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THE CANADIAN PHARMACEUTICAL JOURNAL.

SUPPLEMENT.

VOL. I.

TORONTO, ONT., DECEMBER, 1868.

No. 8.

AN ACT

To regulate the Sale of Poisons, and respecting Chemists, Druggists, and Apothecaries.

WHEREAS, it is expedient for the safety of the public, that persons engaged in the sale of dangerous, poisonous and medicinal substances, should be acquainted with their nature and uses.

Therefore, Her Majesty, by and with the advice and consent of the Legislative Assembly of Ontario; enacts as follows:—

I. From and after the first day of July, A.D. 1869, it shall be unlawful for any person to sell, or keep open shop, for retailing, dispensing, or compounding Poisons, or to assume, or use, the title "Chemist and Druggist;" or "Chemist;" or "Druggist;" or Pharmacist;" "Apothecary;" or "Dispensing" Chemist; or "Dispensing Chemist;" or "Druggist;" in any part of the Province of Ontario, unless such person shall be registered under this Act; or unless such person has been engaged in such business, on his own account, or in partnership with some other person, before the passing of this Act.

II. The several articles named or described in Schedule A, shall be deemed to be poisonous, within the meaning of this Act; and the Council of the Pharmaceutical Society of Ontario, hereinafter mentioned, may, from time to time, by resolution, declare that any article in such resolution named, ought to be deemed a poison within the meaning of this Act, and, thereupon, the said Society shall submit the same for the approval of the Lieutenant Governor in Council, and if such approval shall be given, then such resolution and approval shall be advertised in the *Ontario Gazette*, and on the expiration of one month from such advertisement, the article named in such resolution shall be deemed to be a poison within the meaning of this Act, and the same shall be subject to the provisions of the next following section of this Act, or such of them as may be directed by the Lieutenant Governor, in Council.

III. It shall be unlawful to sell any poison, either by wholesale or retail, unless the box, bottle, vessel, wrapper or cover in which such poison is contained, be distinctly labelled with the name of the article, and the word "Poison;" and if sold by retail, then also with the name and address of the proprietor of the establishment in which such poison is sold; and it shall be unlawful to sell any poison mentioned in the first part of Schedule A,

to any person unknown to the seller, unless introduced by some person known to the seller, and on every sale of any such article, the person actually selling the same shall, before delivery, make an entry in a book to be kept for that purpose, stating in the form set forth in Schedule B, to this Act, the date of the sale—the name and address of the purchaser—the name and quantity of the article sold—the purpose for which it is stated by the purchaser to be required—and the name of the person, if any, who introduced him—to which entry the signature of the purchaser shall be affixed.

IV. For the purpose of more effectually carrying out the objects of this Act, it shall be lawful for the persons at the time of the passing of this Act, engaged as Principals, or Assistants, in the business of an Apothecary, or Chemist and Druggist, to form themselves into a Society, to be called "The Pharmaceutical Society of Ontario," and every person so engaged in business on his own account, shall, upon payment of a fee of four dollars, to the Treasurer of the said Society, be entitled to be enrolled as a Member of the said Society, and every person so engaged as a Clerk, Assistant, or Apprentice, on payment of a fee of two dollars, shall be entitled to be enrolled as an Associate of the said Society.

V. Any Associate may, upon passing such an examination as may be prescribed by the Council, be admitted and enrolled, as a Member of the said Society.

VI. William Elliot, Hugh Miller, and W. H. Dunsbaugh, of the City of Toronto; John Winer, and A. Hamilton, of the City of Hamilton; B. A. Mitchell, and William Saunders, of the City of London, E. H. Parker, of the City of Kingston; William M. Massey and John Roberts, of the City of Ottawa; Joseph H. Parker, of the Town of Owen Sound; James Mills, of the Town of St. Catherines; J. Hawkes, of the Town of Cornwall; F. Brendon, of the Town of Brantford; F. Jordan, of the Town of Goderich; C. Stork, of the Town of Brampton; C. Brent, of the Town of Port Hope; E. Gregory, of the Town of Lindsay; and J. W. Gihmour, of the Town of Peterborough; and such other persons as may become Members, or Associates of the said Society, under the provisions of this Act, shall be, and are hereby constituted, a body politic and corporate, under the name of "The Pharmaceutical Society of Ontario."

VII. Until other persons be elected as hereinafter provided, the thirteen persons first hereinbefore named shall be the Council, or Board of Directors, of the said Society, and shall act as a Board to grant certificates of competency to conduct the business of a Chemist and Druggist, and to be registered under this Act. The first

Persons, selling or compounding poisons, or assuming the title of Chemist and Druggist, to be qualified.

Persons within the meaning of the Act.

Persons to be properly labelled, and to under certain conditions and restrictions.

Chemists & Druggists may form a Society. Terms of membership.

Associates, on passing examination may be admitted as members.

Incorporation of the Pharmaceutical Society of Ontario.

Council to have power to grant certificates of competency.

meeting of said Council shall be held on the first Wednesday in February, 1869, at the City of Toronto.

Council to consist of thirteen members.

VIII. The said Pharmaceutical Council, to be elected as hereinafter mentioned, shall consist of thirteen members, who shall hold office for two years. Any member of said Council may, at any time resign, by letter directed to the Registrar of said Society, and in the event of any vacancy occurring, the remaining members of the Council shall fill up such vacancies from the members of the Society.

First election of Council to take place in July 1869.

IX. The first election shall take place on the first Wednesday in July, A.D. 1869, at such place as shall be fixed by resolution of the said Provisional Council, and the Registrar to be appointed by the said Council shall act as Returning Officer at the said election, and the persons entitled to vote at such first election, shall be all persons who are, at the time of the passing of this Act, engaged as Chemists and Druggists, on their own account, or in partnership with any other person, in the Province of Ontario.

Subsequent elections to take place on the 1st Wednesday in July in every second year.

X. Every subsequent election shall be held on the first Wednesday in July, in every second year, until otherwise by By-law appointed, and the persons qualified to vote at such second election shall be such persons as are members of the said Society.

Council to elect a President, Registrar, and other officers.

XI. The said Council, shall, at their first meeting, elect from themselves a President, and shall appoint a Registrar and such other officers as the said Council may consider necessary. The Registrar to be a member of the Council.

Council may hold two sittings every year for granting certificates.

XII. The said Council may hold two sittings in every year, for the purpose of granting Certificates of Competency, at such times and places as they may, by resolution, appoint.

Notice of examination to be given.

XIII. Every person desirous of being examined touching his qualifications to act as a Chemist and Druggist, shall, at least one month before the sittings of the said Council, pay into the hands of the Registrar the required fees, together with a notice of his intention to present himself for such examination.

