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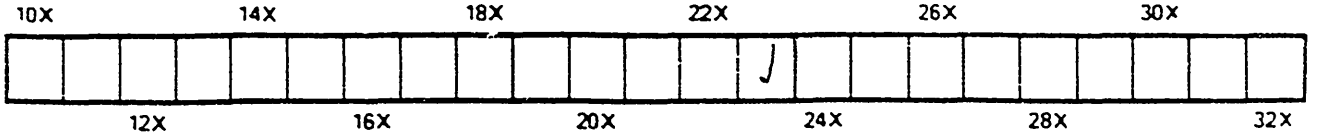

CANADIAN

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Original and Selected Papers.

THE TRADE IN ALOES.*

BY P. L. SIMMONDS.

Our supplies of this important drug do not seem to increase, and annual import of about 700,000 lb. may now be considered as the verage supply from all quarters. Although much useful informaon has been given from time to time on this subject in medical and otanical works, a few recent notes may be found useful to many.

The simply inspissated juice of the leaves of the various species the genus *Aloe* constitutes this well-known drug. It is best obined by using neither heat nor pressure for extracting the sap. By dissolving the aqueous part in cold water and reducing the liquid boiling to dryness, the extract of aloes is prepared. The quality the product is apparently more dependent on soil, climate and eparation than on any specific difference in the plant itself. A eat deal depends on the mode of preparation.

The usual way of extracting the substance is by making a transrse incision in the leaves, or cutting them off at the base; then raping off the juice as it flows if done in the former way, or allow-

*Pharm. Jour. and Trans., August.

ing it to run into a vessel placed for the purpose if in the latter. Pressure is made occasionally to assist the flow, but as Dr. O'Shaughnessy observes, "by this means large quantities of the mucilage are forced out and mix with the proper bitter juice which is proportionately deteriorated;" for it must be recollected that the aloe contains a great deal of mucilaginous matter, abundant towards the centre of the thick fleshy leaves. The juice, after being received into a vessel, is exposed to the sun or other heat by which means it becomes inspissated.

All species of this genus are highly valuable in countries where they are hardy, and can be used irrespective of their medicinal importance, to beautify any rocky or otherwise arid spot and as hedge plants.

Analysing the official customs returns and taking the imports through Egypt, Bombay and the East coast of Africa to be Socotrine and hepatic, the sources of supply were as follows in pounds:—

	Total receipts.	Cape.	Socotrine.	Barbados.
1867	781,306	630,688	80,906	58,202
1868	725,295	534,108	96,524	69,013
1869	661,559			
1870	701,573			

The deliveries for home use and export from the London warehouses in the past five years were as follows:—

	Cases.	Kegs.	Gourds.
1867.....	4347	138	1965
1868.....	3505	34	1858
1869.....	3451	26	918
1870.....	3092	83	747
1871.....	4346	19	804

The stock on hand in London at the beginning of this year consisted of 3538 cases, 98 kegs, and 607 gourds.

Cape Aloes.—*A. ferox*, Lamark, of South Africa, yields the best Cape aloes as observed by Dr. Pappe. *A. purpurascens*, Haworth, is also one of the plants which furnishes the Cape aloes of commerce, and so does *A. spicata*, Linnæus, an exceedingly handsome plant. This species is very common in the Madras Peninsula. The drug of *A. plicatilis*, Miller, acts milder than that of *A. ferox*. According to Thunberg, the finest gum-resin is obtained from *A. linguiformis* (or *angulata*), Miller. *A. Syheri*, Harvey, a magnificent very tall species, is doubtless valuable like the rest.

Dr. Pappe, in his "Flora Capensis Medicæ Prodromus," says the Cape aloes are procured from several species of this extensive genus so peculiar to South Africa. The *Aloe ferox*, Lam., a native of Swellandam is generally acknowledged to yield the best extract. That obtained from the *Aloe Africana*, Miller, is also equally good but not so bitter nor so powerful as a drastic. It is the produce of

the Eastern districts of the Cape Colony, whence large quantities are annually exported. The drug commonly used by the colonists, is prepared from the *Aloe plicatilis*, Miller, whose extract is a much milder purgative, and much resembles the Barbados aloes. It inhabits the mountainous range near the Paarl Drakenstein and Fransche Hoek. It is much to be regretted that the farmers do not take more trouble in purifying this valuable drug.

Barbados Aloes is obtained from *A. vulgaris*, Lamark, *A. barbadensis*, Miller. It is met with in countries around the Mediterranean Sea, also the Canary Islands, on the sandy or rocky coast. Dr. Sibthorpe indentified this species with the *Axon* of Dioscorides; hence it is not improbable that *A. vulgaris* is simultaneously also of American origin, although it is cultivated in the Antilles, and furnishes from thence the main supply of Barbados aloes. In the East Indies this species is also seemingly only existing in a cultivated state. Haworth found the leaves of this and of *A. striata* softer and more succulent than those of any other aloe. It is said to be the only species with yellow flowers among those early known. It is also this species only which Professor Willkoem and Professor Parlatore record as truly wild in Spain and Italy. Barbados aloes is chiefly sent in gourds.

Socotrine Aloes.—*A. Socotrina*, Lamark, is indigenous to the hills of the island of Socotra. It is also cultivated in Barbados and elsewhere, thus yielding the Socotrine aloes. It is difficult to ascertain what is the precise produce of the island now. Our imports are so mixed up with the Indian aloes which comes from Bombay and through Egypt, and from the east coast of Africa, that it is scarcely possible in the official returns to separate Indian and Socotrine produce. The Barbados and the Cape aloes used to be separated in the official trade returns, and all the eastern classed as Socotrine. Within the last year or two the Board of Trade officials have not thought it worth while, however, to classify the supplies, and we now only know the gross quantity received.

The East Indian or Hepatic Aloe, so called from its bright liver colour, is said to be the produce of *A. arabica*, Lam. Some quantity used to be shipped from Madras chiefly to Bengal and Australia. It comes here in casks or kegs. In India an inferior description of aloes is obtained from *A. indica*, Royle, and a better kind is procurable from *A. litoralis*, Kœnig, which grows plentifully at Cape Comorin and the neighbourhood; it is readily distinguishable by the reddish colour of its leaves. The natives attach much value to the juice of the leaves, which they apply externally in cases of ophthalmia, and especially in what are commonly called country sore eyes. The mode of administering it is to wash the pulp of the leaves in cold water, and mix it up with a little burnt alum. In this state it is applied to the eyes, being previously wrapped in a piece of muslin cloth.

CANTHARIDES.*

BY R. ROTHER.

The recent paper of Prof. Dragendorff on cantharidal plaster induced the writer to try the proposed process. This is based upon an excellent theory, but in practice abounds with so many obstacles and yields such an unexpectedly inferior result, that the writer believes should other operators be equally unsuccessful, it will never attain to popularity.

A good quality of cantharides in very fine powder was digested with an aqueous solution of potassium hydrate, then treated with a slight excess of chlorhydric acid, dried and converted into cerate according to the pharmacopœia. The resulting product was destitute of vesicating power.

However, the failure to produce blisters with this preparation, the writer is not inclined to charge entirely to Prof. Dragendorff's part of the process. The writer has found that a water-bath heat, as officinally directed, is often inadequate to dissolve the necessary amount of cantharidin for producing an active plaster. But by following the suggestion of Mr. Donovan, to use an increased and prolonged heat, a desirable plaster is most usually obtained.

The chief incumbrances to Prof. Dragendorff's process are:—

Firstly, That the aqueous alkaline solution produces with the powdered cantharides a doughy mass not easily manipulated, and to bring this into a sufficiently fluid condition which the nature of the operation demands, an excessive quantity of alkaline solution, equal to about three times the weight of the cantharides, is necessarily absorbed. The large surplus of alkali again requires a proportionate amount of chlorhydric acid for neutralization.

Secondly, This mass, if a considerable quantity is under treatment, is not so easily dried, as exposure in the open air without artificial heat is entirely inadmissable by reason of the rapid formation of mould. The subsequent powdering of the dried mass is another unpleasant operation which pharmaceutists always endeavor to evade, especially as in this case the requirements is a repetition. The unsuccessful issue of the operation excites a doubt whether after all the cantharidin thus liberated is as soluble in the fatty excipient as it would be in its natural state of combination when subjected to an elevated temperature. When the prepared cantharides is not thoroughly dry, or if the fatty matter contains moisture, the cerate invariably and rapidly develops an exuberant growth of mould, but it was found that the presence of moisture in either good or defective cerate neither aided or detracted from the activity; because a good cerate made by the ordinary method

*The Pharmacist, August.

may become mouldy from the presence of water and still retain its activity; whilst a cerate made from perfectly dry prepared cantharides by prolonged heat with the fatty matter was unsusceptible of generating mould, but was equally ineffective as a vesicant.

A method much in vogue for regenerating inactive cantharides consists in dampening the powder with a small proportion of oil of turpentine and macerating it for several days previous to preparing the cerate. The oil dissolves a portion of the cantharidin and renders the rest more soluble in the fatty matters.

Another invariably successful method, much employed for reviving the activity of inefficient plaster, consists in the addition of a small quantity of chloroform, which abundantly dissolves uncombined cantharidin. The writer has found this procedure especially adaptable for the cerate made from prepared cantharides, with which it infallibly produces a powerfully vesicating plaster.

The writer, finding that the use of aqueous potash was very impracticable, then resorted to the application of alcoholic potash. This was attended by greatly superior advantages so far as the manipulation was concerned, since a comparatively less volume was required to moisten the powder, and as it was afterwards far more easily expelled, but to produce a vesicating product it was equally powerlesss with the aqueous solution.

In the application of an aqueous solution of potassium hydrate, the writer noticed that even with a very small proportion of the dilute solution a very distinct evolution of ammonia occurred, which was rendered more perceptible by the proximity of a glass rod moistened with acetic acid. A similar result was obtained with the alcoholic solution.

Now, since cantharidin is insoluble in ammonia, then the cantharidate of ammonia is evidently insoluble in water; perhaps, also, in alcohol, ether, etc. If, therefore, a portion of the cantharidin is originally combined as ammonium cantharidate, it is highly probable that this will remain unextracted by the ordinary solvents, but decomposed and dissolved by means of potassium or sodium hydrate. It will then also be decomposable by chlorhydric acid, and consequently the circumstantial treatment with fixed alkali can be dispensed with, and a small amount of chlorhydric acid employed instead.

The use of oil of turpentine or chloroform softens the cerate and increases its adhesiveness, a property which is always desirable. These agents are easily applied, and their effect upon cantharides is invariably positive. Therefore, in the absence of an authorized process with reliable results, the writer recommends the application of oil of turpentine or chloroform.

Prof. Dragendorff suggests that prepared cantharides could be advantageously employed for the preparation of cantharidin. But it is the writer's opinion that it would be vastly more practical to

exhaust the cantharides with alcoholic potash, neutralize the tincture with chlorhydric acid, distil off the alcohol, and take up the cantharidin from the residue with chloroform or ether.

