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Original Papers.

THE COMMERCE OF MARSEILLES.

BY R. W. ELLIOT.

Read before the Pharmaceutical Society, July 7th, 1869.

Under this title a few remarks are offered on the way in which goods used in pharmacy are transported from the points of production, on the shores of the Mediterranean, to Canada, together with some facts regarding their manufacture, gleaned during a recent visit to the south of Europe.

Marseilles has a population of 300,000, and is the chief commercial city of France. Large portions have been recently rebuilt in the palatial style of Paris, and although some of their improved quarters are tainted with the odour of "boquet de guano," the city, as a whole, is well drained, paved, and lighted. The Imperial government has done much to foster and extend commercial enterprises, and at no place are the results of this policy more apparent than in the ports of Marseilles. The old port is constantly crowded with sailing vessels of every conceivable rig and build. The ports Joliet and Napoleon have been formed by the construction of breakwaters, and are used chiefly by the steam fleet. The stone of which the breakwaters are made, is a mixture of gravel and cement cast in immense oblong blocks, and thrown loosely into the sea, without any attempt at building. It is found to resist the destructive action of the waves better in this way than if built up into a solid wall.

The docks and warehouses are extensive, substantial, and, on the whole, convenient structures. There is not the use of steam power, in handling grain especially, that is common with us, and this defect in their economy arises, no doubt, from the different states of the labor market in Europe and America. It would somewhat astonish any European forwarder to see a vessel loaded with 30,000 bushels of grain, haul up to an elevator at sunrise, and before sunset, of the same day, to see the vessel empty, the grain all weighed, cleaned if necessary, and put in warehouse. The operation costing not more than $75 or 375 francs. The bourse or exchange is a fine building, where Italians, Greeks, Germans, Turks, Persians, Egyptians Algerines and Americans, may be daily seen transacting business through brokers who understand their language and customs. The Greeks take a very leading part in banking and the grain trade; Germans, in general merchandise. There is no English house of any standing or importance, a sad commentary on the fact, that while British youths have been translating the obscenities of pagan mythology, these Greeks and Germans have mastered the modern languages, which give them the best positions in practical affairs.

A few years ago Canada had no direct trade with France, but in March, of the present year, there were four ships on the berth for Montreal; the "Ancestor," chartered by Lymans, Clare & Co., and Lyman, Elliot & Co.; "St. Louis," by Wm St. Laurent; "British Queen," A. Urquhart & Co., and "Deodara," Hudin & Co.; all staunch, trim, well formed vessels. Their lading consisted of wine, glassware, olive and seed oils, castile soap, corks, sponges, china, perfumery, essential oils, drugs of various kinds, tiles, liqueurs, cream tartar, argols, sulphur, ochres, nuts, lemons and sundries.

Purchases are made for cash, on the bourse, and the goods delivered by an order on the warehouse in which they are stored, or directly from the manufactory, if produced in the city. The only practical purpose to which I ever saw velocipedes applied, was in the transmission of orders for the reception and delivery of goods, between the bourse and the new dock warehouses, a distance of about two miles.

Having been obliged to wait about ten days longer than was anticipated, the time was filled up by visits to the warehouses and factories, in all of which true French urbanity was displayed, and every facility granted to inspect the details of their operations.

It is to be regretted that space does not permit of showing the connection which exists between the different branches of manufacture, a point of great importance. To make a manufacturing centre it requires a class of men capable of attaining excellence, each in his own particular line, and helping the common progress while helping himself.

I found traces of Mr. Rutherford, of Hamilton, and of orders from all the wholesale drug trade of Canada, in packages prepared for shipment in the different warehouses, and now proceed to describe the goods shipped.

Wine.—The only natural wines we get are those of France and Germany, and it would be well if the rising generation, of Canada, could be educated to appreciate them more highly then their fathers do. The popular ports, sherries, and madeiras are brandied, sugared and drugged out of all likeness to the pure juice of the grape, and are responsible for the tendency to gout and inflammatory forms of disease to which the higher classes, in England, have been subject. A pure wine never contains more than 25% of spirit, while port and sherry frequently contain from 37 to 43%.

