity of cantharides with chloroform, and extracted the cantharidine which was in a free state, he was unable by further treatment with acetic ether to obtain any additional amount. From his research he concludes that cantharidine exists in coleoptera in a free state, and not, as M. Bhun imagines, as cantharidates, for had the latter been present, the acetic ether would have dissolved them. M. Beguin concludes that either acetic ether or chloroform may be employed to extract the active principle; he gives, however, the preference to acetic ether, as proposed lately by M. Galippe.—*Chemist and Druggist.*

Clarification of Alcoholic Solution of Shellac.—One part of shellac yields, with 6 parts of 90 per cent. alcohol, a solution which is turbid from suspended wax. If the solution is agitated with 6 parts of powdered chalk, the greater portion becomes transparent, and the white sediment is readily filtered through paper or felt. If three parts of the turbid shellac solution are agitated with one part of petroleum benzin, the mixture soon separates into a llght-coloured benzin solution of wax, and into a clear, yellowish-brown solution of shellac in alcohol. Shellac thus purified, is left behind, on the evaporation of the alcohol, as a brittle mass; but on adding to the alcoholic liquid from one to three per cent. of Venice turpentine, no brittleness is observable.—*Phar. Cent. Halle*, 1875, *No.* 17, *from Phar. Zeit. f. Russl. Abstract in Am. Jour. Pharm.*

A Quaint Prescription.—Dr. Upham, at the meeting of the Massachussetts Medical Society, read the subjoined old-fashioned prescription, sent by a famous London physician to John Winthrop, Governor of the Colony of Massachusetts Bay, A.D. 1643. It is called a "Remedie against Fevers, Poysons, Small pox, the Plague, and such like:" "R. In the month of March take Toades, as many as you will, alive; putt them into an earthen pott; cover it with a broad tyle, then overwhelm ye pot, so ye bottom may be uppermost; putt charcoales round about it, and in ye open ayre, not in an house. Sett it on fire; when cold take out ye toades, and

in an iron mortar pound them well, and tearce them (whatever that may be)—a black powder will result. Of this you may give a dragme inwardly in any affection. For prevention, ½ a dragme will suffice. Moderate the dose according to ye strength and constitution of ye partie."—*Pharmacal Gazette.*

COLORED INK POWDERS.—Red Ink Powder—Take 20 grs. pure carmine, label No. 1; 18 grs. gum arabic, label No. 2; these are to be put up in separate packages. For use, dissolve No. 1 in three fluid oz. of ammonia water, add No. 2, and agitate at intervals until complete solution has been effected. Thirty grains of good drop lake may be substituted for the carmine where a saving in cost is an object. This is said to produce an ink having a superb color. Purple Ink Powder.—Take 1 lb. logwood, rasped, label No. 1; 1½ oz. verdigris, and 1 lb; 2½ oz. alum, label No. 2; 4 oz. gum arabic, label No. 3. For use, infuse No. 1 in 1 gal. of water, and after twenty-four hours strain the infusion into a vessel containing No. 2; add No. 3, and agitate at intervals until solution takes place. Allow the whole to remain three or four days before use. BlueInk Powder (Mohr's).—Take pure Prussian blue, 6 parts; oxalic acid, 1 part. Mix. For use, rub the powder to a smooth paste with a little warm water, and then dilute with enough to render it fluid and of the proper depth of color. —*Druggists' Circular.*

Registrar's Notices.

RENEWALS CONTINUED.

Bannister, Edw'd., Brampton.
Bauld, E. H., Beaverton.
Brown, Wm., Owen Sound.
Cattle, G., Goderich.
Chandler, E., Springfield.
Davids, Jos., Toronto.
Elwell, G. T. O., Ottawa.
Hickson, E., Seaforth.
Kneeshaw, R., Ingersoll.
Mitchell, C., St. Thomas.
Morton, Thos., Picton.
McPhail, Hugh, Cartwright.
Parker, Mrs. I, Owen Sound.
Parker, S. J., Owen Sound.
Patton, R. M. M., Chatham.
Radley, S. D., Chatham.
Richardson, M., Flesherton.
Slaven, H. B., Orillia.
Slaven, J. W., Orillia.
Stark, H. G., Hamilton.
Strong, R. S., Galt.
Templeton, Robt., Ottawa.
Williams, J. F., Bradford.
Windlow, John, Bethany.
Yeomans, L. H., Mount Forest.

NEW REGISTRATIONS

Blogg, John K., Toronto.
Hanover, W., Almonte.
Hemsworth, M. F., Shipley.
Howarth, Chas. W., Toronto.
Howarth, John, Toronto.