THE SALTPETRE DEPOSITS OF PERU.*

In travelling eastward through Peru, from the sea to the Cordilleras, on the 20th parallel of south latitude, seven zones are crossed, the third of which, the Pampa of Tamarugal, and the fifth, Serrania Alta, or the inner chain (Upper Peru or Bolivia), are explored for saltpetre. The treeless Pampa, a plain somewhat depressed in the centre, has a very scanty vegetation, and the only thing which grows there is a single variety of lucerne grass *(Medicago)*; the cultivation of even this is attended with difficulty, on account of the large proportion of common salt, borax and saltpetre in the soil. It serves in part for the support of the beasts of burden used for transporting to the coast the salts and metallic minerals found here. In the south of the Pampa is a large deposit of borax, pieces of which weigh on an average from 100 to 200 grammes; soda saltpetre is found on the borders of Pampa and Serrania, but too far distant from the sea. On the western slope of the Cordilleras, salt is only found in small quantities; but in Upper Peru, where frequent rains wash it together into great lakes, there are large quantities of it. The saltpetre mines consist of different strata. The surface of the ground is composed of silicates, sandstone and pieces of lime. At a depth of from 8 to 16 inches very regular prisms are usually found, which sparkle with a mass of very small microscopic crystals; the stratum below this, which is of rocky hardness, consists principally of common salt, with a little chloride of potassium and soda saltpetre, mixed with earth and pieces of silicates and carbonates, and has a thickness of 20 to 25 inches. Beneath this crust is the pure soda saltpetre, in more or less perfect crystals, from 20 to 40 inches long, and 3 to 7 feet in diameter. Guano is seldom found there, and only in small quantities; and it always occurs just below a stratum of salt. It is not in a powder, like that of the Chincha Islands, but adheres together, and is of a brown colour, containing the bones and remains of birds and insects, and has an ammoniacal smell.

The chloride of sodium and lime present furnish mineral constitutents required for the formation of the saltpetre. According to Thiercelin, the guano furnishes the nitrogen; but since the guano is always found below the salt crust, Kœnig is compelled to refer the nitrogen to some other nitrogenous organic bodies, from whose de-

*Scientific American.

composition ammonia is formed, and this in turn is converted by the action of the air and organic bases into nitric acid. Besides the three substances named, all the conditions favorable to the formation of saltpetre are found in that neighborhood, namely, a pure, dry atmosphere, absence of rain to wash away the saltpetre when formed, and the regular night fogs. The latter, leaving the salt undissolved, dissolve the saltpetre and filter it through this stratum, under which it crystallizes.

The search for saltpetre is conducted thus: The workman recognizes its presence by certain undulatory elevations of the ground, and numerous lumps of lime and disintegrated sandstone. He bores a hole some 12 to 18 inches in diameter, going down till the mineral is plainly visible. When the lowest layer is reached, the hole is widened to about three feet, filled with charcoal and sulphur and fired. The explosion breaks and tears up the ground for twice that distance around, and then properly begins the bringing up of saltpetre. The crude article varies considerable in compactness, color and quality, and is named accordingly. The so-called sulphuret, which owes its name to its mode of manufacture, is the purest. The porous, earthy and the congealed are different in quality. If the raw product contains less than 50 per cent, the mine is abandoned as not worth working; a yield of 70 to 80 per cent is exceptionally good. The raw material is transported on pack animals or wagons to the factory, where it is refined in two different ways. One method is to break it up in pieces and put it into an iron kettle half full of water, which is then heated over a fire for an hour, the insoluble matter removed and a fresh quantity of raw material added until the solution is saturated. The clear solution is run off into crystallizing vessels, the crystals collected when formed and allowed to dry in the sacks in which it is shipped. In the second method, steam heat is employed; the crude material is put into perforated iron baskets and suspended in boiling water, and the process repeated until the liquor is saturated. The saltpetre prepared in this way contains less than 1 per cent of common salt, while that obtained by the former method contains upwards of 2 per cent. Large quantities of iodine are annually reclaimed from the mother liquors of the saltpetre works of South America.

ON ÆSCULIN.*

BY ROBERT F. FAIRTHORNE.

This principle is easily separated by the following process:—A quarter of a pound of horse-chestnut bark in moderately fine powder is moistened with half a pint of a mixture composed of three ounces of solution of ammonia (U. S. P.), and five ounces of water. This is packed in a glass percolator, in the neck of which a plug of cotton has been placed. A pint and a half of a weak solution of ammonia is poured on the bark, and allowed to pass slowly through.

The first half-pint of the liquid that displaces is set aside in a capsule and evaporated spontaneously until reduced to a syrupy consistence. The remaining pint is brought to the same condition as the first portion, by means of a sand-bath and gentle heat. These products are then mixed with one and a quarter ounces of pure alumina by rubbing together in a mortar. Allow the mixture to dry, which requires a few hours. Powder the dried mass, and boil it for five minutes in a flask with six ounces of alcohol (95 per cent.) Filter this whilst hot, and pour six ounces more of boiling alcohol on the residue in the filter. Place the filtered liquid in an evaporating dish, and allow it to evaporate spontaneously until reduced to a semi-solid state, when impure æsculin will be found in a crystalline condition contaminated with some dark-colored extractive matter.

In order to separate the æsculin from the coloring matter without loss, mix two ounces of cold water with it in the capsule, and having scraped it thoroughly from the bottom of the vessel, pour it into a vial. Add one fluid-ounce of ether to this, and agitate for a few minutes. Allow it to remain undisturbed for twenty-four hours. Afterwards pour the mixture on a filter, and when the dark-colored fluid and the ether have passed through, wash with about two drachms more of cold water.

The æsculin is now nearly pure. In order to make it perfectly so, all that is necessary is to allow it to dry in a warm place, powder it, pass half an ounce of pure benzole through it after having been placed on a filter; then treat it in the same manner with an ounce of ether so as to remove any paviin that may be present, that substance being readily dissolved by ether.

Sixteen grains appears to be the average weight of the purified active principle obtained from 4 avoirdupois ounces of the horse-chestnut bark by this process. After trying various methods for extracting æsculin, I found none so satisfactory as this one, either in regard to simplicity, the quantity yielded, or the quality of the production.

Æsculin, as thus prepared, appears to the unaided sight as an

*Chemical News.

amorphous powder, almost white, being of a slightly pale buff shade. Under the microscope (magnified 220 diameters), it is proved to consist of minute, needle-shaped crystals.

From its alcoholic solution its crystals arrange themselves in stellular tufts, the aciculæ, pointed at the ends, radiating from a common centre in every direction, forming a very beautiful object, the transparent prisms glistening with more than ordinary lustre.

I find that it is soluble in the following liquids:—Alcohol, acetic ether, strong acetic acid, solution of carbolic acid, solution of the hydrate of chloral, and in the alkaline solutions.

When æsculin is added to nitric acid it becomes yellow, and if ammonia in excess is added to this mixture, a bright cherry-colored liquid is produced. When sulphuric acid is substituted for the nitric acid, and ammonia added, the same color appears.

PRELIMINARY NOTE ON OZONE.*

BY CHARLES THOMAS KINGZETT.

Houzeau found that the oxygen evolved by treating baric peroxide with hydric sulphate contained an agent possessing the properties of ozone—that is to say, it liberated iodine from potassic iodide, and was capable of oxidizing ammonia. I am not *aware* of any experiments in the same direction upon oxygen derived from other sources.

Whilst experimenting upon ozone, I was desirous of ascertaining if oxygen from all sources possessed the properties ascribed to that obtained from baric peroxide and hydric sulphate; therefore I made the subject a matter of experiment, and obtained amongst my results the following:—

Oxygen obtained by either—

(*a*). Heating mercuric oxide, and passing the resulting gas through strong and pure potassic hydrate (to absorb any nitrous fumes);

(*b*). Acting upon potassic dichromate with hydric sulphate;

(*c*). Acting upon potassic permanganate with hydric sulphate; or,

(*d*). Heating *native* or *artificial* manganic dioxide;—liberated iodine from potassic iodide, forming, when starch was present, the blue iodide. In short, from every source I have tried, the oxygen produced never lacked these properties. Of course contact of the gas examined with organic matter was avoided as far as possible.

Thus in (*a*) the tube containing the mercuric peroxide was

*Chemical News, May.

drawn out, and bent twice at right angles, and then passed into a tube holding the potassic hydrate, the column depth of which was in every experiment more than four inches. (*b*) and (*c*) are readily performed in open test-tubes, placing at the mouths of the tubes the paper soaked in the potassic iodide and starch mixture.

But acting upon potassic permanganate with hydric sulphate requires care, for (as is well known) if the mixture be heated, vapors of permanganic acid are evolved and detonations occur. I purposely obtained these detonations twice by placing tubes containing the mixture in a steam-bath. The contents of the tubes smelt strongly of ozone afterwards, just like the fishy odor obtained by the passage of electric sparks through moist air or oxygen; and on holding a piece of iodide paper over the mouths of the tubes, iodine was rapidly liberated.

In (*d*), the manganic dioxide may be heated to bright redness, and yet the vapors evolved contain, or in some way produce, the agent alluded to before. This is remarkable, considering that ozone is destroyed instantaneously at 300° C., and slowly at much lower temperatures. However, at present, I have no proof to offer that it *is* ozone; the moisture on the iodide paper may share in the reactions which occur.

I have ventured these statements in the belief that the facts stated are not *generally*, if at *all*, known. If they are known, my experiments merely confirm them, and if they are not known and explained, I hope to be able to show by a series of experiments which I am now making, not only the effects but also the causes.

ON KOUSSIN AND ITS MEDICINAL USE AGAINST TAPEWORM.*

BY DR. C. BEDALL, APOTHECARY AT MUNICH.

In his lengthy essay, the author gives a brief discription of the three kinds of tapeworm which have been observed in the human intestines, *Tœnia Solium*. *T. mediocanellata* and *Botriocephalus latus*. The successful removal of these parasites depends, in a great measure, upon some casual circumstances, among which the following appear to be the most important: age, constitution and habit of the patient, the species of the tapeworm, the length of time it has been in the intestines, the period in which parts of it are spontaneously expelled, and the influence exerted upon it by different victuals and medicines.

*Translated and abridged from Wittstein's Vierteljahresschrift, 1872, p. 339-357, in *Am. Jour. Pharm.*

The older remedies for tapeworm are the rhizome of male fern and the root bark of pomegranate; after about the year 1840, koussa, kamala and saoria were introduced from Abyssinia and Malabar. Each of these remedies has had, and still has, its advocates and its opponents among physicians; but the large dose and disagreeable taste, as well as the preparatory diet required when male fern and pomegranate are used, render these two rather objectionable; saoria requires likewise a large dose, and overdoses are apt to produce unpleasant results; kamala is not open to these objections, but it is frequently largely adulterated, while the large dose of powdered kousso, which is sometimes thrown up by the patients, is the fault that has been found with the latter.

To obviate the employment of the powder, a resin had been prepared, and seems to have answered its purpose better than the powdered flowers. Proximate analyses were made by Wittstein, St. Martin, Viale and Latini, Pavesi, Willing and Bedall. The first and last of these analyses agree in the main results, and prove the presence of tannin, volatile oil, valerianic acid and two resins; one black green and tasteless, the other yellowish-white, bitter and acrid. The hagenic acid of Viale and Latini, and the alkaloid koseina of St. Martin could not be obtained. Pavesi's koussin or taeniin is identical with Wittstein's bitter and acrid resin, but does not exist only in the pollen, as supposed by Pavesi, but likewise in a small proportion in the stalks and pedicels.

The best process for obtaining this principle is that of Pavesi, and is analogous to the one by which santonin is obtained; kousso is repeatedly treated with alcohol, to which hydrate of lime has been added, the residue is boiled with water, the different liquids mixed, filtered and distilled, and the residue treated with acetic acid, which separates koussin as a white flocculent precipitate, soon becoming denser and resin-like, and on drying easily turning yellowish, or, at a higher temperature brown. The yield of kousso, free from stalks, is three per cent. Carefully prepared and dried, koussin has, in larger quantities, a peculiar odor of Russian leather; it has a persistent bitter and acrid taste, a yellowish or yellowish-white color, and under the microscope an indistinct crystalline appearance. It is very sparingly soluble in water, but readily in alcohol, ether and alkalies; its empirical formula is $C_{26}H_{22}O_5$.

Koussin has been used therapeutically for the last thirteen years, and the author cites a number of cases from Munich, Dresden, Vienna, Paris, Stuttgart and other places, in which koussin proved effectual in the hands of various physicians. A factitious koussin is met with in Germany, which is either the black resin spoken of above, or has been prepared analogous to resin of jalap; it is a black powder, almost tasteless, and of a disagreeable odor.