Persons passing examination may be entered as chemists and druggists.

XIV. Any person having passed such examination to the satisfaction of a majority of the examiners, shall be entered upon the roll of registered Chemists and Druggists. Such examination may be conducted by the members of the Council, or by persons appointed by them.

Duty of Registrar to make and keep register.

XV. It shall be the duty of the Registrar to make and keep a correct Register in accordance with the provisions of this Act, as shown in schedule "C," of all persons who shall be entitled to be registered under the Act, and to enter opposite the names of all registered persons who shall have died, a statement of such fact, and from time to time, to make the necessary alterations in the addresses of the persons registered under this Act.

Evidence of qualification to be given before registration.

XVI. No names shall be entered in the Register, except of persons authorized by this Act to be registered; nor, unless the Registrar be satisfied by proper evidence, that the person claiming is entitled to be registered; and any appeal from the decision of the Registrar may be de-

ceded by the Council of the said Society; and any entry that shall be proved, to the satisfaction of such Council, to have been fraudulently or incorrectly made, may be erased from or amended in the Register, by order of such Council.

XVII. All persons, who, at the time of the passing of this Act, were in business as Chemists and Druggists, or Chemists, Druggists or Apothecaries, upon their own account, or in partnership with any other person, shall be entitled to be registered under this Act, upon production to the Registrar of such evidence of their having been so engaged as the Council of the said Society may require, and upon payment of a registration fee of two dollars; and, after the first day of July, 1871, it shall not be lawful for any person whatsoever, unless as hereinafter excepted, to sell, or keep open shop, for retailing, dispensing, or compounding poisons; or to assume or use the title "Chemist and Druggist," or Chemist, or Druggist, or Pharmacist, or Apothecary, or Dispensing Chemist, or Druggist, in any part of the Province of Ontario, unless such person shall have been registered under this Act.

XVIII. The said Pharmaceutical Society shall have power to acquire and hold real estate, not exceeding at any time, in annual value, \$5,000; and the same, or any part thereof, may alienate, exchange, mortgage, lease, or otherwise change, or dispose of, as occasion may require; and may erect buildings for the purpose of accommodating Lecturers on Chemistry, or Pharmacy, or for a Library, Pharmaceutical Museum, or Specimen Room for the use of the Members and Associates of the said Society; and all fees payable under this Act shall belong to the said Society for the purposes of this Act.

XIX. The Council of the said Society shall, subject to the supervision and disallowance thereof by the Lieutenant-Governor in Council, have authority to prescribe the subjects upon which candidates for certificates of competency shall be examined; to establish a scale of fees to be paid by the members, or associates, of the said Society, and persons applying for examination; and to make bye-laws, rules and orders for the regulation of their own meetings and proceedings, and those of the Society, and for the remuneration and appointment of examiners and officers of the Society, and for the payment of the actual expenses of the members of the said Council in attending its sittings, or in attending upon the business of the said Society, and in respect to any other matters which may be requisite for the carrying out of this Act.

XX. Any person registered under this Act, and no other, shall be entitled to be styled a "Pharmaceutical Chemist," and shall be authorized to dispense all prescriptions of legally authorized medical practitioners.

XXI. Upon any person being registered under this Act, he shall be entitled to receive a certificate, in the form in Schedule D, or to the like effect, under the corporate seal of the said Society, and signed by the Registrar.

XXII. Every Pharmaceutical Chemist, carrying on business on his own account, shall display his certificate in a conspicuous position in his place of business.

Unregistered persons may not keep shop, nor assume the title of chemist and druggists.

Pharmaceutical Society may hold real estate.

Subjects for examination to be approved by Lieutenant-Governor.

Persons registered may assume title of "Pharmaceutical Chemist," and shall be authorized to dispense prescriptions.

Persons registered to receive certificates.

Certificate must be displayed in place of business.

Pharmaceutical Chemists may dispense spirits &c., on prescription of physicians only. XXIII. Any Pharmaceutical Chemist may, upon the written prescription of any legally authorized medical practitioner, but not otherwise, furnish to any patient, any wine, spirit, or cordial which may be prescribed, for the use of such patient.

Penalties for violation of this Act. XXIV. Any person transgressing any of the provisions of this Act, or selling any poison, in violation thereof, shall, for the first offence, incur a penalty not exceeding \$20, and costs of prosecution; and for each offence committed subsequent to such conviction, a penalty of \$50, and costs of prosecution, to be recovered in a summary manner, before any two Justices of the Peace, or Police Magistrates, on the oath of one, or more, credible witnesses: one moiety to belong to the prosecutor, and the other to Her Majesty, for the public uses of this Province.

Certificate to be prima facie evidence of right to keep open shop. XXV. In any prosecution under this Act, it shall be incumbent upon the defendant to prove that he is entitled to sell, or keep open shop, for retailing, dispensing, or compounding, poisons; and to assume the title of Chemist and Druggist, or other title, mentioned in Section I, of this Act, and the production of a certificate, purporting to be under the hand of the Registrar, and under the Seal of the said Society, shall be *prima facie* evidence that he is so entitled.

Charges not recoverable in court of law or equity. XXVI. No person selling any articles in violation of the provisions of this Act shall recover any charges in respect thereof, in any Court of Law, or Equity.

Reserving rights of certain persons. On decease of Pharmaceutical Chemist, business may be carried on by his executors. XXVII. Nothing in this Act contained shall extend to or interfere with the privileges conferred upon Physicians and Surgeons, by any of the Acts relating to the practice of Medicine and Surgery, in this Province; nor shall it prevent any person whatsoever from selling goods of any kind, to any person legally authorized to carry on the business of an Apothecary, Chemist or Druggist, or the profession of a Doctor of Medicine, Physician, or Surgeon, or to prevent the members of such profession supplying to their patients such medicine as they may require; nor shall it interfere with the making, or dealing in Patent Medicines, nor with the business of wholesale dealers in supplying poisons, or other articles, in the ordinary course of wholesale dealing; and, upon the decease of any person, legally authorized, and actually carrying on the business of Chemist and Druggist, at the time of his death, it shall be lawful for the Executor, Administrator, or Trustee, of the Estate of such person, to continue such business, if, and so long only as such business shall be, *bona fide*, conducted by a Pharmaceutical Chemist, registered under this Act,

Name of offender against Act to be erased from register. XXVIII. Upon a resolution of the Council of the said Society being passed, declaring that any person, in consequence of his conviction for any offence, or offences, against this Act, is in the opinion of the Council, unfit to be on the Register, under this Act, the Lieutenant-Governor, in Council, may direct that the name of such person shall be erased from such Register; and it shall be the duty of the Registrar to erase the same accordingly.