DRUGS, MEDICINES, &c.	$ c.		$ c.
Acid, Acetic, fort	0 13	@	0 14
Benzoic, pure	0 22		0 27
Citric	1 35		1 50
Muriatic	0 03½		0 05
Nitric	0 10		0 13
Oxalic	0 20		0 23
Sulphuric	0 03		0 05
Tartaric, pulv	0 49		0 50
Ammon, carb. casks	0 22		0 24
" jars	0 23		0 24
Liquor, 880	0 25		0 28
Muriate	0 14		0 15
Nitrate	0 45		0 60
Æther, Acetic	0 45		0 50
Nitrous	0 40		0 42
Sulphuric	0 50		0 50
Antim. Crude, pulv	0 15		0 17
Tart "	0 55		0 65
Alcohol, 95 per ct. Cash	1 97		2 07
Arrowroot, Jamaica	0 18		0 22
Bermuda	0 50		0 65
Alum	0 02¾		0 03½
Balsam, Canada	0 33		0 38
Copaiba	1 10		1 15
Peru	3 40		3 75
Tolu	2 00		2 10
Bark, Bayberry, pulv	0 18		0 20
Canella	0 17		0 20
Peruvian, yel. pulv	0 35		0 50
" red "	1 60		1 70
Slippery Elm, g. b.	0 18		0 20
" flour, packets	0 28		0 32
Sassafras	0 15		0 18
Berries, Cubebs, ground	0 20		0 25
Juniper	0 06		0 10
Beans, Tonquin	0 62		1 10
Vanilla	18 00		20 00
Bismuth, Alb	2 50		2 75
Carb.	2 65		2 90
Camphor, Crude	0 33		0 40
Refined	0 43		0 47
Cantharides	2 20		2 30
Powdered	2 30		2 40
Charcoal, Animal	0 04		0 06
Wood, powdered	0 10		0 15
Chiretta	0 23		0 30
Chloroform	1 10		1 55
Cochineal, S. G.	0 58		0 70
Black	0 75		0 90
Colocynth, pulv.	0 60		0 65
Collodion	0 70		0 80
Elaterium	3 20		4 00
Ergot oz	0 70		0 75
Extract Belladonna	1 90		2 00
Colocynth, Co	1 25		1 75
Gentian	0 50		0 60
Hemlock, Ang	0 00		0 95
Henbane, "	1 80		1 90
Jalap	5 00		5 50
Mandrake	1 75		2 00
Nux Vomic oz	0 40		0 50
Opium oz	1 40		
Rhubarb	5 00		5 50
Sarsap. Hon. Co	1 00		1 20
" Jam. Co	3 50		4 00
Taraxacum, Ang	0 70		0 80
Flowers, Arnica	0 17		0 25
Chamomile	0 28		0 32
Gum, Aloes, Barb. extra	0 70		0 80
" " good	0 40		0 50
" Cape	0 16		0 20
" " powdered	0 20		0 30
" Socot	0 50		1 35
" pulv	1 00		0 00
Arabic, White	0 38		0 60
" powdered	0 60		0 75
" sorts	0 19		0 24
" " powdered	0 42		0 50
" com. Gedda	0 13		0 16
Assafœtida	0 40		0 42
British or Dextrine	0 13		0 15
Benzoin	0 35		0 75
Catechu	0 12		0 15
" powdered	0 25		0 30
Euphorb, pulv	0 35		0 40
Gamboge	1 00		1 20
Guaiacum	0 45		1 00
Myrrh	0 50		0 85