The author arrives at the following conclusions:

1. Koussin is the only active principle of kusso, and deserves the preferance before the latter.

2. It is preferable to other tænifuges, because 2 scruples =2·5 grm. are sufficient for dislodging the tapeworm, and the remedy, divided according to age and constitution into two or four powders, is conveniently taken between wafers, and usually agree well with the patient, producing, in exceptional cases, merely transient nausea or vomiting.

3. In the doses mentioned, koussin leaves no ill effect of any duration; on the contrary, most patients enjoy good health and appetite after the tapeworm has been expelled.

4. Koussin needs no preparatory treatment in diet or with other remedies; but in obstinate cases it may be advisable to aid its action by giving some Epsom salt or other convenient purgative.

5. If, after the use of koussin, the tapeworm should not be entirely expelled and its small head not be found, it is well to ascertain whether it has not been killed and the head is not subsequently discharged.

6. If the treatment be unsuccessful, this should not be charged to the koussin, but rather to casual circumstances which counteract, more or less, the effects of this remedy.

NICOTINE AN ANTIDOTE TO STRYCHNIA.

A case of poisoning by strychnia which was successfully treated with nicotine, has been published in the 'British Medical Journal' by the Rev. Dr. Houghton, F.R.S., of Trinity College, Dublin. When the treatment commenced, the patient, a lad nineteen years of age, was violently convulsed, his pupils were dilated and his arms and legs were rigid. The nicotine was administered in drop doses in whisky-punch every half-hour. After the second dose the paroxysms were less violent; and when he had taken four doses he was much better, and eventually he recovered. The poisoning was caused by the lad picking up and eating an egg which had had strychnia introduced into it, and been placed in the garden for the purpose of poisoning magpies.

SIMPLE METHOD OF WATER ANALYSIS*

Every medical practitioner is familiar with the terrible risks attendant upon the use of bad water, and is anxious to employ the power and influence which he possesses in exposing those risks and in striving to avert them. But he is restrained by practical difficulties which are, in too many cases, insuperable. Local authorities are inert and often ignorant. The stupidity of the tenant is only equalled by the cupidity of the landlord. Water analysis costs money; and anyone who suggests its necessity is sure to be met instantly with the question, Who is to pay for it? Unfortunately, a proper analysis of water for sewage or drainage contamination is a process which from its complexity can only be carried out by a professional chemist; and in every important case such an analysis is a matter of necessity. But it is nevertheless true that it is perfectly possible to form a useful and, in many cases, a sufficient estimate of the quality of water, and even approximately of the extent of its contamination, by the use of well-known methods so simple as to be available to every intelligent man, and certainly to every medical practitioner. The methods we are about to describe must, of course, be applied as accurately as possible, and the results interperted with caution; but we have verified them all with care and know that they may be depended on to the extent we indicate. For the sake of convenience, we have arranged them all for use with the weights and measures found in every surgery and chemist's shop,

1. *Examination of the source.*—This is of vital importance, and will often supersede the necessity of any analysis by indicating that the water *must* be foul. The chief sources are three—namely, rivers. surface-well or spring, and deep wells or deep-seated springs. Wells 100 ft. in depth may be reckoned in the last class. The contamination of rivers may be judged of by circumstances which will occur to all: the nature of the house-and-land drainage they receive, the proximity of factories, &c. Few rivers are above suspicion, and many are utterly abominable as sources of supply. It is somewhat more difficult in many cases to judge of the contamination which a shallow well, often not more than 15 ft. deep receives. Regard must of course be had to the proximity of drains, cesspools, stables, and the like; and much may often be gathered from a study of the nature and conformation of the land. Loose porous soil—such as gravel or broken chalk—is not only more liable to drainage contamination, but affords a more imperfect filtration than closer soil. Very shallow porous soils are often exceedingly foul from the stagnation and accumulation in them of manurial matters. The dip of the land is also an important element in the study. A cesspool below a

*From the London Lancet.

well on a hillside may not pollute the water; but if above, the water will be almost sure to suffer.

The quality of the water of deep wells is still more difficult to determine by mere observation. If no surface-drainage can find its way in—a condition not always secured,—we have to consider the filtering efficiency of the bed of earth through which the water has to pass in its downward passage. The "previous sewage contamination"—the record of past fouling—in such waters is often high, but it by no means follows that the water may not be free, or nearly free, from unoxidised organic matter.

2. *General characters.*—The amount of suspended matter in the water should be observed carefully. When it has subsided a portion may be examined under the mircroscope. Low forms of animal and vegetable life will often be seen, and this indication has some value, though not very much. In very bad water fragments of undigested muscular fibre can sometimes be seen. If a portion of this sediment be dried and burnt in a small porcelain basin over a spirit-lamp, it will exhale an unpleasant smell, if of animal nature. The *colour* of the water is best seen by looking down a tall jar or glass tube. It should be greenish-blue; but clay, peat, and other harmless contaminations, cause a yellow or brownish tint; and on the other hand, bad water has sometimes a tolerably good colour. The *smell* is often sufficient to identify very bad water. Shake a sample in a bottle and warm it occasionally; a fæcal or putrescent smell will often become apparent under these circumstances, though sometimes not until the bottle has stood for a day or too. It is a good plan to evaporate a portion of the water to dryness in a basin and then heat it over a spirit-lamp. Any organic matter will blacken under these circumstances, but animal matters, if in any quantity will also give a bad smell.

Unfortunately, we cannot give any easy and exact process for the determination of this nitrogen. But a useful though somewhat rough indication may be obtained as follows:—Concentrate a portion of the water (say two fluid ounces) to one-eighth of its bulk, avoiding boiling. Let it cool, and pour it into a test tube of about one-third of an inch diameter as much as fills nearly an inch of it. Add an equal bulk of *pure* concentrated sulphuric acid. When the mixture is quite cold hold the tube almost horizontally, and pour in gently about an equal bulk of pretty strong solution of green vitrol. The iron solution will float on the acid mixture. Let the tube stand for half an hour, and look at the line of junction of the two liquids. If a dark line is visible the water *does not contain less* than 5 part of nitrogen in 100,000, though of course it may contain more. This is equal to a previous sewage contamination of 5000 in 100,000.

Now for the use to be made of this determination. If the water is from a deep and apparently unobjectionable well, and if the general characters are good, the water need not be condemned

or chalk water often contain more nitrogen. If the water is from he river or surface-well of tolerably good character, the indication s sufficient to throw a very grave suspicion on it. And lastly, if he history of the water is bad, if it is known or strongly suspected o be contaminated, the indication stamps it at once as certainly angerous.

By varying the concentration of the water it is possible to arrive t a pretty fair idea of the quantity of nitrogen in the water. Some ater reacts without any concentration.

4. *Chlorine.*—We have on a previous occasion pointed out the alue of this indication. By an examination of the best water a eighbourhood affords, it is easy to find the amount of chlorine hich is natural to the water. In the south of England it seldom mounts to more than 1 part in 100,000 except where sea-water enetrates. Purely local causes may of course produce an excess, ut not very often. The determination may be made with sufficient xactness in the following manner:—Dissolve 88.3 grains of pure itrate of silver in 1 pint of distilled water, and dissolve separately 4 rains of yellow chromate of potash in ½ pint of water. Take 4 unces of the water to be examined in a tumbler or beaker; add 10 inims of the chromate solution a drop at a time from a minim glass. s soon as the faintest tinge of red appears, read off the number of inims of silver solution which have been added. Every minim ndicates 0.1 part of chlorine in 100,000 of the water, so that ncontaminated water ought not to require more than 10 minims to ive the red tint in 4 ounces.

5. *Permanganate test.*—The great objection to the last two ethods is, they only tell of a previous contamination which may ossibly have ceased to be noxious. Of the methods which tell of he present condition of the water, the only one which can be easily pplied is the permanganate test, which, unfortunately, is the least ustworthy of them. It depends on the fact that many kinds of rganic matters, and particularly putrescent organic matters, are xidised by permanganate of potash in presence of sulphuric acid. he permanganate, losing its oxygen, loses its beautiful violet colour nd the amount of permanganate decolourised by a given volume f water is therefore some kind of measure of the amount of organic atter in the water. Unfortunately, however, different kinds of rganic matter affect the permanganate very differently. Some, ea for instance, do not affect it at all, and, on the other hand, me mineral matters, such as nitrites, sulphites, and protosalts of on, decolourise it easily. Nevertheless, water which decolourises uch permanganate is generally bad water, and we therefore give e test for what it is worth. Dissolve 3.3 grains of pure permanganate potash in one pint of distilled water. Take one pint of the water be examined; introduce it to a colourless flask, add 5 fluid rachms of dilute sulphuric acid (1 part strong acid to 5 parts water

by measure) and add the permanganate from the minim glass a little at a time, as in the chlorine process. After every addition shake the flask and let it stand ten minutes. If the violet colour disappears, add a little more, and so on, until the violet colour, not a brown, remains permanent for ten minutes. If the quantity required is large it is better to dilute another portion of the water with distilled water and begin again. Each minim of permanganate used in this process represents .001 part of oxygen given up to 100,000 part of water. To give an idea of the working of the test we may quote the results of its application to the London waters in 1865. For the quantities of material given above, the permanganate used may be said to have vared from 5 to 200 minims. Accordingly the quantity of oxygen required to oxidise the organic matter in 100,000 parts of water was taken as varying from 0.005 to 0.2 part.

That these methods are rough we freely admit, but we believe they may be safely used, with due care, in those cases in which a proper scientific analyis cannot be obtained.

FORMATION OF OZONE BY PLANTS.*

BY C. BELLUCCI.

Scoutetten, Bineau, Kosmann, and De Luca, instituted experiments from the results of which they inferred that plants are sources of ozone, whilst Cloez (Ann. Chem. Phys. 1856) on the contrary shows conclusively that the apparent ozone was due to other causes. He passed the aeriform products from the plants through two tubes placed side by side, and containing iodized test-paper; one of these was exposed to the action of light, and the test-paper became colored, whilst in the other which was protected from the light, it remained unaltered, showing that the action was due, not to ozone evolved from the plants, but to the effects of moisture, oxygen, and light on the test-paper. The author has carefully repeated the experiments of Cloez, and devised new ones, in which he introduced into a large Woulfe's bottle containing water saturated with carbonic anhydride, and to which a small quantity of potassium iodide and starch was added, sprigs and leaves of the following plants: *Taxus baccata, Juniperus virginiana, Abies vulgaris, Thuja orientalis, Prunus Laurocerasus, Buxus sempervirens* and *Chara fætida.* The apparatus was then placed in bright sunshine, but no change was observable in the liquid, proving that the green parts of plants do not evolve ozone under the influence of the solar rays.

*'Gazzetta Chimica Italiana,' i. 607–690., and 'Journ. Chem. Soc.' in Pharm. Jour and Trans.

THE NEW TREATMENT OF ITCH.