Short title. This Act may be cited as the Pharmacy Act of 1868.

SCHEDULE A.

PART 1.

- Arsenic, and the Compounds thereof.
- Acid, Hydrocyanic (Prussic).
- Corrosive Sublimato.
- Ergot.
- Hemp, Indian.
- Strychnine, and Nux Vomica.
- Savine, and preparations of.
- Veratria.

PART 2.

- Acid, Oxalic.
- Aconite, and the Compounds thereof.
- Antimony, Tartrate of.
- Belladonna, and the Compounds thereof.
- Beans, Calabar.
- Cantharides.
- Chloroform, and Ether.
- Calomei.
- Conium, and preparations thereof.
- Croton Oil, and Seeds.
- Cyanide of Potassium.
- Euphorbium.
- Elaterium.
- Goulard's Extract.
- Hyoscinum, and preparations.
- Hellebore.
- Iodine.
- Opium, with its preparations, including Morphia, Laudanum, &c.
- Pills, Mercurial.
- Podophyllin.
- Potassium, Iodide of.
- Potassium, Bromide of.
- St. Ignatius Beans.
- Santonine.
- Scammony.
- Stramonium, and preparations.
- Valerian.
- Verdigris.
- Zinc, Sulphate of.

SCHEDULE B.

Date.	Name of Purchaser.	Name and Quantity of Poison Sold.	Purpose for which it is required.	Name of Person introducing Purchaser.	Signature of Purchaser.

SCHEDULE C.

Name.	Residence.	Qualification.	Remarks.
A. B.....	Kingston	In business prior to Pharmacy Act.....	} Dead. Erased by order of Lt.-Gov. dated Oct. 14, 1869.
C. D.....	Hamilton	Examined and Certified July 12, 1869.	

SCHEDULE D.

I hereby certify that C. D., having first passed the examination prescribed by the Pharmaceutical Council (or having been in business prior to the Pharmacy Act of 1868, as the case may be), was, on the _____ day of _____, duly registered a Pharmaceutical Chemist, and is authorized to carry on the business of Chemist and Druggist, in the Province of Ontario.

(Signed) E. F.,

Registrar of the Pharmaceutical Society.



PHARMACEUTICAL LEGISLATION.

We have received the following correspondence respecting the proposed Pharmacy Bill:

WALSINGHAM, Dec. 10, 1868.

R. W. ELLIOT, Esq.—DEAR SIR: Why not apply for an Act of incorporation for the Pharmaceutical Society during the present session of our Ontario Legislature? The matter has now been in contemplation by the profession for more than a year and a half, and the sooner action is taken with a view to obtaining legislation on the subject the better.

Yours truly, J. McLEAN,
Walsingham, Ont.

TORONTO, Dec. 12, 1868.

J. McLean, Esq., Walsingham:

DEAR SIR—Replying to your note of the 10th, I would say that an Act has been applied for, as you suggest; but before the Administration could investigate the matter, it was too late to proceed this session.

The Legislature are properly careful that bills shall meet the views of the parties interested, and good service will be done if druggists in different sections will take any proper occasion to bring the Bill, as printed in *THE JOURNAL*, to the notice of the member for their locality, and, if possible, enlist his influence and support.

Every provision contained in the proposed Bill has already been made law in Great Britain; the urging of this fact should have great weight here.

Since the Bill has been in type it appears to me that it might be improved by the following sections:

Sec. — All compounds named in the "British Pharmacopœia" shall be prepared according to the formula directed in the latest edition published "by authority;" unless the College of Physicians and Surgeons of this Province shall select another standard; or unless the label distinctly shows that the compound is not prepared according to the authorized formula.

Sec. — No Registered Chemist shall vend any damaged, spurious or adulterated drug or medicine, unless with a label attached distinctly showing such fact or facts.

Sec. — An Act passed Vic. —, chap. —, intitled an Act to Regulate the Sale of Poisons, is hereby repealed.

I think the intention of these provisions is apparent from the words used, but of course the lawmakers will make a very different story of it when it passes into their hands.

I remain, yours sincerely,

R. W. ELLIOT,

Chairman of Committee on Legislation,
Canadian Pharmaceutical Society.

ALCOHOL AS FOOD.

Dr. Letheby, M.A., M.B., &c., in a series of lectures delivered before the Society of Arts (England), on the subject of Food, made use of the following remarks regarding the use of spirituous and fermented liquors:—

"And with regard to the use of fermented liquors, there is the same universal indication of their serving a profound physiological purpose, and supplying a common want. It is no argument that, because these things have been abused they serve no purpose in man's economy. On the contrary, the fact of their use in all time, and that no saccharine liquid or juice of ripe fruit can be exposed to the air without spontaneous and almost immediate fermentation, are striking evidences of a useful purpose. They may not enter into the tissues, but they may stimulate the energies of the living frame, and rouse them into increased activity. It is not merely the brick-work and marble, so to speak, of the human body, nor yet the concrete movements of the machine, that have to be sustained, for there are rarer forms of matter, and higher manifestations of force, concerned in man's existence; and his resort to such beverages as these may be for something more than the nourishment of the system, or even the mere raising of his spirit above the common concerns of this work-o-day world.

"That alcohol stimulates the action of the nervous system there is no doubt, and it is equally certain that it increases the respiratory changes. Dr. Edward Smith is of opinion that it also lessens the action of the muscles which are subject to volition, and increases, in a certain degree, the action of those who are independent of it, as the heart and respiratory muscles. He finds, too, that it diminishes the functions of the skin, and by thus lessening the waste of animal heat, it has a conservative tendency. The effects of alcohol are, however, much modified by the substances with which it is associated in different alcoholic liquids—beers and ale, for example, act on the respiratory functions by reason of the saccharine and nitrogenous matters they contain; wine also, as well as cider and perry, have a similar action, and in proportion to their saccharine and acid constituents; brandy and gin lessen the respiratory changes, and the latter acts on the kidneys by reason of the volatile oil it contains; whiskey is uncertain in its effect upon the lungs; while rum, like beer and ale, is a true restorative, as it sustains and increases the vital powers; he says that the old-fashioned combination of rum and milk is the most powerful restorative with which he is acquainted.