The production of wine in France is enormous and the statement of the French census, that 3,000,000 of the population directly depend on vine culture for their living, will best illustrate the extent of the trade. It would require a volume to accurately describe the varieties of wine which we class under the generic name of claret. At first I was very much pleased to find that about 7,000 barrels of pure wine were being shipped for Canada. It has been often remarked that in countries where wine is the common stimulant, drunkenness is unknown, and knowing that 7,000 barrels for a spring supply would represent a large proportion of the wine drunk in Canada, the inference was drawn that the popular taste had improved at a marvellous rate. All hopes for the health of my countrymen received a rude shock from the following incident: Riding in a suburb of Marseilles, this sign came in view, "*Victoire Joyeuse fils aine, Fabricant de Vin,*" Victor Joyous' eldest son, maker of wine. But where does he get his grapes? My companion answered; it is the custom of such gentlemen to buy one cask wine, some alcohol and *four empty casks.* I thereupon suspected that "Fabricant de vin" was a trade not unknown in Canada, that you can get port, sherry or other wine dry, sweet, fruity, full bodied—any property you wish after the manner of the bottle-trick—all from the same cask.

Argol or Tartar, is found deposited in the wine casks and varies in color from deep red to a light gray. The quality depends on the per centage of tartaric acid. There is considerable use for the article in its natural state in dyeing, but by far the greater proportion is used in the tartaric acid and cream tartar manufactories.

Cream Tartar.—This product is one of considerable importance. Of late years the price has been low and the consumption in Canada is at present from 125 to 150 tons per annum against a fifth of that quantity some years back. Most of that brought to this country is pure, and is so sold; but what is imported in crystal is sometimes reduced by admixture with sulphate of potash; and that sold in powder is sometimes adulterated with "terra alba." The British Pharmacopœa gives the necessary tests for determining its purity.

Glassware.—The French are very tasty in the forms of bottles, and although I must confess a liking for plain simple shapes, the more showy article *sells* and that is the highest merit in a bottle. Manufacturers in France are not cursed with labor combinations, labor is abundant, skilful and cheap, so that the first cost of glass is much less than in England, against this the cost of freight is higher, and that is an important item in glassware. There is, however, a large quantity imported, and the trade is in the hands of those who thoroughly understand both markets. In green bottles, the Canadian factories are now masters of the situation, their prices excluding competition from every quarter.

Vinegar.—Of this article large quantities

are made from spoiled wine, and the word itself means sour wine, the flavor of genuine wine vinegar is superior to that from any other source, but the demand exceeds the supply, so that even in France, large quantities are sold that have a foreign basis.

Liqueurs.—Vermouth, Absinth, Curaçoa, Chartreuse, Eau Vert, Creme de Moka, &c., are names given to skilful mixtures of spirit sugar and all the popular flavors and tonics. These are much used as semi-medicinal stimulants and are exported in considerable quantities.

Capsules.—These are made of sheet lead coated on both sides with tin. They are very useful for preserving the contents of bottles and give a highly ornamental finish. Two considerable factories are devoted to their production in Marseilles.

Corks.—Of these there are 28 manufactories in Marseilles, and it is a most interesting sight to witness the quickness and dexterity displayed in their production. The raw material is thoroughly used up, even the shavings are made into life buoys. There are extensive cork forests in Algeria, but Spain still retains pre-eminence in the quality of bark and in the manufacture of the finer kinds of wine corks. Numerous attempts have been made to supercede hand labor in cork cutting, none have so far succeeded, machinery not being able to detect flaws that render the cork unfit for use. There is, however, a little machine now used that makes vial corks of exactly the same size and is a great improvement in tapers.

Sponges.—The principal varieties at Marseilles, are Venice, Hard Toilet and Turkey. This is a most difficult article to buy or sell satisfactorily, unless you deal with one who possesses a large share of honesty and skill, disappointment and loss are almost certain results of an investment. The sponge merchant buys all kinds ound by the diver, at so much for the pile, without reference to weight, and then sorts, trims and bleaches them. The latter operation is performed by means of dilute muriatic acid, after which they are rinsed in salt water, so that they may have a tendency to remain moist.