The following translation from the German of Professor Rothmund, we quote from an English source :—

The remedies hitherto in use for itch, such as Wilkinson's sulphur ointment, Hebra's tar soap, Vlemingx's solution, etc., are not to be compared for certainty, rapidity and pleasantness of cure with *Styrax* and *Peruvian balsam*. *Styrax* was first recommended in itch in 1865, by Von Pastau, of Berlin. It has shown itself a most efficacious remedy, due to its containing cinnamein, cinnamonic acid and resin. It is used as a mixture :—Styrax ℥ij, ol. olivar. ℥j, or thus, styrax, ℥ij, alcohol, ℥ss, ol. olivar., ℥ij. Styrax is a good and cheap remedy, its only disadvantage being its very disagreeable smell. For children it is used in the form of soap. Balsam of Peru is even better than styrax for the cure of itch. It was first employed in 1853 by Bosck, and was strongly recommended by Barensprung in 1864, on the strength of an extensive trial of it in the Charité Hospital, of Berlin. Its component parts are cinnamein, cinnamonic acid and resin. Balsam of Peru is preferable to all the other vaunted remedies, because the acarus scabiei is most rapidly killed by it, because it acts with rapidity, with certainty, and agreeably; because it does no injury to the skin; because it easily penetrates the skin; because baths are not absolutely necessary with it, and because it kills all the acari and their eggs, for when well rubbed into the skin it comes in contact with the eggs. As a remedy for children it is superior to all others. The children are first placed in a warm bath, then well dried, and forty drops of the balsam rubbed well in. This is to be repeated four or five times the next twenty-four hours, and the cure is complete. It may be used in every form of itch in children with advantage. It has, to be sure, no effect upon the eczema scabiei; for this, soap baths, starch powder, or glycerine inunctions are required. In adults the best plan is to rub in the balsam of Peru all over the naked body, slowly, carefully and gently, giving special attention to certain parts of the body, especially the fingers. Although in the treatment of itch the rubbing in cannot act mechanically, yet, whatever substance may be used, the mode of preparing the inunction is of great importance. As the balsam is readily distributed, nine grammes of it suffice for the operation. It is not at all necessary to begin the treatment with a bath; but if a bath is first given, the rubbing-in should not follow immediately, as the balsam is more rapidly absorbed by a dry skin. Hence, in persons who easily perspire, the skin should be well dried before the remedy is used. When the operation is carefully performed, relapses occur very rarely, and there is never any increase in the eczema that may be present. It is seldom that prurigo occurs after the itch. Should it occur, this disagreeable symptom is more readily removed by the internal use of carbolic acid than

by warm baths and soft soap or glycerine. The only objection to Peru balsam is its expense. Carbolic acid, on account of its efficacy, its facile employment and its cheapness, deserves to be mentioned next to Peru balsam. It must be mixed with glycerine or oleum lini to prevent its caustic action. One scruple of acid. carbol. is to be mixed with two ounces of either of the two other excipients. This remedy has this advantage, that by by its action on the peripheric cutaneous nerves, it completely removes and prevents the morbid itching, prurigo and pruritus. In cases of prurigo and pruritus, independent of itch, the internal use of carbolic acid in the form of pills is an excellent remedy. As the carbolic acid gets pretty quickly into the circulation, it is necessary to give it in very moderate doses, especially where there are parts destitute of epidermis. But as thereby its action is delayed, it is better to employ the carbolic acid in the form of a salt. According to Rothmund, natrum carbolicum supplies all the requirements of a good, rapid and certain itch remedy. The following is the best way of using it:—

R.	Natr. carbol.,	ʒxv.	
	Aqua destil.,	flozclxxx.	M.

With this the affected portions of the skin are to be rubbed three times a day, and even in the most inveterate cases the treatment never lasts more than two and a half days; relapses are not to be feared, and if the rubbing-in is carefully performed, no erythema to speak of occurs. During the treatment the patients are in no way hindered from following their usual occupations. One advantage of the Peru balsam and carbolic acid treatment of itch is that it is not necessary to disinfect the clothes or bed linen. In order to make sure, Rothmund recommends an additional rubbing in be made some eight or ten days after the cure of the itch, in order to kill any acari or their eggs that may have lurked among the clothes or bed linen.

Editorial.

REVISION OF THE LIST OF POISONS.

By reference to the minutes of the late council meeting, it will be seen that certain changes were authorized to be made in the schedule of poisons appended to the Pharmacy Act. The attention of the council was directed to this subject by a case of poisoning, which took place at London, Ontario. We are not acquainted with the precise details of the case, but were given to understand that a person who was in the habit of using hydrate of chloral, came to his death by the effects of an overdose, carelessly apportioned by himself. Of course the druggist who sold the chloral could not be blamed. There is no legal restriction on the sale of the drug by a registered chemist, and moral responsibilities would be limited to the cautioning of the purchaser in regard to the poisonous nature of the medicine, and the dose in which it might safely be administered. This, we may assume, would certainly have been done by the druggist from whom the chloral was purchased, and here his legal and moral obligations would terminate.

We cannot think that this occurrence should be urged as showing a weakness in our law, as the proposed change would certainly imply. We do not think that such a change would have the slightest effect in preventing a repetition of occurrences of a similar character in future. It may, indeed, be well to throw as many obstacles as possible in the way of allowing careless or ignorant persons obtaining possession of dangerous medicines, and the transposition of chloral from the second to the first part of Schedule A—as mediated by the Council—would, in some measure, tend to this end. There are, however, many other articles enumerated in the second part of Schedule A which are of equal, if not greater, importance. To neglect these would be to place the Council under a charge of inconsistency which would admit of no excuse. Take the instances of opium and its preparations, belladonna, cantharides, croton oil, hellebore, and conium and the preparations thereof. Any of these substances are as poisonous as chloral, and many of them more so. Some of them, with their doses, are as little known as chloral, and

others are so familiar as to have almost lost their power to call forth proper caution in their use. By all means let these articles be included with chloral in the first part of the schedule, if a change is really necessary. Why put obstacles in the way of a patient getting a sleeping draught of chloral, while he is allowed free access to the laudanum bottle, or worse still, a supply of morphine? Would twenty grains of sulphate of morphia, or a like quantity of chloral hydrate, be most dangerous in the hands of the careless or ignorant? These are the questions which our critics would ask if the contemplated change were carried out, and we fear a reasonable answer would not be forthcoming.

Another change proposed is the removal of oil of cedar entirely from the list. At present it is included in the first part of the schedule, and can only be sold under stated conditions, one of which is, that the purpose for which it is to be used must be clearly set forth in writing, and be properly attested, before a purchase can be effected. This cannot possibly do any harm, and may be the means of preventing much evil. There is a wide-spread belief that oil of cedar is capable of producing abortion; and this knowledge is not unfrequently put to the test. Of the correctness of the belief we cannot state, but we do know that oil of cedar is capable of producing death. It is seldom that a month passes without the medical journals bearing record of some unfortunate one who has fallen a victim to her experiments with this supposed remedy. Even supposing the drug to possess none of those properties which are popularly ascribed to it, it is sufficient for us to know that, in some way, it is instrumental in the death of many persons. We hope that the present restriction will be continued, and we would furthermore express the opinion that if changes are to be made at all they should not savor of laxity, but greater stringency. There are many substances which might, advantageously, be added to the schedule, and many others, which are, at present, sold with trifling restrictions, which should be properly included in the first part of the list.

VICTORIA UNIVERSITY, MEDICAL DEPARTMENT AT TORONTO.—The new building which has been in course of erection during the past summer, is now almost completed. The College is situated in

the immediate vicinity of the Toronto General Hospital, being, in fact, almost opposite the gates of that institution. This close proximity will be found a great convenience to students, and will be the means of saving much time. The new building, which is a handsome brick structure, contains a commodious theatre and lecture room, a laboratory, museum, reading room, waiting rooms, &c., with all the modern improvements of heating and ventilation. The commencement of the session will be made the occasion of a formal opening of the new College. This will take place on Tuesday evening, Oct. 1st, when the Rev. Dr. Punshon and several other speakers are expected to deliver addresses.

MESSRS. LYMAN BROTHERS' PIC-NIC.—The annual pic-nic given by the Messrs. Lyman to their employees, took place on Monday, September 23rd. The party, to the number of about one hundred and twenty, accompanied by a band of music, were conveyed to the West Lodge grounds, which had been secured for the occasion. The weather was delightfully fine, and as every effort had been made by the promoters of the pic-nic, to render its arrangements as complete as possible, a very pleasant afternoon was spent. Various games were provided, into which the younger portion of the party entered with great gusto. Prizes were offered for running and jumping, and were competed for with spirit. About five o'clock tea was provided on tables spread on the lawn, after partaking of this a portion of the party enjoyed themselves in dancing to the enlivening strains of a quadrille band. The day was appropriately brought to a close by Mr. W. Hunter, who, in offering to the Messrs. Lyman the thanks of the assembly, delivered a most happy speech, Mr. Lyman responded, and after remarks by other members, the party broke up, and were conveyed to their respective homes.

COLLEGE OF TECHNOLOGY.

The lectures in this institution have been resumed. Those on Chemistry are delivered on Monday, Wednesday and Friday evenings. Mechanical and Engineering Drawing, on Tuesday and Thursday. The Reading Room and Library of Reference is open

to the public on Tuesday from 7 until 10 o'clock, p. m.; and on Saturday from 2 until 9 p. m. All the leading scientific periodicals may be found in the reading room. No fee is charged for attending the lectures, and it is hoped that pharmaceutical students will take advantage of this excellent opportunity for rendering themselves acquainted with the elements of a science so important as chemistry.

Editorial Summary.

RELATION BETWEEN THE ODOR OF GASES AND THEIR POWER OF RESISTING LIQUEFACTION.—Mr. F. Treves (*Pharm. Jour. and Trans.*) points out certain relations existing between the properties of gases. 1st. That those gases alone have odor which can be reduced to a solid or liquid condition by the application of pressure or intense cold; and in reviewing the relation in another aspect it is found that every gas that is inodorous, is likewise quite irreducible by either cold or pressure. 2nd. That the intensity of odor of any gas bears a marked relation to the power required to reduce that gas to a liquid, or to a solid state; the strength of the odor being in inverse ratio to the amount of force required for condensation. The first of these relations is found to hold good in most instances, but admits of some exceptions. The elementary gases oxygen, hydrogen and nitrogen, are perfectly inodorous, and, at the same time, quite irreducible by pressure or cold, while chlorine which has a most marked odor, is easily condensed. Of the compound gases, carbonous oxide is inodorous and also incondensible; carbonic oxide, which has a faint pleasant odor, can be brought to a liquid—even a solid state. Nitrous oxide, possessing a faint but decided smell, can be liquified and also solidified; nitric oxide is inodorous, and has never been condensed. Several other instances are adduced by the author, all of which go to substantiate the idea advanced. Of the exceptions to this so-called rule, acetylene is instanced. This gas has, so far, proved incondensible, but still possesses a most distinct and far from pleasant smell. In order to prove the second proposition—that there is a ratio between the intensity of the odor and the power required to reduce the gas—sulphurous acid is instanced. This gas is so odorous as to be quite suffocating, but requires only a pressure of two atmospheres at 15°, or a temperature of 17·8° to reduce it to a liquid; whilst, on the other hand, no less than fifty atmospheres at 7·2° are required to bring nitrous oxide

a gas faintly odorous to a liquid condition. Chlorine is liquified under five atmospheres, while hydrochloric acid, the odor of which is proportionately fainter, requires forty atmospheres for complete reduction. Ammonia and sulphuretted hydrogen on the one hand may be compared with ethyiene, and the same relation will be found to hold good. The author does not note any special exceptions to this rule, but states that some exist, and states that the gases which are described as having a fœtid or garlic odor, are particularly noticeable among the number.

Poisonous Properties of Pure Carbolic Acid.—It is well known that fatal effects have resulted from the incautious use of carbolic acid. By some authorities this poisonous action has been charged to impurities in the acid, and it has been advanced that the pure acid is not poisonous. Dr. Husemann, of Gottingen, has lately published the results of a series of experiments made in order to decide the point, and the conclusion is arrived at that *pure* carbolic acid is, undoubetly, possessed of poisonous properties.

Poisonous Properties of Privet (*Ligustrum Vulgare*).—Dr. J. D. Moore (*British Medical Journal*) says that although cases of poisoning from eating privet berries have been frequently noticed, the occurrence of poisoning by the leaves, or young shoots of the plant has never as yet been recorded. The writer then gives the case of two children, who, having eaten privet leaves, were seized with unmistakeable symptoms of poisoning, characterized by violent purging, with subsequent vomiting, convulsions, loss of power, especially of the lower extremities. Under medical treatment the children ultimately recovered.