"Liebig is of opinion that alcohol is burnt or oxidized in the system, and is therefore a calorific agent; but the researches of Lallmand, Perrin, and Duray, as well as those of Dr. Edward Smith, demonstrated that a large portion of it passes through the system unchanged, and appears in the breath and perspiration, as well as in the urine. They, therefore, conclude that alcohol is not a food, but a mere excitator of the nervous centres. On the other hand, Dr. Thudicum, in a rather large experiment on the students in his class (33 in number), found that of the 4,000 grammes of alcohol in the 44 bottles of wine which they drank at one sitting, only 10 grammes appeared in the urine; and assuming that about 10 grammes more were exhaled by the breath and skin, he concluded that only 0.5 per cent. of the alcohol escaped unchanged. He therefore believes that alcohol is oxidized in the body, and is a true food.

But besides this, the inquiries of Poisseuille have shown that it is a physical as well as a chemical and physiological agent, for it hinders the flow of liquids in narrow tubes, and may act in the same way on the movements of the blood in the capillary vessels. He found, for example, that when the flow of a certain quantity of water through a small tube occupied 575.8 minutes and of the serum of blood 1048.6 minutes, the flow of the same quantity of Madeira wine under the same circumstances was 1138 minutes, of sparkling Sillery 1463, and of Jamaica rum 1832. Its functions, therefore, are manifestly of a complicated nature; in fact, the whole subject is remarkably obscure, and requires the light of science to illuminate it. As in the case of tea and its allies, ages of empiricism are waiting for a philosophical interpretation.

"Lastly, as to the functions of condiments—as peppers, mustard, spices, &c. They are merely stimulants of the digestive organs, promoting the flow of the saliva, the gastric juice, and other intestinal secretions; and increasing the peristaltic movements of the viscera. They thus aid in the processes of digestion; and by giving flavor to the food, they whet the appetite, and so increase the relish for it. Indifferent food is thus made palatable, and its digestion accelerated."

yet scarcely manage their own affairs with success.

If their own special business goes wrong—if their gardens and farms are neglected; if their crops are bad, and if things in general are not exactly what they wish,—they blame the Government, and look to the next elections as a remedy for everything. The real error in these men is this: that they expect far too much from Government and far too little from themselves. Now, without wishing to give any one the slightest offence, it does appear as if some of us held similar sentiments, if we look from a Pharmaceutical point of view. Are we not all, at times, too apt to expect too much from societies and organizations? There is no doubt that they have their special purposes to fulfil, and advantages to confer; but it is necessary for every individual member of any society to exercise common-sense views about organizations. It does not follow, that because we unite ourselves to any body of men, the sin ple fact of being in connection with them makes us better men. It does not follow that mere union of any kind will at once, as if by some magical influence, improve our returns and fill our coffers with gold. Golden dreams of this sort may pervade some minds; but such utopian ideas are not in harmony with the practical notions of the present day.

It must be very disheartening to young Pharmaceutical students to be told that after all their studies and anxieties, they are simply rendering themselves more unfit to fill situations. Such a doctrine as this must be an error. As a general rule, it is rather the intelligent and well-disciplined student who is ultimately the most successful in the battle of life. His studies expand his mind in every direction. If he be a good student, his training will have developed the habits of carefulness, perseverance, thoughtfulness, and unflinching industry. Was Scheele a worse business man because he was such an industrious student? Was Stephenson a worse workman because he spent so much of his time in trying to unravel the mysteries of science? Or was Franklin a worse tradesman because he discovered that thunder and lightning were only the terrible phenomena of electricity; and who, when engaged in scientific pursuit, still had the good sense and humility to wheel his own goods in a barrow through the streets of Philadelphia to his own shop? "Knowledge is power," not only in the higher walks of life, but even to the humblest tradesman; and the greater the knowledge, the greater the power. Young students, take courage and work hard, for intelligent men must of necessity receive the greatest preference in the future. Let self-independence and improvement be your thorough determination.

At the same time, to lessen the force of objections, always strive to combine with the highest scientific attainments good business and moral habits. An eminent statesman has remarked, that we ask the opinions of intellectual men, but we follow the advice of men of character.

An idea prevails that a member of the Pharmaceutical Society gets nothing but the *Journal* for his guinea; suppose this to be true, the *Journal* itself is worth the money to any man who has a taste for his business. The highest idea connected with the subject, however, is that the founders of the Society had loftier motives than self-

aggrandizement. Their motive was how they could cure permanent advantage to those who were to follow them; and although many of us may feel to a certain extent isolated from the more immediate advantages which are enjoyed by those in London, yet we are just receiving as much pleasure and profit as it is possible under the circumstances to obtain from any institution of a like kind. If the *Journal* be not worth a guinea, it is a satisfaction and honor to feel that the few shillings thus spent can uphold such a noble institution as exists at present in London for the education of young chemists. It ought to be the ambition of every young man now entering the trade to try and prepare himself for examination, even for his own satisfaction, if nothing else. The opinions of both friends and foes to the Pharmaceutical Society culminate in the fact that there must be education, and an examination test for the future; and whatever means of training of a similar kind which may spring up, none can arise that will be able to show in its founders, greater sympathy, disinterestedness, benevolence, and desire to benefit the young men in the trade. Young men who enter the business now should ponder well before taking the steps, and instead of trying to evade the necessary studies, they should lay themselves out to master the various branches required, and they would never have cause to regret the ordeal. Where self-dependence, energy, industry, and indomitable perseverance are the guiding principles of any young man, he will seldom have occasion (unless under very peculiar circumstances) to retreat. At the same time, it should always be borne in mind that any man can do far more for himself than any society or master can do for him. It is not to be wished that combinations of men are to be undervalued; but there is a great difference between undervaluing and overvaluing them. It is pleasant for brethren to unite for the common welfare of each other, and for the protection of each other's interests; and it was this very principle which actuated the founders of the Pharmaceutical Society.

To organize, therefore, and to train the mind to the highest pitch is not only right, but it is our duty, for the sake of others as well as ourselves; but, after all, there is a sort of moral culture required to teach the proper use of organizations and intellectual attainments. This moral culture would develop all the qualities of the man; so that he would never consider himself as above his work. To be a first-class worker is the highest achievement, and to be a first-class worker requires the highest mental and moral culture; and nothing short of this will give public satisfaction. Men so trained would be above advancing their business by fibbing advertisements of cures for every disease, "Indian Brandee" dodges, etc., etc. The chemists of the future are expected to be men in every respect,—men who shall conduct their business on sound and right principles, and who will in a special manner throw character into all they do.

Chemical manufacturing, though quite in its infancy on the Pacific coast, is already entered upon by competing firms which display considerable energy within the limited field open to them by the demands of the market.

On the Extraction of Oil by means of Sulphide of Carbon.

BY M. HEYL.

A new and interesting process for the extraction of oil by means of sulphide of carbon is carried out on a large scale at the manufactory of M. E. O. Hoyl, at Moabit, near Berlin.