Castile Soap.—This article at one time came from Spain, as the name implies; but the French government offered a bounty on its exportation, and now there are sixty-seven manufactories of it in Marseilles. When pure, it is one of the best soaps made, but latterly, some manufacturers adulterate it with from 4 to 45% of talc or other earth. As a matter of commercial policy, it will pay no dealer to save a cent or two per pound on all the castile soap he sells, in exchange for his reputation for supplying pure articles. The sophistication may be detected even in cutting across a bar, or more certainly by attempting to dissolve a small quantity in hot water. The materials for this manufacture are very conveniently obtained in Marseilles. The black soda ash is made three or four miles out, and there are numerous oil mills in the city that supply a fresh oil of sufficiently good quality. Formerly, olive oil was used altogether, but this is not now the case. Each foreign market has its peculiar style of box and bar. The mottled variety is in greatest demand; but the white is made from finer oil, and commands a higher price.

Olive Oil.—Of this article the consumption has been considerably increased this year from the high price of its competitor, lard oil. The first pressing is used to a great extent at home, in cookery, and as a substitute for butter: the surplus is exported as salad oil. The second pressing is used more extensively for machinery purposes, while the third quality is used for soap. It is sophisticated with oils from various kinds of seeds, and this may be detected by gravity. The trees are very much like apple trees in growth, but the leaves have a peculiar dusty appearance, and do not realize the poetical idea of an olive grove.

Seed Oils.—In one factory I saw 25 pairs of hydraulic presses at work on the manufacture of oil from sesame, poppy, ground-nut, rape, and other seeds. The operatives have a style of undress while at work, well suited to display their physical proportions. These oils are very sweet and good while fresh, but lack the keeping properties of olive oil. The sesame oil is best, and commands the highest price.

Sugar.—There are four refineries in Marseilles, the raw material being beet root. It is much to be desired that this industry should be introduced in Canada, a small sample will show to what perfection it may be carried. The manufacture is fully described in recent publications and is perfectly practicable.

Sulphur and Brimstone.—The raw material comes mainly from Sicily, but the usual forms of sublimed and roll are produced farther west. In the manufacture of sulphuric acid, raw sulphur is not used in France.

Soda.—Common salt is cheap in Marseilles, and at a distance of about sixty miles on the Spanish coast, are found deposits of iron pyrites, containing 30 to 50 per cent. of sulphur. The salt is first made into sulphate, and then into a crude carbonate by fire. The black soda thus produced is sold to the soap manufacturers, and by them sufficiently purified for their purpose. This process is very economical, saving the cost of freight and packages, under the system by which soap is produced in this country. It is quite practicable, and might be introduced here to great advantage.

Wax Matches and Candles.—These are important industries, and it is astonishing to see all over Europe, and on this continent, the number of little boxes of Marseilles production that are consumed.

Porcelain.—In design and execution, goods of French production stand very high. The colors are, however, all English, for the best descriptions.

Balances.—The best counter balances, quality and price considered, are produced by the establishment of Beranger, of Lyons, and one of my most pleasant recollections is a visit to this factory.

Bricks and Tiles.—The floors and partitions of houses in the south of France are all made of these, and they have such manifest advantages in point of cleanliness, and non-conduction of fire or sound, that their introduction here would be a great improvement. They occupy much less space than our wooden partitions; a point to be considered in cities.

Chemicals.—These are manufactured to a considerable extent, but altogether for home use.

Drug Mills.—All the articles which require powdering, are to be had in that state, but the quality is not equal to those bought crude and powdered here. A very considerable trade is done in powdered pyrethrum roseum or black hellebore, as an insect destroyer, and it appears worthy of more general use than it has yet had in Canada.

Vermicelli and Maccaroni.—These well known articles are produced and shipped under names signifying Italian pastes, their use is more common in Europe than with us. They are made from a wheaten flour, harder and drier than ours and therefore less liable to spoil.

Lemons and Oranges.—Are shipped in large quantities. The number of ship-loads and the varieties would astonish those who buy only what they require for personal use. When one gets to talk of millions of boxes there is merely a word and not an idea conveyed.

Ochres.—Of these we take considerable quantities of yellow powdered, but the English red is purer and better.

Essential Oils.—It is somewhat remarkable that England should produce better Lavander and Peppermint than can be got elsewhere while all the other minty odors, Origanum, Rosemary, Thyme, Savine, &c., are best from French soil. Italy excels in lemon and sweet orange. With a great many of the perfumery products of southern Europe we are acquainted only by name at most. The cultivation employs a great many people and sells for a large amount of money, showing

that a cultivated nose is not so rare in other lands as it is here.