Adulteration of Cardamom Seeds.—Geo. W. Kennedy (*Amer. Jour. Pharm.*) reports an adulteration of cardamom seeds by orange pippins. The resemblance between the two is not very striking, but in the hands of careless or hasty persons, the addition might pass unnoticed. In the case referred to, the adulteration amounted to four cent.

Glycerin as a Solvent for Aniline Colors.—It is stated in the *Journal of Applied Chemistry* that glycerin dis-

solves these colors more readily than alcohol. Experiment has shown that the fact may be taken advantage of in dyeing. In many cases the colors obtained with a glycerin solvent were superior to those in which alcohol had been employed. This was especially remarked in the case of iodine green. While alcohol evaporates by the application of the necessary heat, and the coloring matter is thereby deposited, the glycerin remains unaffected, consequently more even colors can be obtained.

GLYCERIN FOR PRESERVING MUCILAGE ACACIÆ.—R. Rother *(Pharmacist and Chem. Record)* recommends the following formula as producing a preparation which will keep unchanged during the prolonged influence of summer temperature. Whether the addition of so much glycerine is admissible, in a medical point of view, is, we think, questionable. With a smaller quantity the mucilage will turn acid, but the usual sour odor is absent.

Gum Arabic.....	12 troy ounces.
Glycerin.....	8 fluid ounces.
Water.....	16 fluid ounces.

INDIGESTIBLE SUBSTANCES IN THE STOMACH OF A HORSE.—The Glasgow *Herald* contains a communication from the manager of the Springbank Chemical Works, relating to the contents of the stomach of a horse, the carcase of which was lately sent to the works for utilization. An exchange speaks of the matter as a sad case of "Pepsine wanted." We fear, however, that the best makers of digestive powder would find the following materials a little too hard for them:—Broken nails, 629; nails 1½ to 2 inches long, 30; ditto 1 to 1½, 144; spring nails 1 inch, 131; ¾-inch tacks, 158; screw nails, 6 whole and 3 broken, 9; rivets, 2; broken gas burner, 1; shoe tackets, 15; broken pieces of metal, 129; nail heads, sorts, 102; small washers, 5; buttons, 4 whole and 4 broken, 8; pieces of lead, zinc, and round shot, 75; small pieces of wire, 121; pins, 33; ditto broken, 4; needle, 1; ditto broken, 20; small broken pieces of wire riddles, 889; glove catch, 1; boot eyelets, 7; hook and eye, 1; small wire staple, 1; small brass ring, 1; odd bits of metal, 8—in all, 2,523 articles, weighing 3lb. 2½oz; and of gravel and sand, 6lb. 13oz. Total 9lb. 15½ oz.

Transactions of Pharmaceutical Colleges and Societies.

MEETING OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.

BY OUR CORRESPONDENT.

The Twentieth Annual Meeting of the Association was held at Cleveland, Ohio, during the first week in September. As recommended in the circular of announcement sent to members, delegates and others from the east to the number of upwards of fifty spent the Sunday and Monday at Niagara Falls and Buffalo where, but for the detention of the train, your correspondent would have joined the party and have received the genial welcome which was given on arrival at the Kennard House, Cleveland, arranged as headquarters for the members during their stay The resources of this excellent hotel were taxed to their utmost to accomodate the arrivals on Monday and Tuesday, they proved equal to the occasion and to one attending a convention of the kind for the first time, the assembly of the leading Pharmacists of the United States was exceedingly interesting. The time at disposal previous to the meeting enabled your correspondent to glean some particulars regarding the progress made in the United States towards legislative restrictions similar to those already obtained in Ontario. The Pharmacy Act of Ontario, was looked on universally as being not only a step in the right direction but as a very advanced step and one which in its general provisions they were endeavoring to follow, namely the formation of a standard of acquirements, to which future pharmacists must attain, and placing the regulation and maintenance of this in the hands of pharmacists themselves, as being the best judges of what education is necessary for the purpose. The difficulties they have to contend against are the apathy and venality of Congress and the State Legislatures, the members of which find enough work on measures which produce more tangible results than public welfare and pharmaceutical advancement; another cause being the natural repugnance felt in a republic, to any legislation in the direction of curtailing the liberty of the subject. The lesson of too much liberty frequently producing worse results than too little, must be studied for some time longer south of the Lakes in the matter of pharmaceutical education as well as in some other matters.

For the City of New York a law was passed placing the examination of pharmacists already in business and their assistants in the hands of a board of physicians nominated by the Mayor, the fee being thirty dollars. This was looked on by the druggists as iniquitous

and last year they succeeded in amending it so as to control the examinations themselves, and while those in business have an allowance of time in which to prepare for examination, those intending to enter business are more severely dealt with in the matter of examination. Assistants who assume to dispense prescriptions are also required to pass the examination. The wisdom of this provision is a matter of dispute with some, however, judicious in the eyes of your correspondent. No opportunity was obtained of making a comparison with the examinations held by the Ontario College what little information there was led me to think that the latter were the most rigid. Similar enactments have been obtained in Philadelphia, Baltimore, and in the State of California and the efforts of the American Pharmaceutical Association are directed to extending the movement so as to embrace the cities and towns, the smaller villages being left without restriction.

An introduction of a few of the leading members to the readers of the *Canadian Pharmaceutical Journal* may not be out of place. We commence with Dr. E. R. Squibb, of Brooklyn, a gentleman of continental reputation, who relinquished the practice of his profession for that of manufacturing chemist. He is devoted to the interests of pharmacy and possesses a practical acquaintance with every topic brought under notice, and a cordial desire to place his experience and the result of his labors at the disposal of his co-workers. He is a pillar of strength to the Association. Professor Proctor of the Philadelphia College of Pharmacy is another thorough, genial pharmacist, connected with the Association nearly from its commencement, his position on the notes and queries committee requiring as it does a large amount of labor shows his zeal in the cause. The same may be said of Messrs. Shinn of Philadelphia, C. Diehl, of Louisville, Professors J. F. Moore, of Baltimore, and Ballorf, of New York; Dr. Neergard, of New York, one of the examiners for New York city; Prof. Judge, of Baltimore; J. M. Gordon, of Cincinnati; Prof. Ebert, of Chicago; Enno Sander, of St. Louis, the retiring President; Scheffer, of Louisville, whose researches and compilations regarding pepsin have been a valuable feature in the literature of the past year to pharmacists; and last, though not least, the representative of the Ontario College, Mr. Saunders, who, but for a little national feeling in the committee on nominations, would have been placed on the list of officers for the current year; his services to the Association, and his acquirements, are fully appreciated, while personally he has a host of warm friends among the members. A visitor cannot but notice the large proportion of Germans in the Association, as well as in the northern cities of the United States, and also the scientific tendency displayed by the educated ones amongst them.

The meeting was organized at three o'clock on Tuesday, with about 120 members and delegates present, at the skating rink, the

galleries of which were pretty well filled with specimens on exhibition, comprising specimens of the productions of the large manufacturing pharmacists; sugar-coated pills, fluid extracts, and elixirs forming a very large percentage, and of these the means at command were not sufficient to test their value thoroughly; the appearance was unexceptionable. In chemicals, Powers & Weightman displayed a mass of crystals of quinine, 250 oz., morphia, 150 oz., chloroform, acetic acid, creasote, &c., of their manufacture, which all appeared of excellent character. They and Messrs. C. T. White & Co., show some samples of granulated acetate of potash, muriate of ammonia, chlorate of potash, and phos. of soda, some recrystallized acetate of lead, and powdered extract of nux vomica, which would all be found acceptable to the trade in Canada if placed within their reach, as being in a more convenient form than usually presented. The last mentioned article, along with other strong extracts, should be dispensed in this form to prevent the possibility of an unequal distribution through a pill mass, which has frequently loomed up to me as a probable cause of accident, in the future, as well as to avoid the oily agglomeration labelled extract of nux vomica, which has been seen in the Canadian market.

The quinine of Messrs. White & Co. seemed scarcely as white as it should be, nor did the strychnine, this, however, is not often seen in fifteen pound lots as it appears here, the product of three tons of beans. Iodide of potass seemed scarcely as translucent as the English market. Bromide was very fine. The display of solid extracts contained nothing of special interest—many being inferior in aroma to Allen's and other English makers. Mr. H C. Gaylord, of Cleveland, exhibited beautifully moulded suppositories and soluble bougies, together with the moulds for making them, similar in construction to Maw's mould, but not so heavy. Mr. Mercein, of New York, exhibited a Bushby pill machine, and also a collection of his own labels; the taste displayed by himself and the printer was worthy of the large share of attention received. Native wines were well represented. Good & Roof, of York, showed eight varieties of Eberhardt and Lachman's California wines, possessing fine boquet and good body, without the acidity of many American wines, and lighter than many imported ones. Ohio and North Carolina wines are also shown, but do not equal the California products. W. H. Pile, of Philadelphia, exhibits a large assortment of chemical glassware of his own make, comprising an immense variety of specific gravity instruments and bottles equal in finish and price to imported goods. Shop furniture bottles are exhibited by J. Quinlan in great variety. The glass labels, now so popular, permit an unlimited display of taste, questionable and otherwise, by the furnishers of glassware, and must be a source of profit in requiring a frequent change of style to keep up with the prevailing fashion. The handsomest I noticed was a

burnt-in gold oval label the stopper and shoulder being also decorated in burnt-in gold, it would be improved by having a shading to the letters or a groundwork to the label, also burnt in of some color but as a forty ounce bottle costs three dollars in plain burnt gold, they would be rather too expensive to be popular in shop furnishing. In decorated specie jars the work displayed was inferior to English production. In plain glassware Whitall, Tatum & Co. show a good collection, introducing as a poison bottle a blue oval covered with raised points. The usefulness of having a distinctive bottle for poisons is very questionable, the plan brought out in England of making a distinctive attachment to the cork, or one introduced and shown by Mr. Gaylord of Cleveland, of attaching by an india rubber band, a tag to the neck of the bottle with words of caution printed seems to me to be more worthy of general adoption. The discussion raised at the former meeting as to the reliability of the pressed herbs found in commerce, has brought out two fine collections of carefully picked, dried and pressed herbs, which certainly leave nothing to be desired of a better class, provided the samples are commercial not exhibition ones, this, the exhibitors B. O. & G. C. Wison of Boston, state to be strictly true of their samples and the firm deserves mention. An apparatus for the use of pharmacists desiring to press their own herbs was forwarded but not received by the Secretary, samples of the pressed packets showed them not so firmly packed as usually furnished; if the apparatus is simple and inexpensive it will be largely adopted by druggists who value their reputation. The curiosities on exhibition included a London pharmacopœia of 1774, an interesting illustration of the state of pharmacy a hundred years ago, when the *materia medica* included, the dried bones, &c. of members of the *genus homo*, who in life had been distinguished by their disregard of the law generally; the decoctions of various kinds of creeping things, together with a number of unmentionable articles, which would undoubtedly act as emetics if administered in the present day, provided the patients knew the composition. A sample of crude brimstone found on the line of the Pacific railway in extensive deposits, said to contain 90 to 95 per cent of pure sulphur was shown.

The whole exhibition was said, by those who had been present at former meetings, to be rather below the average.

After calling the roll of the members and delegates present the President Enno Sander of St. Louis nominated the committee on credentials, Prof. J. Harris Moore of Baltimore, and Messrs. W. Brown of Leavenworth, Kansas and J. M. Gordon, Cincinnatti, who reported the following organization represented Massachusetts Coll. of Phar., 4; New York Coll. of Phar., 5; Cincinnatti Coll. of Phar., 4; Louisville C. of P., 4; Chicago C. of P., 4; Kansas C. of P., 4; Ontario C. of P., 2; and Tennessee C. of P., 1; New Jersey Pharmaceutical Association, 5; Newark do., 5; Columbia do, 4; Alle-

ghany C. do., 5; Saginaw Valley do., 5; Alumni Association Massachusetts Coll. of Phar., 5; do. New York do., 4; do. Philadelphia do., 4.