With respect to this method, the annals of Prussian agriculture contain details which we now transcribe. An oil of sufficiently good quality for successful employment in the lubrication of machinery, is manufactured at Moabit at the daily rate of 2,570 kilogrammes; its residue forming an excellent food for cattle. When more or less finely ground, the latter may be sent off in sacks, and requires no pulverization before being mixed with hard or soft water, but may be given to the animals at once, thus having an advantage over oil-cake. The oleaginous grain, such as colza, linseed, or mustard, arrives in ships by the Spree, and is raised into the warehouse by a perpetual screw, which every day draws up into the manufactory the necessary quantity for the work (about 33 hectolitres). It is then placed by a lift upon a sieve comprising a winnower, and thence falls, perfectly clean, into a triturator, the movements of whose cylinders are combined in such a way as to tear rather than bruise it.

After this preparation the grain passes into a revolving cylinder of sheet iron, about 0.418 m. in the diameter, and heated from below, whence it falls after desiccation into eight large vats, each holding 8.78 hectolitres and capable of revolving on two horizontal axes.

After having carefully closed the vats with covers, the sulphide of carbon is conducted into them from a higher reservoir; about 7,000 kilos. being required for the daily manufacture, of which, however, only 28 kilos. are lost, that is to say about 4 per cent. From the bottom of the vat, the solution of oil in the sulphide of carbon trickles out in a thread-like manner, and becomes clearer, until at last the sulphide runs quite pure. This indicates the precise moment when the seed is completely deprived of oil, and steam is then substituted for the sulphide, of which it entirely removes all traces.

The vats are now uncovered and reversed in order to eject the exhausted matter, which is taken up by the lifts and passed successively through three mill-hoppers heated by steam; lastly it is again ground, when it forms an alimentary powder, containing 5.3 per cent. of nitrogen, and saleable at 15.15 francs the hundred kilos. The mixture of oil and sulphide of carbon extracted from the vat washings is purified with steam, distilled twice, and cooled in three large worms and passed through refrigerators. It is then rectified, which renders it capable of employment in new operations, after being restored to the original reservoir. The trade price of sulphide of carbon is from 0.79 fr. to 0.85 fr. the kilogramme, but costs the manufactory of Moabit rather less as it is made on the premises. The oil thus obtained is sold as lamp oil after being deprived of colour; and by submitting it to a chemical process, a superior oil for purposes of lubrication is produced, possessing the advantage of being and remaining extremely fluid. Another oil is also manufactured, specially adapted to the lubrication of railway-carriage axles, inspis-

sating at a very low temperature only. Four large wrought-iron reservoirs of 7,416 cubic meters each hold large quantities of oil, and a steam engine of 12-horse power, with two boilers and a pressure of two atmospheres, give all the power and steam necessary for operation, transport, &c. The daily fabrication of 2,570 kilos. only requires the work of six men; and the careful analyses of MM. Birner of Regenwalde, and Karsten, of Kiel, could only find in the residue 2 per cent. of oil and 7 per cent. of water, whilst in the residue from the common method of pressing, 9 per cent. of oil and 15 per cent. of water were discovered.

The question has been much discussed as to whether colza oil-cake be a beneficial food for cattle; it depends on the object in view. The experience of M. Strengeld of Tharand prove that when cattle are young and have not attained their full growth, the colza oil-cake is advantageous, as the growth of animals requires food richer in nitrogen and phosphoric acid than in fatty matter; it is also beneficial to milk cows. For fattening cattle, aliments richer in fatty matter are preferable. These remarks will explain the contradictory opinions held by different agriculturists.—*Preussische Annalen der Landwirtschaft.*

On the Bleaching of Palm Oil.

BY M. ENGELHARDT.

M. Engelhardt, of Leipsic, effects in the following manner the bleaching of palm oil by means of bichromate of potash and chlorhydric acid:—

A given quantity of palm oil is placed in an iron pot, heated to about 62° C., and allowed to stand all night. The next day it is poured into a clean vessel and cooled to 40° or 37° C. Meanwhile a certain quantity of water, say for instance 45 kilogrammes of water to 1,000 of palm oil, is set to boil; in it are dissolved 15 kilogrammes of bichromate of potash, and when the solution is cooled a little, 60 kilogrammes of chlorhydric acid are added. This mixture is then poured into the palm oil, which must be quickly stirred, and in about five minutes it will assume a sombre green colour from the reducing action of the combination of the chromate with the chlorhydric acid. By continuing to stir, the separation of the oxide of chromium is completed, and the oil gradually clarifies and becomes at last quite limpid. In order to render it quite white, it is now only necessary to wash it in warm water; if, however, it should not appear quite colourless, the operation must be repeated with 0.25 kilogrammes of red chromate and 1 kilogramme of chlorhydric acid. The method is quick, free from danger, and produces very good results. The author declares that the new methods in which either gaseous chlorine, chloride of lime, or a mixture of chlorhydric acid with peroxide of manganese are proposed, are much inferior to the above process.—*Dingler's Polytechnisches Journal.*

PRESERVATION OF WOOD.—M. Bouchere reports favorably of preserving wood by displacing the sap with a solution of sulphate of copper. When it is to be guarded against attacks of the teredo, he finds coal products, containing phenic acid, most successful.

Liquid Glue,

BY M. KNAFFL.

This useful article, which is employed for a variety of purposes, as mending porcelain, glass, mother-of-pearl, &c., is not nearly so good when prepared with vinegar and nitric acid as that obtained by the following process:—Three parts of glue broken into small pieces should be covered with eight parts of water, and left to stand for some hours; one-half of chlorhydric acid and three-fourths of sulphide of zinc must then be added, and the whole exposed to a temperature of from 81° to 89° C., during ten or twelve hours. The compound thus obtained does not gelatinise; it only needs to be allowed to settle, and will be found a most useful agent for joining purposes.—*Wochenschrift des Nieder-österreichischen Gewerbevereins.*

Percentage of Resin in Jalap.

Mr. H. S. EVANS, in a report laid before the British Pharmaceutical Conference, says:

Commercially speaking, there are at the present time only two varieties of Jalap—the Vera Cruz and the Tampico. The Pharmacopœia orders the tuberos root of the *Exagonium purga*, and therefore it only should be employed in pharmacy. Fair average samples of this Jalap yield in the laboratory, according to my experience, an average of 38 per cent. of extract, prepared according to the directions of the British Pharmacopœia, 42 per cent. being the maximum, and 35.1 per cent. the minimum result. Tampico Jalap, on the other hand, yields very uncertain results, and the extract obtained is very different in its constitution to that produced from the true Vera Cruz. A careful analysis of the two varieties gave the following results:—

	Vera Cruz. Per cent.	Tampico. Per cent.
Resin insoluble in ether	15.2	6.0
“ soluble	0.0	7.1
Glucose	9.0	26.9
Total, soluble in Alcohol.	24.2	40.0

from which we see, although the aggregate yield is much greater in the Tampico Jalap, the resinous contents are very much inferior, and in these figures, I take it, is found a decided answer to the query, which root possesses the greatest medicinal value, and we can have no doubt that the Tampico Jalap should not be substituted for the Vera Cruz.