Gum-arabic.—In some parts of Africa this article is as important as the wheat crop with us, last year it was a comparative failure, hence present high prices. The cultivation of cotton has also had a material influence on the collection of gum, and it is argued therefrom that we are not likely to see former low rates.

The iron, silk, cotton, wood and other manufactures are left out, being foreign to our purpose, noticing only one apparatus that seemed worthy of remark.

Where power is required at intermittent intervals and not very large amount, an engine is used resembling a stationary steam engine. The cylinder is charged at one end with a mixture of coal, gas and air, which is fired by an electric spark. The power thus evolved drives the piston to the other end of the cylinder, where the operation is repeated and from the alternation, rotary motion is produced in the usual manner. The advantage is that power can be produced at the instant it is required, and *fuel* is only expended while work is being done.

The situation of the city is picturesque from almost every point of view, but from the sea it presents a scene to be remembered. Imagine if you can, a landscape bathed in sunlight, with a setting of clearest sky and bluest water. The panorama embraces beautiful islands, forts, beacons, a forests of masts, miles of noble buildings, above which rise the spires of the churches, and the view is closed by the encircling hill., studded with gardens and country seats.

The effect is heightened by reflecting on the antiquity of the place. The site of the cathedral has been used for a church ever since Christ was first preached to the Gentiles; and in the Phœnecian times was a temple of Janus.

Glue.

Good glue is hard, clear, though not necessarily light-colored, and free from bad taste and smell. Glue which is easily dissolved in cold water is not strong. Good glue merely smells in cold water, and does not dissolve until it has been heated to nearly the boiling point. Glue is insoluble in alcohol, though a small quantity of alcohol may be mixed with the solution without difficulty: though if too much alcohol be used, the glue separates from the water and falls to the bottom of the vessel in the form of a white, viscid substance. Neither does it dissolve in ether, or in the fixed, or the essential oils, although oily matters of all kinds may be incorporated with the solution of glue. These facts will enable our readers to judge of the value of those recipes in which they are directed to dissolve glue in alcohol or in oil for the purpose of making a glue which will remain liquid at all times. A little alcohol may be added, but if the amount of alcohol be sufficient to produce any marked effect, the glue is apt to separate. One of the most marked characteristics of good glue is its property of gelatinizing. By this is meant the fact that a moderately strong solution of the glue which is quite fluid when hot forms a stiff jelly when cold. This property is no bad test of the quality of glue. The firmer the jelly the better the glue. It is true that great efforts have been made to get rid of this property, and acids and various salts have been added to the solution of glue for the purpose of preventing its gelatinization, and thus retaining it in a liquid form that would be ready for use at any moment. But by those who have devoted the most careful attention to the subject, the fact stands unquestioned that the strongest glue is that which is purest and which gelatinizes most completely. Good glue, properly prepared and well applied, will unite pieces of wood with a degree of strength which leaves nothing to be desired. The fibres of the hardest and toughest wood will tear asunder before the glue surfaces will separate, and certainly anything more than this would be unnecessary. Mr. Bevan found that when two cylinders of dry ash, each an inch and a half in diameter, were glued together, and then torn asunder after a lapse of twenty-four hours, it required a force of 1260 lbs. to separate them, and consequently the force of adhesion was equal to 715 lbs. per square inch. From a subsequent experiment on solid glue he found that its cohesion is equal to 4000 lbs. per square inch. This would indicate that the method of applying this substance as a cement is capable of improvement, and it is undoubtedly true that great care and skil must be used if the best results would be obtained.

The most obvious defects in glue are the mixture of extraneous matters and incipient putrefaction. There are other substances beside gelatin, present in the matters from which glue is prepared, and unless these substances are carefully separated the glue will prove of an inferior quality. Hence, in selecting glue, choose that which is transparent and free from clouds or flocks in its substance. Very clear and colorless glue is by no means the best; but, whatever be the color, see that it is clear. It is true that in some cases very finely divided powders have been added to glue with the avowed object of rendering it stronger. We feel inclined to believe, however, that such additions serve merely to cloak defects in the glue itself, or in the mode in which it is applied. Peter Cooper is said to add very finely divided Paris white to his glue, and it is claimed that the glue is improved not only in appearance but in actual strength. How this may be we know not. White-lead added to glue is said to make it water-proof as well as to strengthen it, and from the well-known relation of white-lead to oils and animal substances it is not impossible that this may be the case. For our own part, however, we have always found good, pure glue equal to any requirements which we might demand of it. The greatest and most common defect in glue is incipient putrefaction. This may occur either at the glue factory or in the workshop of the mechanic, and in either case it is fatal to the strength of the glue. It is easily detected, however, by the smell. The odors of good glue and of that which has begun to decay are so different that, once observed, they will never be forgotten. Glue which has begun to putrefy at the factory may not exhibit any odor so long as it is kept perfectly dry. The only means by which this defect can then be detected is by moistening it. Glue which exhibits a bad odor when moistened should be rejected and used only for making the coarser varieties of articles; and when the glue-pot begins to show any signs of putrefaction, it ought to be carefully cleaned out and thoroughly soaked and washed.—*Manufacturer and Builder.*