The report of the executive committee was read by Mr. Maisch, giving the operations of the committee for the past year. The same gentleman then read his annual report as Permanent Secretary, from which we gather that the proceedings of the annual meeting which are printed and sent to members, formed a larger volume each year. He recommended that it should be made more interesting by the introduction of woodcuts to illustrate any new apparatus brought out. He had received a letter from the College of Physicians and Surgeons of Philadelphia, recommending the use of distinctive bottles for poisons and the printing of the antidotes to be used on the labels.

A committee on nominations was struck consisting of one representative from each organization, to nominate officers for the ensuing year. The business committee reported through Mr. Shinn of Philadelphia and recommended altering the by-laws, so that the committee might be enlarged and their duties include everything of a business nature, so that all the time of the annual meeting should be taken up with discussion of the queries and papers brought in.

The President read his annual report, showing a membership of 925 ordinary and 24 honorary members. The increase of the fees to $5 having been found beneficial, 199 new members having joined during the past two years in place of 174 in the same time under the reduced fee. The annual fee has been refunded in the case of five indigent members. The report reccommended that the initiation fees should be funded, that members of 10 years standing should be allowed to commute their annual payment for a proportionate single payment; that the committee on the progress of pharmacy should divide the work amongst themselves instead of having one report from the chairman, or that a permanent reporter should be appointed and paid, as the labour in making up this report was increasing annually. He referred to the unofficinal preparations which were flooding the market, and recommended the committee on the pharmacopœia should take charge of the matter. The business of the day was concluded by the appointment of a committee of three. Mr. Saunders, chairman, to report on the president and secretary's reports.

On Wednesday, after the reading of the minutes, the committee on nominations presented the following list, which was adopted on discussion:—

President—Albert E. Ebert, Chicago.

Vice-presidents—S. S. Garrigues, Saginaw; E. S. Nicholls, M.D., Newark; H. C. Gaylord, Cleveland.

COMMITTEES.

Executive—Thos. S. Wiegand, Philadelphia, chairman.
Progress of Pharmacy—Louis Dohme, Baltimore, chairman.
Drug Market—W. H. Brown, Baltimore, chairman.
Papers and Queries—C. Louis Diehl, Louisville, chairman.
Business—Paul Balluff, New York, chairman.
Specimens—H. J. Meninger, Raleigh, chairman.

The new president was conducted to the chair, and after a few remarks in acknowledgment of the honor, a vote of thanks to the retiring officers was carried by acclamation. A lively discussion on the reception of a delegate from the Georgetown College of Pharmacy was entered on, in which it was brought out that it was one of many educational establishments which had started a course of pharmacy, and the question was whether such institutions should be allowed to send five delegates as authorized in the by-laws—the matter was finally sent to a committee to decide.

The treasurer presented his annual report, the current expenses of the association being, for salaries, $500 to secretary and $300 to treasurer, with $429 incidentals. An audit committee reported it correct.

The amendments to the By-laws were discussed but were not at all popular with the members. Dr. Squibb and others thought that it would take away a great deal from the interest of the meeting to have all business matters managed by a committee. The question was indefinitely postponed.

The President announced that the druggists of Cleveland had invited the Association to a sail on the lake at two o'clock, and that a band of music would be in attendance at the rink in the evening. Dr. Squibb thought that the question of putting the druggists of the city where the annual meetings were held to the expense of such entertainments should be settled by respectfully declining their kind invitation. He thought it was injudicious to make their annual meeting a bill of expense to the local druggists and that their duty was fully done by merely indicating the points of interest worthy of a visit, and by arranging for conveyances at fair rates, which members would gladly pay.

The representative of the Clevelanders said that the boat had been chartered so that it was too late to withdraw.

The report of the committee on drug market was read, noting the gradual advancement in prices which had taken place during the year; the reduction in duties, principally in crude articles which were now free and would lead to a renewal of export trade cut off by the duties imposed at the close of the war; the tendency to a decline from the cash principle of sales were deprecated. In specifying the different leading drugs. Cundurango held last October at $50 to $100 per lb. had been imported to the extent of 1,300 serons

and could now be bought for 75c. Cantharides—the market had fallen under heavy importations of Chinese flies, which were found to be richer in the active principle. Opium having been held largely by speculators when the market broke had been exported to China. Bromine and bromides now made so extensively as to be exported. Iodine; the enormous price now reached was thought to be owing to a monoply in the English market, aided by the demand for it in the manufacture of aniline green. Quinine, supplied almost entirely by American manufacturers, and of equal value, the recent rise in the price of barks was being felt in its products. Cinchonine increasing in demand. The report closed with a recommendation of free trade, and a regret that no statistics could be obtained of the chemical manufacturing trade of the country. This closed the reports of permanent committees on hand, and the reading of the papers was commenced. At the risk of telling an old story, it may be explained that the committee on papers and queries make out a list of questions which is circulated at each annual meeting, when those who choose may accept such questions as they wish, and send or bring in a reply at the next meeting; some of the more difficult are given to members of the Association, who, being absent, are thought by the committee to be able and willing to make replies, so that some questions go begging from year to year, and some who have accepted queries find themselves with an elephant on their hands, and do not reply, yet there are always enough papers presented to make these meetings very interesting to any one who looks on pharmacy as an interesting study, rather than a weary toil, who finds a pleasure in exploring the untrodden paths of investigation and experiment which our occupation presents at every turn to a greater extent than any other.

Prof. Proctor, on behalf of the Committee, said that of the 70 queries given at the last meeting, answers had been only received from 40, many of which were in blank, and wishing to be notified of any volunteer papers and replies which the members might have brought; several papers were notified.

Mr. Proctor presented a letter from Mr. Parrish, with an album he had received from Mr. Brady, who, it will be remembered, visited the Association at its last annual meeting, and as an acknowledgment of the kind attentions received, had sent a collection of photographs of the leading gentlemen connected with the Pharmaceutical Society of Great Britain, and distinguished pharmacists. A cordial vote of thanks was passed and suitable reply authorized. A letter from the signal office at Washington was received with charts, &c., and the reports on which the daily weather bulletin was based, explaining the operation. Dr. Squibb said that he thought the Association should, in acknowledging the receipt, express their opinion as to the value of the bureau to the agricultural as well as commercial interests of the country, as by so doing it might

strengthen the hands of those who were endeavoring to extend its operations by the establishment of two or three signal stations off the eastern coast of the continent. The expense connected with which, though heavy, would be fully warrantable.

The first query—Cantharidate of potasse as a vesicant. Mr. Ebert said that it had been tested in Chicago and found wanting. Dr. Squibb said that he had sent preparations of it to the different army medical stations to be tested, and would be able to report at next meeting. His own experience was from a trial on himself, thus its action was slower than that of the ordinary plaster and that perhaps the alkaline solution might not retain its properties well.

A paper on Syrup of Senega and compound syrup of squills, was read and discussed; its general recommendations were endorsed by others. In the case of this and many other papers, which will probably be published in the Journal it will only be necessary to name them.

Mr. W. J. Weeks' paper on the tests for purity of Oil Erigeron gave as the test, its action with nitric acid forming a uniform brown color.

A query regarding effervescing granular salts was not answered, a good exposition of the composition of which would be useful not to say alarming.

A query as to the best hand drug mill for ordinay use was answered, recommending Hances, as being freer in use and more suitable than others. Mr. Eberle of New York, preferred Swift's common corn mill as being the cheapest, easiest cleaned and kept in order. This was also endorsed by others as the result of their experience.

Burgundy Pitch received no reply as no one seemed willing to divulge the secret for Burgundizing Resin, &c.

The question of the active principle of Cimicifuga had again to be laid over. This is one of the many subjects which any pharmacist with the time and inclination to spare might profitably study.

Mr. J. F. Hancock gave a good paper on a dispensing counter, illustrated by drawings, and was followed by a volunteer paper from Dr. Squibb on aconite root, in which he gave directions for testing its quality, viz: by breaking the root near the centre and applying a piece the size of a pin head to the tongue, the first taste being very slightly bitter followed by the characteristic tingling produced, by the local paralysis of the organs lasting 3 to 4 hours. This should be perceptible in 8 out of 10 roots tested, anything less than that should be rejected. The probable cause of the inferior quality presented was its being gathered at all seasons of the year and by inexperienced persons, and until inferior samples were rejected by druggists entirely, the same state of affairs would continue. Dr. S. said that the active principle aconitine was found to vary in uniformity as much as the root; this, if true, leads to the conclusion

that aconitia is not really the active principle but an accompaniment of the root, and opens up a new field for investigation. This paper was supplemented by one on rhubarb of which the doctor had two chests on exhibition, one of Russian and one of Chinese imported via San Francisco. Duggists were warned against the nicely shaped pieces sold for fancy prices (not yet introduced into Canada,) he having seen four lots bought at 10 pence to 1s 3d sterling which were entirely worthless and yet had passed the drug examiners at New York.

The paper on glacial phosphoric acid, and the experience of others reported the article as supplied generally free from any material impurities. The query as to whether isinglass could be procured from the fish of the northern lakes had to be carried forward. Mr. Enno Sander of St. Louis reported that he had tested four samples of creosote found in commerce and only found one to answer Morson's glycerine test, he asked an extension of time so as to be satisfied that Morson's test was a true one, by having some wood creasote made, as it might be that this was only a peculiarity belonging to Morson's creasote. Mr. Remington said that experiments in Germany had tended to show it fallacious or likely to be affected by the density of the glycerine.

Thursday's proceedings consisted of reports of committees and answers to queries. A telegram from Dr. Jenkins stating that the report on the progress of pharmacy would not be ready for the meeting, was a disappointment to many, but it was hoped that it might appear in the published proceedings. A committee of three was struck to select a place of meeting for next year. A very interesting paper on pharmaceutical legislation in the United States and ew York in particular, was read by Mr. Balluff—the principal results have been already mentioned. He thought the principle of strict government surveillance, adopted in Germany, though admirable for protecting the public and compelling higher acquirements, was not suited to the democratic institutions of the U.S., while the limitation in numbers savored of monopoly and favoritism, but agreed as to the education being furnished by the State. The labor in obtaining their present status was great, and paved the way for further proceedings. He reported 91 as having passed the examination in New York city.

Mr. Saunders reported on the President and Secretary's annual report, favorably in the case of most of the suggestions, but with reference to the recommendation of the College of Physicians of Philadelphia, as to poison bottles, &c., the committee could not endorse it. It was a disappointment to many that the clause advocating the printing of the necessary antidotes on the poison labels was not viewed favorably.

The liveliest debate of the meeting was brought on by the reading of a reply by Mr. Eberbach, of Ann Arbor, Michigan, to the

question as to the proportion of alkaloids in the so-called elixirs in the market. The elixir nuisance, as many of the members named it, is one which has only just made its appearance on Canadian soil, and from the insight obtained in a short time by your correspondent as to its physical habits, I should say it required more verdancy in the medical profession than I hope it is likely to meet, to insure a vigorous growth. But in the United States, commencing in a mild way, it has assumed immense proportions. Tom, Dick and Harry make combinations of two or more articles of *materia medica*, iron, bismuth, lime, soda, pepsin, strychnine, &c., &c., and having commenced on beef, will soon have veal, mutton, and pork dragged in until in time we shall have presented in an elegant form an elixir of *lacto caffein*, combined with *albuminovoid* extract of pork and solanized beef for breakfast. The manufacturer sends a sample to the physician, who finds the taste of the medicines beautifully disguised (?) by the alcohol and sugar, and forthwith prescribes it, and the unfortunate druggist finds himself compelled to keep a whole host of the compounds of each manufacturer, any of which he could make quite as palatable if his conscience allowed him to make the same difference between the actual and nominal contents of each teaspoonful. Prof. Eberbach's paper, the result of immense labour in analysing the numerous samples of so many makers, showed very few contained anything like the amount of alkaloids stated on the label. He gave a formula for simple elixir and recommended for calisaya elixir that the alkaloids be precipitated from an acid infusion and dissolved by citric acid.