ANALYSIS OF SAMPLES OF JALAP POWDER.

Source.	Soluble in Ether	Soluble in Alcohol.		Aqueous Extractive.
		Resin.	Sacchar.	
Authenticated Vera Cruz	4.00	14.30	14.70	22.16
Authenticated Tampico	13.66	1.50	11.16	18.33
G. per Hon. Sec. Brit. Ph. Conference	9.50	2.83	8.65	20.16
D. retail unknown	8.26	3.22	10.1	17.26
E. “ from the North	5.36	12.60	10.25	21.8
F. & C. V. C.	1.20	15.0	9.66	15.26
H. assumed Tampico	7.1	6.0	17.20	8.60
I. E. S. & Co.	trace	15.2	9.00	19.50

The large imports which take place of Tampico Jalap prove that it is becoming extensively used as a substitute for the more expensive officinal root; and although the small yield of resin may cause it to be abandoned for the preparation of extract, still it is very probable it may be used for grinding, either to substitute entirely or in part with the Vera Cruz varieties.

In alluding to the above statements, the President of the Conference said:

Messrs. T. and H. Smith assert that, in many trials, they have never obtained of the resin more than 15 per cent., while our colleague, Mr. Umney, has recently obtained 21.5 per cent. from the Vera Cruz drug. Dr. Squibb considers that powdered jalap, which does not yield over 12 per cent. of dry resin, should be rejected as unfit for use, an opinion which I cannot endorse, for I have found Vera Cruz jalap of undoubted goodness which yielded but 11 per cent., and a similar result was obtained by my friend Mr. Broughton.

The Dread of an Examination.

Let us try, whilst on the eve of an opening session, to rob this ordeal of its terrors. During the past two months the secretary of this society and certain others have been overwhelmed with letters desiring information as to the exact limit of qualification required in order to enjoy the privileges accorded by the Amended Act of Pharmacy. Most of the questions asked might have been spared by an attentive reading of the September number of the *Journal*, our present duty, however, is not to enter on a review of laws and schedules, but to say a few kind, though serious, words to assistants of long standing and undoubted capability, whose inquiries have formed a minimum portion of the late correspondence. They have our most cordial sympathy and strongest wishes for their future welfare. It is perfectly intelligible, that those who are conscious of being skilled dispensers, competent to conduct the entire routine of a druggist's business, and superintending others less experienced than themselves, and to some extent advanced both in years and station, should hesitate to be exposed to the smallest chance of failure.

That men so well fitted to do credit to themselves and reflect honour on the society to which they might belong, should not have availed themselves of the position which the formality of an examination would have conferred cannot be otherwise than a subject of regret; and if it be stated that familiarity with practical detail is one thing, while technical knowledge is another, it may be answered fearlessly that the daily devotion of the work of one morning or evening hour, for no longer period than three months, would enable such a student to satisfy the most rigid examiner.

Let us, in this quiet autumn month, quietly talk the matter over. What is the nature of this proposed Modified Examination, which has caused such a flutter of consternation? Strip it of technicalities, and this is the result. Candidates must know how to read prescriptions, write a label, and be on their guard against dispensing a drachm of arsenic if ordered for a dose; they should be thoroughly clear in their own minds that rhubarb is not jalap, nor ought to confuse senna leaves with chamomile;

they should know when calumba root is good, and when it might reasonably be rejected. Further, it has been thought not a too stringent regulation that compound tincture of cardanoms should be distinguished from sal volatile, and that the proportion of the active ingredients existing in more powerful remedies should be remembered. Seven plants have to be recognised, all specified beforehand, being the amount of botany required, and the assistant should be able to determine whether specimens submitted are such as he would choose to vend in an establishment of his own. What less could he be asked to know? With how much less would he feel comfortable himself? We implore those interested to take the matter into their earnest consideration; at least let them shake off for once and for ever the shadow of that unwholesome fear of an examination which might paralyse their exertions.

Here we must pause while an episode of argument is presented. There are men amongst us (long may they remain) who have borne the full heat and burden of their day. Popularly they are described as the founders of our Society. Whether so or not is matter of no moment. Early in life they accepted pharmacy as a vocation; they struggled hard during many an unprofitable season to scrape together a decent business. That unremitting care, assiduous application, and never-wearying exertion should be finally rewarded, is but an illustration of the eternal law, that whatsoever a man soweth he shall reap.

They have succeeded,—have made money, and transmitted to their descendants the heritage of a name as well as solid pecuniary advantages. Shall we say they were subjected to no examination; why should we? No; for these men are, of all others, the most eager that their sons should accept the better and larger facilities of the age in which we live; the first to rejoice over and to advance the cause of classical and pharmaceutical education; the first to feel grateful that their children are spared the drudgery, loss, and social degradation which their fathers not infrequently were forced to undergo; the last to entertain any sympathy with scarcely-fledged apprentices, who would rather indolently sink into a duck pond than manfully prepare for the duties that lie before them.

Respecting these, by far the most numerous class of applicants for information, we scarcely know what to say. At the commencement of a new phase in the career of Pharmacy not one word of discouragement shall escape our lips. These young gentlemen being occasionally of the advanced age of twenty-one, having served a few years' apprenticeship, less or more, and in some cases having been assistants for two years at most, tremble with anxiety to ascertain whether the provisions of the Amended Act will wink at such a want of qualification, and permit them to remain incompetent for life. We can imagine no greater mistaken kindness than the slightest effort made in this direction, and no conduct more suicidal. The pharmacist of to-day cannot rest the druggist of fifty years ago. All classes are influenced by the progress of the age; the world imperatively demands more than ever it did before from those who, in the battle of life are compelled to fight for their daily

bread. Pharmacy forms no exception to the rule.