DRUGS, MEDICINES, &c.—*Contd.*	$ c.		$ c.
Sang Dracon	0 60		
Scammony, powdered	5 50		6 00
" Virg. "	14 50		—
Shellac, Orange	0 80		0 85
Gum, Shellac, liver	0 60		0 70
Storax	0 40		0 45
Tragacanth, flake	1 10		1 75
" common	0 53		0 65
Galls	0 22		0 30
Gelatine, Cox's 6d	1 15		1 20
Glycerine, common	0 18		0 23
Vienna	0 25		0 28
Prices	0 60		0 75
Honey, Canada, best	0 16		0 17
Lower Canada	0 14		0 16
Iron, Carb. Precip	0 20		0 25
" Sacchar	0 40		0 55
Citrate Ammon	1 40		1 50
" & Quinine, oz	0 52		0 55
" & Strychine	0 20		0 25
Sulphate, pure	0 08		0 10
Iodine, good	4 30		5 00
Resublimed	5 10		5 50
Jalapin	1 25		1 50
Kreosote	2 40		2 50
Leaves, Buchu	0 22		0 32
Foxglove	0 25		0 30
Henbane	0 35		0 40
Senna, Alex	0 27		0 60
" E. I.	0 14		0 20
" Tinnevilly	0 20		0 30
Uva Ursi	0 15		0 17
Lime, Carbolate brl	5 50		—
Chloride	0 05		0 06
Sulphate	0 08		0 12½
Lead, Acetate	0 15		0 16½
Leptandrin oz.	0 60		—
Liq. Bismuth	0 50		0 60
Lye, Concentrated	1 50		1 60
Liquorice, Solazzi	0 50		0 55
Cassano	0 23		0 40
Other brands	0 14		0 25
Liquorice, Refined	0 35		0 45
Magnesia, Carb. 1 oz.	0 20		0 25
" 4 oz.	0 17		0 20
Calcined	0 65		0 75
Citrate gran.	0 60		0 75
Mercury	1 25		1 35
Bichlor	1 30		1 50
Chloride	1 50		1 70
C. Chalk	0 65		0 70
Nit. Oxyd	1 70		1 90
Morphia Acet	3 45		3 70
Mur.	3 45		3 70
Sulph.	3 60		3 85
Musk, pure grain oz	25 00		—
Canton	0 60		1 20
Oil, Almonds, sweet	0 45		0 47
" bitter	14 00		15 00
Aniseed	4 00		4 25
Bergamot, super	8 00		8 25
Caraway	3 20		3 50
Cassia	2 00		2 25
Castor, E. I	0 13¾		0 14
Crystal	0 22		0 25
Italian	0 26		0 28
Citronella	1 05		1 15
Cloves, Ang	3 75		3 80
Cod Liver	1 25		1 50
Croton	1 40		1 50
Juniper Wood	0 80		1 00
Berries	2 75		3 00
Lavand, Ang. oz.	0 00		1 00
Exotic	1 25		1 50
Lemon, super	3 80		4 00
ord	3 20		3 40
Orange	3 00		3 25
Origanum	0 65		0 75
Peppermint Ang	15 00		16 00
" Amer.	5 50		7 00
Rose, Virgin	8 50		8 75
" good	7 00		7 25
Sassafras	0 75		1 90
Wintergreen	5 25		5 50
Wormwood, pure	4 00		6 00
Ointment, blue	1 10		1 25
Opium, Turkey	6 25		6 50
pulv	9 50		10 00

DRUGS, MEDICINES, &c.—*Cont'd*	$ c.	$ c
Orange Peel, opt.	0 35	0 36
" good	0 15	0 20
Pill, Blue, Mass.	1 00	1 20
Potash, Bi.chrom	0 18	0 20
Bi-tart	0 33	0 35
Carbonate	0 14	0 20
Chlorate	0 35	0 40
Nitrate	8 00	9 00
Potass um, Bromide	65	0 75
Cyanide	0 60	0 70
Iodide	3 60	3 80
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 10	—
" 100 oz. case.	2 05	—
" 25 oz. tin..	2 05	—
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	90	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 00	1 10
" " 2nd	0 60	0 70
" French	0 75	—
Sarsap., Hond	0 53	0 60
" Jam	0 88	0 90
Squills	0 10	0 15½
Senega	1 00	1 10
Spigelia	0 25	0 30
Salt, Epsom	2 50	3 00
Rochelle	0 30	0 32
Soda	0 02½	0 03
Seed, Anise	0 13	0 16
Canary	0 17	0 17
Cardamon	2 00	2 10
Fenugreek, g'd	0 08	0 09
Hemp	0 06½	—
Mustard, white	0 14	0 16
Saffron, American	0 75	0 85
Spanish	12 00	13 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 03¾	0 05
Bicarb. Newcastle	5 75	6 25
" Howard's	0 14	0 16
Caustic	0 05½	0 05¾
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
DYESTUFFS.		
Annatto	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
Copperas, Green	0 01½	0 02
Cudbear	0 16	0 25
Fustic, Cuban	0 03	0 04
Indigo, Bengal	2 40	2 50
Madras	0 85	0 90
Extract	0 26	0 30

DYESTUFFS—*Continued.*		
Japonica	0 07	0 08
Lacdye, powdered	0 33	0 38
Logwood	0 01½	0 03
Logwood, Camp	0 01¾	0 03
Extract	0 12¼	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 22	0 28
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 07 @	0 08
" refined	0 25	0 30
Blue, Celestial	0 08	0 12
Prussian	0 65	0 75
Brown, Vandyke	0 10	0 12½
Chalk, White	0 01	0 01½
Green, Brunswick	0 07	0 10
Chrome	0 16	0 25
Paris	0 30	0 35
Magnesia	0 20	0 25
Litharge	0 07	0 09
Pink, Rose	0 12½	0 15
Red Lead	0 07¼	0 08
Venetian	0 02½	0 03½
Sienna, B. & G	0 07	0 08
Umber	0 07	0 10
Vermillion, English	1 50	1 60
American	0 25	0 35
Whiting	0 1	0 1½
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 03½
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 03¾	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 80	4 25
Clear, pale	5 75	7 25
Spirits Turpentine	0 45	0 47
Tar Wood	3 90	4 25
OILS.		
Cod	0 63 @	0 70
Lard, extra	1 10	1 20
No. 1	105	1 10
No. 2	0 90	0 95
Linseed, Raw	0 60	0 66
Boiled	0 63	0 65
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 67½	0 70
Straw	0 62½	0 65
Sesame Salad	1 30	1 55
Sperm, genuine	2 65	
Whale refined		