Mr. Shinn said that physicians found their labor saved by using these combinations and recommended druggists to keep and introduce to physicians a simple aromatic elixir with which they might combine the active ingredients required. Dr. Squibb disapproved entirely of elixirs as being little else than a cloak for disguised tippling, many of the combinations were entirely inappropriate, not two cases in ten requiring the ingredients to be in the same proportion, and the whole affair was nothing more than an attempt to carry on the practice of medicine on the ready-made clothing principle, arrising from a laziness or ignorance of physicians who loaded the gun up to the muzzle with shot and blazed away on the chance of something hitting the mark.

Mr. Shaeffer said that the elixirs containing pepsin were entirely worthless as promoters of digestion, the solution not retaining the power of dissolving coagulated albumen, as might be verified by any one.

Mr. Ebert said that the course he had adopted was when an elixir of any particular maker was ordered, to combine the ingredients which he claimed for it with his own simple elixir, and to explain to the physician his course, and the reasons for it. This brought up the question as to how far any departure from the liter

erscription was permissable in the druggist. The almost unanimous opinion was that the prescription should be dispensed as written, or not at all; only one gentleman went so far as to defend he substituting of a home-made preparation of an officinal character, where that of an individual maker was specified. It is to be oped that the sentiments expressed by the members are as generlly adopted by other pharmacists in the United States and Canada.

Mr. Maisch read a paper on Sneezeweed, the subject having een brought before the Association at the last annual meeting by physician reporting fatal results to cattle from eating it. He ound it to be *Helenium Autumnale*, and promised further investiation. An excellent paper on Education, by Prof. Parrish, was ead, and will, I hope, be given in a future number of this journal. was followed by a volunteer paper on Tennessee opium. A mple shown was of a fine, even texture, without the impurities of mmercial opium, and from analysis 20 per cent. richer in the ac- ve salts. The yield was large, some 40 lbs. to the acre, but no actical report of the labour was given, an important item in the oducer's estimate of profits.

The steamboat excursion announced for the afternoon was stponed till next day, and the Cleveland reception committee ovided carriages for the ladies and others to visit the attractions the city; their drive was cut short by a heavy shower. A numr of the members prevailed on the President to hold an extra ssion, which was well attended. A few remarks on glassware by e representative of a large factory savored very strongly of an adrtisment, and the dodge was sufficiently transparent to provoke gns of impatience in the meeting. Dr. Squibb followed with a ry good paper on percolation, introducing a percolator he had iginated, which was shown in operation. It may briefly be deribed as a large celery glass, the sides tapering straight down, rming a base three inches in diameter, to be covered with a piece felt. In the centre is placed perpendicularly a glass tube, and e dry ingredients placed around it keeps it in place. The liquid ssing through the drug enters the well, and is drawn from it by eans of a syphon, arranged by means of sections of rubber tubg, so as to be fastened at any point of elevation—the doctor iming that by raising or depressing the syphon the rapidity with ich the liquid passes through the drug may be regulated, and us the true object of percolation attained, namely that of causing e menstruum to pass perpendicularly downwards, *through* each rticle instead of *around* it. The one shown was operating on umba root, and in a very satisfactory manner. A sample of umba which had been operated upon by four times its quantity diluted alcohol, was a strong argument as to its efficiency.

Friday morning was occupied in reading papers. Dr. Squibb Am. Cit. Bismuth; Mr. Saunders on Ext. Cannabis Ind., re-

commending that it be made from the plant instead of purifying the crude extract as recommended in the U.S.P.; and others. The committee on the next place of meeting recommended Richmond, Va., which was carried on discussion. The Louisville members who had been empowered to extend an invitation, felt rather slighted. The true objects of the Association, that of creating and extending an interest in Pharmacy as a study, have been carried out in the selection of the various places of meeting; as of paramount importance; Cleveland was proposed as having only two members of the Association, it required, to use an Americanism, "jerking up," and the same reason seems to have settled on Richmond for the next meeting, several former members having dropped off. The idea has been successful as regards the present meeting, an addition of 70 or 80 members has been made during the session.

The sail on the lake was enjoyed especially by those who hailed from the inland and southern states. A teachers' convention was being held during the week, and with the druggists made a very large party to share the hospitality of the citizens. The view of the city from the lake is not one an artist might chose for a picture. Those tall chimneys with their pennons of smoke make a more interesting background to the picture in the present mercenary age than a snow-capped mountain; and the muddy ditch, thronged with boats bringing the iron ore from Lake Superior and Canada, or bearing away the product of the coal mines, and smelting furnaces and steel factories, possesses a charm unseen in the sparkling brook, fringed with emerald, which must have occupied the centre of the picture less than a hundred years ago.

The sail over, the visitors formed parties according to their various destinations, and bade good-bye to the city of Cleveland, hoping to renew their acquaintanceship of a week on the third Tuesday of September, 1873, at Richmond.

BRITISH PHARMACEUTICAL CONFERENCE.

We gather the following particulars of this meeting from the pages of the *Chemist and Druggist.*

The Conference was opened on Tuesday, 13th, with a good attendance, among the company being Professors Markoe, of Boston, and Wayne, of Cincinnati; Professor Redwood, the President of the Pharmaceutical Society, Mr. Henry Deane, and many other pharmaceutical luminaries were also present. A letter of invitation from Bradford was read, and the invitation accepted. The Report of the Executive Committee followed, and its adoption was proposed by Mr. Cornish, and seconded by Mr. Salmon. Then followed the President's address, for which a vote of thanks was proposed

by Mr. Savage, and seconded by Mr. Brew. Dr. Edward Squibb, of Brooklyn, and Professors Markoe and Wayne, were elected honorary members. At the morning sitting were read a selection from Dr. Attfield's paper; "Pharmaceutical Education," Mr. Julius Schweitzer; "Notes on Education," Mr. Barnard S. Proctor; "Pharmaceutical Ethics," Mr. S. R. Atkins.

In the afternoon letters relative to Professor Attfield's paper were read from Mr. E. Smith, of Torquay, Mr. Mackay, of Edinburgh, Mr. William Gilmour, one of the Board of Scottish examiners, Mr. David Kemp, and Mr. Peter Squire. "Educated intelligence," said the latter in effect, "is a better safeguard than the best devised Act of Parliament." Professor Michael Foster was appealed to by the President to relate his experience with regard to the practice of examinations and as to how far they might be accepted as a test of knowledge. He reserved his remarks to the conclusion. Many members spoke on the subject. Mr. Sandford read a short paper, which was mainly a review of Dr. Attfield's tractate. Mr. Hampson, of Islington, had also committed his remarks to manuscript. Mr. Haselden, President of the Pharmaceutical Society, defended the present system of examinations, insisting, as indeed was the case with the generality of the speakers on the imperative necessity of preliminary education. Mr. Schacht, as well as Mr. Reynolds, explained the several schemes with which their names are popularly connected. Mr. Giles assented to the adoption of the machinery provided already by the Government system, wherever it could be applied to such technical instruction as would advance the interests of pharmacy; Mr. Carteighe gave his views with his usual clearness and animation. The meeting then adjourned.

On Tuesday evening the local members invited those from a distance to a supper, and Wednesday was devoted to papers of a more strictly pharmaceutical character.

Varieties.

THE VEGETABLE POISON MASCHI.—K. F. Appun, in his "Travels," speaks as follows of this nearly unknown poison:—

The Serekongs of British Guiana prepare the fearful poison, known as *Maschi*, which is made out of the rootstocks of *Arum venenatum* W., and has an arsenical look. The rhizomes are dried in the sun and reduced to a fine powder, which is preserved in quills. According to the dose, the poisoned persons may live on for months, gradually wasting away, and finally die in torments, or he may give up the ghost after an hour of terrible, burning, intestinal pain and repeated spasms.

The poisoner places the powder upon the lips or on the nostrils of his victim whilst asleep, in such a way that when he wakes he will draw

it in with his breath, or lick it off his lips; or else he gives a feast to his victim, and, after drinking himself from the full calabash, hands it to him, holding it in such a manner that his thumb is plunged into the liquid, and the poison which has been concealed under the nail is dissolved out.—*Vierteljahrschr. fur prakt. Pharmacie* Heft 2, 1871, in *New Remedies.*

SEPARATION OF GOLD AND COPPER FROM LEAD BY MEANS OF ZINC.—The property of zinc to combine with gold and copper more readily than with silver is now practically employed in Germany for the separation of those metals in the metallurgy of lead. To the pot holding about 30,000 pounds of lead, no more than 40 pounds of zinc are at first added; the zinc scum which is produced carries up with it the copper and all of the gold, with scarcely any silver. The scum or dross is removed and further treated for the gold and copper contained in it. In this way a very small percentage of gold can be economically separated from other metals in lead ores.

BROMINE WATER AS A TEST FOR PHENOL—C. Mene.—When bromine-water is added in excess to a weak aqueous solution of phenol, there is formed a yellowish white precipitate of tribromo-phenol; this reaction is so sensitive that 1 part of phenol (carbolic acid) in 43700 parts of water, that is 0·0229 grms. to the litre, can be detected; in case of any doubt arising as to the nature of the precipitate, it is separated by filtration, washed, and put into a test-tube, gently heated along with some sodium amalgam; the liquid is then poured into a beaker-glass, and upon the addition of a few drops of dilute sulphuric acid the characteristic smell of phenol will be preceived and the substance becomes visible in the shape of oily drops.—*Chem. News., from Rev. hebdom. de Chim.*

USE OF THE ESSENCE OF EUCALYPTUS GLOBULUS TO DISGUISE THE ODOR AND TASTE OF COD-LIVER OIL.—The researches of Prof. Gubler on the *Eucalyptus Globulus* and its essence—Eucalyptol—has suggested to M. H. Duquesnel a trial of the effect of the Eucalyptol in masking the disagreeable flavor and odor of cod-liver oil, and the result, he says, has been most satisfactory. He mixes one hundred parts of cod liver oil with one part of the essence of eucalyptus. The oil thus aromatized, he states, has neither the taste nor odor of cod-liver oil; it is readily swallowed and leaves in the mouth or on the tongue only the flavor of the essence with which it is mixed: and the disagreeable eructations which follow the taking of the pure oil are completely modified. The aromatic oil may be kept for a long time if the bottle in which it is placed be maintained very closely stoppered.—*Med. News and Library, August, 1872, from Rev. de Therap., June* 15. 1872. *from Bull. de Therap.*

IMPORTANCE OF CLEAN BOTTLES.—A case of poisoning is reported in the *British Medical Journal,* under the following circumstances: A child, two weeks old, was ordered dill-water, which was procured in a bottle previously containing a preparation of opium, and beaing a label to that effect. The bottle was empty, what liquid there had been in it having dried up, leaving a deposit on the sides and bottom. The dill-water dissolved the residue, and, upon analysis, was found to contain morphia and meconic acid. A teaspoonful was given to the infant, who immediately thereafter fell asleep. His breathing changed within an hour, followed by convulsions and narcotism. He died the following day.