Often in these pages has study been recommended on its own account, and for the sake of those intellectual pleasures which alone it can bestow. A few days hence this and other aspects of student-work will probably be introduced by one who is singularly competent for the task. It remains our duty distinctly and unhesitatingly to allude to trade considerations; let these young inquirers rest thoroughly persuaded that just in proportion to their individual attainments in those branches of science, by the knowledge of which they will have to gain a livelihood will be in the usual order of God's providence their chance of ultimate success. This positive and personal acquirement (of which no man and no circumstances can deprive them afterwards) utilised and directly made to bear on daily business, constitutes the secret of modern enterprise. Others (marvellously few) a century ago hit on the same plan and kept it dark; now, every year adds to the number of those who are sharp enough for their own interests to follow the example.

The future Pharmacist must be prepared to run the race, or without the slightest figurative allusion, there will be no crown for him. May we invite them, such as have not entered the lists already, to avail themselves of the advantages offered by this Society; nowhere will they find means more directly adapted to the end in view; we have occasionally thought they were neglected because too cheap. A fair acquaintance with the three great branches of instruction given is indispensable, unless the druggist be content to be outstripped by others; laboratory manipulation, analysis, whether applied to commercial or scientific purposes, is of a practical importance which cannot be estimated.

Let our young friends think the question over solely, just this moment, from the viewpoint of personal advantage, and trade gain. Once more rises the spectre of three examinations—they form three tests by which the student may ascertain how he stands. Let him not include this dread amongst his other anxieties.—surely we have laid the ghost.—*Pharmaceutical Journal (Eng.)*

Manufacture of Sulphite of Magnesia.

Since the publication of the latest edition of the Dispensary of the United States, several new chemical compounds have been introduced to the notice of pharmacutists and those of the medical profession, and some of these have already come into extensive use. Among others we may mention the *sulphite of magnesia*, of which we have already been several times requested to give a description and the formula for its preparation. Sulphurous acid with magnesia forms two compounds, the mono-sulphite (MgO, SO_2+3 or $6 HO, =79$ or 106), and the acid sulphite ($MgO, 2 SO_2, =68$). The latter is not used in medicine; it is an efflorescent salt of an acid taste, soluble in twenty times its weight of cold water and about five or six parts of boiling water. The mono-sulphite, which is the salt alluded to above, is white, easily decomposed by exposure to the air, not readily soluble in water, and, when dissolved, again precipitated by the addition of alcohol. It is soluble in sulphurous acid, with which it forms the acid sulphite. It is

decomposed by acetic, tartaric, oxalic and most of the mineral acids.

We know of only three formulae for preparing it, two from the Gorman, and one by an American, Mr. Joseph P. Remington.

The first consists simply in passing sulphurous acid in its gaseous state through water containing carbonate of magnesia in suspension; but it is said that the salt so produced is not so white as that obtained by the other process. Besides this, we conceive that there would be great danger of producing a mixture of the mono-sulphite and the bisulphite, from the necessarily varying proportions of sulphurous acid gas introduced.

The second process is to dissolve 136 parts of the crystallized sulphite of soda ($NaO, SO_2, +8 HO$), made free from the carbonate and sulphate of soda in a little less than its own weight of boiling water, and while still hot, to filter the solution into a solution of 123 parts of common sulphate of magnesia, or epsom salts, (MgO, SO_3+HO), in about one-half its weight of hot water, and to stir the mixture until cold. A quantity of fine white crystals will be formed, which should be left to drain upon a filter, and then pressed between the folds of bibulous paper and dried at a moderate heat. When the above quantities of sulphite of soda and sulphate of magnesia are used, the resulting product of sulphite of magnesia will be about sixty-nine parts.

The process of Mr. Remington is somewhat different from either of these. He takes eight ounces of pure calcined magnesia and sixteen ounces of distilled water, with which he forms a paste, and then adds aqueous sulphurous acid of the United States Pharmacopoeia, sp. g. 1.035, stirring the mixture to favor reaction. When acid has been added in quantity sufficient to show a slight excess, the crystals which have formed are left to subside, the clear liquid is decanted, and the sulphite of magnesia, after being sufficiently drained, is dried on bibulous paper. The product is about one and a half pounds. He suggests that the washing can be accomplished most effectually, and with the use of the least water, by allowing the crystals of sulphite to collect in a stratum on the bottom of the strainer, and adding just enough distilled water to cover the surface; any sulphate of magnesia is dissolved, and this, together with the yellow mother water, is displaced by clean water, and the salt is left white. By this process sulphite of magnesia may be obtained as pure and white as by double decomposition, with economy in time and labor, the yellow color disappearing by simply washing, with very little loss of the salt, as it is not easily soluble in cold water.

From the ready decomposition of this new preparation we presume that it is intended to take the place of other and more nauseous mixtures containing sulphur and magnesia. We have as yet seen no definite statement of its effects on the animal economy.—*Journal of Applied Chemistry.*

PEPPER.—Both the ripe and immature berries of black pepper yield the alkaloid *piperina*, which when acted on by alkalis is converted into a volatile *piperidina*. Wertheim has shown that the latter substance is produced in large quantity and to better advantage by distilling at once an alcoholic fluid extract of pepper with caustic alkali.—*Chem. Centrall.* 5, 1863, p. 661.

Rectifying Alcohol by Means of Gelatin.

Whilst witnessing the manipulation of the Eburneum process in the studio of Mr. Burgess, at Norwich, Mr. Burgess mentioned a curious circumstance. When the gelatin and pigment forming the layer of eburneum is quite dry, it is coated with collodion to render it impervious to moisture. This operation he noticed always rendered the eburneum soft and limp, so that it required placing in the drying-box again. The greediness of the gelatin for moisture causes it to absorb the trace of water in the solvents of the collodion, and so become damp. This suggested to us a possible use for rectifying small quantities of alcohol, on removing water from collodion in which the use of imperfectly rectified solvents has caused a tendency to give crapy films. Place a little pure gelatin in the spirit to be rectified. There is no danger of any portion of it dissolving, but it will absorb the water and gradually swell; it may then be removed, carrying the water with it. This will be found more convenient than the plan sometimes recommended of agitating with carbonate of potash, and after subsidence decanting.—*Chem. News*, Sept. 11, 1868, from *Photograph News*.

On Tinctura Physostigma.

BY WILLIAM PROCTOR, JR.

The tincture of Calabar bean (*Physostigma venenosum*) is occasionally prescribed in Philadelphia, and, not having been a formula, the following is offered as affording the active constituents of this new remedial agent:

Take of Calabar beans, a troy ounce,
Alcohol, seven fluidounces,
Water, three fluidounces.

Reduce the beans to a fine powder in the mortar, mix the alcohol and water, moisten the wder with half a fluidounce of this menstruum, pack it in a conical tube (the neck of a broken retort), and pour on the remainder of the fluid until eight fluidounces have passed. Should the menstruum indicated not be sufficient, add more, until the measure of half a pint is obtained.

When needed to *calabarize* paper, evaporate two fluidounces to the measure of three fluid-drachms with a gentle heat, and when cold, filter. This solution is about equal to that recommended by Mr. Hanbury (*Pharm. Jour.*, July, 1863), and the paper (which should be thin letter paper deprived of its size by boiling in water) is dipped in it and dried three or four times, which will impregnate the paper with a sufficient amount of the extract to perform the needed service within the eyelid.—*Am. Jour. Pharmacy*.

EXCITING LIQUID FOR GALVANIC BATTERIES.

—In "Comptes Rendus" M. Delaurier recommends for this purpose 20 parts by weight of proto-sulphate of iron, dissolved, as much as possible, out of contact with the air, in 36 parts of water; add, stirring, 7 parts monohydrated sulphuric acid, and then one part of monohydrated nitric acid. This composition is said to be very powerful, and not to disengage any unpleasant gases. M. Delaurier observes that "he brings into action enough hydrogen to form water and ammo-

nia, and that binoxyde of nitrogen is prevented from escaping by the excess of proto-sulphate of iron which absorbs it, and through the influence of the nascent hydrogen, decomposes it, producing sulphate of ammonia and water, while proto-sulphate of iron remains, having acted as a carrying agent."

A NEW ANILINE DYE, producing a shade of color known as *ponceau*, is made by dissolving one part of rosaniline in one thousand parts of boiling water, and when cooled to 113°, by adding four and a half parts of deut-oxide of barium dissolved in thirty-five parts of cold water and ten parts of sulphuric acid. At first the mixture turns a lemon yellow color, but very soon becomes nearly colorless. It is then filtered to remove the sulphate of baryta, and the clear solution boiled for about two minutes, when it assumes its greatest intensity of color. Acids strengthen the color, while ammonia destroys it. The name given to the new dye is *geranosine*, and its quantity and brilliancy are pronounced equal to the finest cochineal.—*Journal of Applied Chemistry*.

A GREEN COLOR FOR SWEETMEATS.—Professor Artus gives the following formula for a beautiful green color, devoid of poisonous properties. 5 grs. of saffron are shaken up with $\frac{1}{2}$ oz. of distilled water, and the mixture allowed to stand twenty-four hours; at the same time, 4 grs. of indigo carmine are shaken up with $\frac{1}{2}$ oz. of distilled water, and the mixture also allowed to stand for twenty-four hours. At the end of this time, the two solutions are mixed together, and a very fine green solution, capable of coloring five pounds of sugar, is produced.—*British Medical Journal*.

AMALGAM FOR FILLING TEETH.—Chloride of zinc, after exposure to the air until it has become deliquescent, is triturated with common mercury, such as may be purchased at any of the dental depots, and the excess, with that of the mercury, is pressed out by being enveloped in cloth or buckskin, and subjected to pressure by a pair of pliers. It will harden after being introduced into the tooth in an hour or two. The advantage is, that by the addition of the chloride of zinc, the amalgam does not become discolored.

FUSIBLE METAL.—Lead, eight parts; bismuth, fifteen parts; tin, four parts, and cadmium, three parts. Melt together. This alloy is white, like silver, and does not readily tarnish; its specific gravity is about 9.1, and its melting point about 140° Fahr. It may be used for filling teeth, and as a solder for metals which are not to be exposed to the heat. It may even be applied under water, and may be melted on a piece of paper held over a spirit lamp.

FEEDING BOTTLES.—A very simple improvement in these very useful articles has been made by T. G. F. Dolby, in order to prevent the return of the breath from the child's mouth into the bottle, and for the admission of fresh air. A conical or other shaped valve of india-rubber or other suitable material is placed in the cap, neck, or top of the bottle, and a similar valve is also applied at the top or bottom of the tube through which the food passes to the child's mouth.—*Student*.

TO PREVENT ADHESION OF GLASS STOPPERS.—Much difficulty is frequently experienced by druggists and others in removing the glass stoppers used in bottles which contain solutions of caustic potash and soda, lime-water, extract of lead, etc. All this trouble may be prevented by dipping the stoppers in melted paraffin, upon which none of these substances act, and which also acts as a lubricant.

SOLUTION OF VLEMINCKX FOR THE ITCH.—This liquid, recommended by Vleminckx, is a solution of sulphuret of calcium made as follows:

Take of quick lime..... 1 lb.
Water..... q. s. to slack.
Sublimed sulphur... 2 lbs.
Water..... 20 lbs.

Mix and boil until reduced to 12 lbs. and filter.

The medicine is employed as follows:—The patient is put in a warm bath and remains there half an hour, then all the parts affected by the itch are rubbed by a piece of flannel dipped in the solution as above; and the patient returned to the bath for half an hour. The next day this treatment is repeated, and usually is sufficient to cure.

Prof. Hëbra, for women and persons with delicate skins, often employs the following mixture:—

Petroleum oil (Seneca oil).
Alcohol, of each an ounce.
Balsam of Peru, a drachm.
Oil of Rosemary.
Oil of Lavander.
Oil of Lemon, of each 22 grains—Mix.

This physician employs the solution of Vleminckx for psoriasis, prurigo sycosis.—*Bull. Ther. et Jour. de Chim. Méd.*

NAPHTHALINE TO REPEL INSECTS.—M. Eugene Pelouse proposes to employ naphthaline to protect plants from insects. It does not act as an insecticide, but is so disagreeable to them as to cause them to leave a plant upon which it is sprinkled. It is used in very small quantities, and said to be very effectual.—*Jour. de Chem. Méd.*

PARAFFINE AS A LUBRICANT FOR MACHINERY.—The need of a lubricant for machinery with heated surfaces has caused a substance of the paraffin class, mëlène (C₂₀H₄₀), to be suggested for this purpose by M. A. Monnet. It is volatile at 370° C. without change, has the consistence of wax ordinarily, but soon softens by the friction, and when it is much heated it is very fluid and unctuous.—*Jour. de Chem. Méd.*

PARAFFIN TO PROTECT VESSELS IN CRYSTALLIZING.—M. Franz. Stolba, of Prague, suggests the use of paraffin as a coating to vessels of glass or porcelain, when these are attacked by certain liquids to be set aside for crystallization. The paraffin is put into the capsules, previously well dried and heated till it commences to boil; the vessels are then turned about so as to bring the paraffin in contact with the whole of the interior surface and then empty out the surplus. After cooling it is found to hold well, and the vessels are ready for use; of course the solutions to be crystallized must not be heated, but left to spontaneous or vacuum evaporation.—*Journal de Chim. Méd., Aout., 1868.*