DRUGS, MEDICINES, &c.	$ c.	$ c.
Acid, Acetic, fort	0 12 @	0 14
Benzoic, pure	0 25	0 35
Citric	1 25	1 30
Muriatic	0 05	0 06
Nitric	0 11½	0 15
Oxalic	0 35	0 55
Sulphuric	0 03¾	0 07
Tartaric, pulv	0 50	0 50
Ammon, carb. casks	0 22	0 22
" jars	0 22	0 22
Liquor, 880	0 21	0 25
Muriate	0 12½	0 15
Nitrate	0 45	0 60
Æther, Acetic	0 45	0 50
Nitrous	0 35	0 37
Sulphuric	0 48	0 50
Antim. Crude, pulv	0 13	0 17
Tart "	0 56	0 60
Alcohol, 95 per ct.....Cash	1 60	1 72
Arrowroot, Jamaica	0 18	0 22
Bermuda	0 45	0 65
Alum	0 02¾	0 03½
Balsam, Canada	0 40	0 42
Copaiba	0 77	0 80
Peru	3 80	4 00
Tolu	0 .0	1 00
Bark, Bayberry, pulv	0 18	0 20
Canella	0 17	0 20
Peruvian, yel. pulv	0 42	0 50
" red "	2 10	2 20
Slippery Elm, g. b	0 15	0 20
" flour, packets	0 28	0 32
Sassafras	0 12	0 15
Berries, Cubebs, ground	0 20	0 25
Juniper	0 06	0 10
Beans, Tonquin	0 62	1 10
Vanilla	28 00	28 00
Bismuth, Alb	3 50	4 00
Carb.	3 75	4 0[illegible]
Camphor, Crude	0 38	[illegible]
Refined	[illegible]	[illegible] 00
Cantharides		3 00
Powdered	80	3 10
Charcoal, Animal	0 04	0 06
Wood, powdered	0 10	0 15
Chiretta	0 20	0 30
Chloroform	1 25	1 65
Cochineal, S. G	0 80	0 95
Black	1 10	1 20
Colocynth, pulv	0 50	0 60
Clolodion	0 67	0 70
Elaterium oz	4 50	5 00
Ergot	0 65	0 75
Extract Belladonna	2 20	2 50
Colocynth, Co	1 25	1 75
Gentian	0 50	0 60
Hemlock, Ang	1 12	1 25
Henbane, "	1 70	2 00
Jalap	5 00	5 50
Mandrake	1 75	2 00
Nux Vomic oz	0 60	0 70
Opium oz	1 10	—
Rhubarb	7 50	—
Sarsap. Hon. Co	1 00	1 20
" Jam. Co	3 25	3 70
Taraxicum, Ang	0 70	0 80
Flowers, Arnica	0 25	0 35
Chamomile	0 32	0 40
Gum, Aloes, Barb. extra	0 70	0 80
" " good	0 38	0 50
" Cape	0 16	0 20
" " powdered	0 20	0 30
Socot	0 5[illegible]	80
" " pulv	0 60	90
Arabic, White	0 60	0 65
" powdered	0 50	0 75
" sorts	0 28	0 30
" " 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 48	0 55
Catechu	0 12	0 15
" powdered	0 25	0 30
Euphorb, pulv	0 32	0 40
Gamboge	1 05	1 20
Guaiacum	0 25	0 78
Myrrh	0 42	0 60

DRUGS, MEDICINES, &c.—*Contd*	$ c.	$ c.
Sang Dracon	0 60	0 70
Scammony, powdered	6 50	6 75
" Virg. "	14 50	—
Shellac, Orange	0 55	0 60
Gum, Shellac, liver	0 50	0 52
Storax	0 65	0 75
Tragacanth, flake	1 10	1 40
" common	0 35	0 40
Galls	0 27	0 32
Gelatine, Cox's 6d	1 10	1 20
Glycerine, common	0 30	0 35
Vienna	0 30	0 40
Prices	0 60	e 75
Honey, Canada, best	0 15	0 17
Lower Canada	0 14	0 16
Iron, Carb. Precip	0 17	0 20
" Sacchar	0 40	0 55
Citrate Ammon	1 50	1 50
" & Quinine, oz	0 56	0 60
" & Strychine "	0 17	0 25
Sulphate, pure	08	0 10
Iodine, good	12 50	—
Resubiimed	16 25	—
Jalapin	1 40	1 60
Kreosote	2 00	2 10
Leaves, Buchu	0 25	0 30
Foxglove	0 25	0 30
Henbane	0 35	0 40
Senna, Alex	0 30	0 60
" E. I	0 12½	0 20
" Tinnevilly	0 20	0 30
Uva Ursi	0 15	0 15
Lime, Carbolate brl	5 50	—
Chloride	0 06	0 07
Sulphate	0 08	0 12½
Lead, Acetate	0 14	0 15
Leptandrin oz.	0 60	—
Liq. Bismuth	0 50	0 75
Lye, Concentrated	1 75	2 00
Liquorice, Solazzi	0 5[illegible]	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 45	0 50
Mercury	1 10	1 15
Bichlor	1 15	—
Chloride	1 35	—
C. Chalk	0 60	—
Nit. Oxyd	1 45	—
Morphia Acet	3 80	4 00
Mur.	3 80	4 00
Sulph	4 00	4 20
Musk, pure grain oz	22 00	—
Canton	0 90	1 20
Oil, Amonds, sweet	0 50	0 52
" bitter	14 00	15 00
Aniseed	4 25	4 50
Bergamot, super	5 75	6 00
Carraway	4 00	4 20
Cassia	2 40	2 50
Castor, E. I	0 15	0 15
Crystal	0 22	0 25
Italian	0 26	0 28
Citronella	1 30	1 50
Cloves, Ang	1 75	2 00
Cod Liver	1 [illegible]0	1 50
Croton	1 75	2 00
Juniper Wood	0 80	1 00
Berries	6 00	7 00
Lavand, Ang oz.	0 90	1 00
Exotic	1 40	1 60
Lemon, super	5 00	5 50
ord	3 20	3 40
Orange	5 25	5 50
Origanum	0 65	0 75
Peppermint Ang	13 00	14 40
" Amer.	3 25	3 50
Rose, Virgin	8 00	8 25
" good	5 75	6 00
Sassafras	1 15	1 40
Wintergreen	6 00	6 50
Wormwood, pure	4 00	6 50
Ointment, blue	0 76	0 80
Opium, Turkey	7 75	8 00
pulv	10 00	10 50

DRUGS, MEDICINES, &c.—*Cont'd*	$ c.	$ c
Orange Peel, opt.	0 30	0 36
" good	0 12½	0 20
Pill, Blue, Mass	0 80	0 85
Potash, Bi.chrom	0 23	0 27
Bi-tart	0 30	0 32
Carbonate	0 14	0 20
Chlorate	0 55	0 60
Nitrate	10 50	11 00
Potassium, Bromide	1 40	1 60
Cyanide	0 75	0 80
Iodide	11 50	11 75
Sulphuret	0 25	0 35
Pepsin, Boudault's oz	1 50	—
Houghton's doz.	8 00	9 00
Morson's oz.	0 85	1 10
Phosphorus	0 75	0 85
Podophyllin	0 50	0 60
Quinine, Pelletier's	—	2 25
Howard's	2 50	—
" 100 oz. case.	2 45	—
" 25 oz. tin..	2 40	—
Root, Colombo	0 13	0 20
Curcuma, grd	0 12½	0 17
Dandelion	0 17	0 20
Elecampane	0 16	0 17
Gentian	0 10	0 12½
" pulv	0 15	0 20
Hellebore, pulv	0 17	0 20
Ipecac, "	2 20	2 30
Jalap, Vera Cruz	1 10	1 25
" Tampico	0 90	1 00
Liquorice, select	0 12	0 13
" powdered	0 15	0 20
Mandrake "	0 20	0 25
Orris, "	0 20	0 25
Rhubarb, Turkey	2 50	2 75
" E. I.	1 10	1 20
" " pulv	1 20	1 30
" " 2nd	0 90	1 00
" French	0 75	—
Sarsap., Hond	0 40	0 45
" Jam	0 88	0 90
Squills	0 10	0 15½
Senega	1 35	1 50
Spigelia	0 40	0 45
Sal., Epsom	2 25	3 00
Rochelle	0 30	0 35
Soda	0 02½	0 03
Seed, Anise	0 13	0 16
Canary	0 05	0 06
Cardamon	3 25	3 75
Fe ugreck, g'd	0 09	0 10
Hemp	0 06½	—
Mustard, white	0 14	0 16
Saffron, American	1 25	1 50
Spanish	16 00	17 00
Santonine	9 00	10 00
Sago	0 08	0 09
Silver, Nitrate Cash	14 85	16 50
Soap Castile, mottled	0 11	0 14
Soda Ash	0 04	0 05
Bicarb. Newcastle	6 25	6 50
" Howard's	0 14	0 16
Caustic	0 06¼	0 06½
Spirits Ammen., arom	0 25	0 35
Strychnine, Crystals	2 20	2 50
Sulphur. Precip	0 10	0 12½
Sublimed	0 03½	0 05
Roll	0 03	0 03½
Vinegar, Wine, pure	0 55	0 60
Verdigris	0 35	0 40
Wax, White, pure	0 75	0 80
Zinc. Chloride oz	0 10	0 15
Sulphate, pure	0 10	0 15
" common	0 06	0 10
DYESTUFFS.		
Annatto	0 35 @	0 60
Analine, Magenta, cryst	3 00	4 00
" liquid	2 00	—
Argols, ground	0 15	0 25
Blue Vitrol, pure	0 10	0 10
Camwood	0 06	0 09
Copperas, Green	0 01½	0 02½
Cudbear	0 16	0 25
Fustic, Cuban	0 02½	0 04
Indigo, Bengal	2 40	2 50
Madras	0 95	1 10
Extract	0 30	0 35

DYESTUFFS—*Continued.*		
Japonica	0 06¼	0 06½
Lacdye, powdered	0 33	0 38
Logwood	0 02	0 03
Logwood, Camp	0 02	0 3½
Extract	0 10	0 14
" 1 lb. bxs	0 14	—
" ½ lb. "	0 15	—
Madder, best Dutch	0 15	0 17
2nd quality	0 14	0 16
Quercitron	0 03	0 03
Sumac	0 06	0 08
Tin, Muriate	0 10½	0 12½
Redwood	0 05	0 06
SPICES.		
Allspice	0 11½ @	0 12
Cassia	0 38	0 40
Cloves	0 17	0 18
Cayenne	0 18	0 25
Ginger, E. I	0 12	0 14
Jam	0 20	0 30
Mace	1 75	1 75
Mustard, com	0 20	0 25
Nutmegs	1 15	1 20
Pepper, Black	0 22½	0 23
White	0 40	0 42
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 08
Pink, Rose	0 12½	0 15
Red Lead	0 07	0 08
Venetian	0 02½	0 03½
Sienna, B. & G	0 10	0 15
Umber	0 07	0 10
Vermillion, English	1 25	1 30
American	0 25	0 35
Whiting	0 85	0 90
White Lead, dry, gen	0 08	0 09
" " No. 1	0 07	0 08
" " No. 2	0 05	0 07
Yellow Chrome	0 12½	0 35
" Ochre	0 02½	0 03½
Zinc White, Star	0 10	0 12
COLORS, IN OIL.		
Blue Paint	0 12 @	0 15
Fire Proof Paint	0 06	0 08
Green, Paris	0 30	0 32½
Red, Venetian	0 07	0 10
Patent Dryers, 1 lb tins	0 11	0 12
Putty	0 03½	0 04½
Yellow Ochre	0 08	0 12
White Lead, gen. 25 lb. tins	2 25	—
" No. 1	2 05	—
" No. 2	1 85	—
" No. 3	1 65	—
" com	1 30	—
White Zinc, Snow	2 75	3 25
NAVAL STORES.		
Black Pitch	5 00 @	5 25
Rosin, Strained	5 25	—
Clear, pale	7 80	—
Spirits Turpentine	0 75	0 78
Tar Wood	5 00	5 25
OILS.		
Cod	0 60 @	0 62
Lard, extra	0 95	—
No. 1	0 90	0 95
No. 2	0 85	0 90
Linseed, Raw	0 82½	0 85
Boiled	0 87½	0 90
Olive, Common	1 15	1 35
Salad	1 80	2 30
" Pints, cases	4 20	4 40
" Quarts	3 60	3 80
Seal Oil, Pale	0 80	0 82
Straw	0 70	0 75
Sesame Salad	1 30	1 35
Sperm, genuine	2 15	2 40
Whale, refined	0 90	0 95