Vegetable Electromotors.

The *Chemical News* contains an article contributed by Edwin Smith, M. A., giving results of researches in a field which so far as we are aware has been hitherto untraversed. He says: It is well known that a voltaic combination may be made of two liquids and a metal, if one of the three acts chemically upon one and only one, of the other two: thus—we may employ copper, and dilute nitric acid, or platinum, potash, and nitric acid. Connect a platinum crucible with one terminal of a galvanometer, pour in a little solution of caustic potash, place in this the bowl of a tobacco-pipe having the hole stopped up with wax, pour into the bowl a little nitric acid, dip in the acid a small slip of platinum foil, and connect this with the other terminal of the galvanometer; a powerful deflection of the needle indicates the presence of an electric current and shows its direction to be from the alkali to the acid, the platinum serving merely as a conductor. It occured to me, when performing this experiment, that an electro-motive combination might just as well be made of two vegetable substances, with platinum for conductor, provided only they were of a nature to act chemically upon one another—an alkaloid and an organic acid, for instance. It also seemed to me not unlikely that, wherever two flavors are habitually conjoined in our cookery and eating, the reason why they mutually improve each other is because a certain amount of electric action is set up between the substances employed to produce them. The *rationale* of the right blending of flavors might be found partly, no doubt in chemistry, but partly, also in galvanism.

Pursuing this idea, I tried pairs of eatables which generally go together, such as pepper and salt, coffee and sugar, almonds and raisins, and the like, and found that a voltaic current more or less strong was excited in every instance which I tested. Bitters and sweets, pungents and salts, or bitters and acids, generally appear to furnish true voltaic couples, doubtless in consequence of the mutual action of some alkaloid salt and an acid of its equivalent. As others may like to repeat or extend the experiments, I will describe shortly my mode of procedure. Cut two pieces of platinum foil about 5 inches by 2½ inches, and a number of pieces of filter paper a trifle larger. Well-washed linen is sometimes more convenient than filter paper. Have a small wooden board near the mercury cups of the galvanometer, and let a short copper or platinum wire, dipping into one of the cups, rest on the board. The substance to be tried must be brought to a state of solution, the stronger the better, by infusion, decoction or otherwise. Suppose coffee and sugar are to be operated upon; solutions of both having been prepared, dip into each a slip of filter

paper; place one slip on one of the pieces of platinum foil, and the other on the second piece. Next lay the first slip on its foil on the board, with the metal touching the copper wire before mentioned. Lay the second slip with its platinum upwards, so that the coffee and sugar come into even contact with slight pressure, and immediately connect this upper slip, through a bit of copper wire, insulated from the touch, with the other terminal of the galvanometer. Deflection occurs instantaneously, and may be increased to a considerable vibration by breaking and making circuit at the right swing of the needle. After a few distinct vibrations, it is well to turn over the whole pile of slips just as they are, and connect opposite ends with the galvanometer, so as to reverse the current. This is desireable for the sake of confirming your previous observation, and of correcting any slight disturbing cause arising from the wire and mercury connectors, temperature of the hand, etc. It will be found that coffee and sugar have the same electrical relation to each other as zinc and platinum. Coffee, in fact, is the positive, sugar the negative element. I subjoin a table of the results of numerous experiments, conducted in the manner above described:

Electro-positive.	Electro-negative
Coffee	Sugar (loaf).
Tea (black)	"
Cocoa	"
Nutmeg	"
Cloves	"
Cinnamon	"
Mace	"
Vanilla	"
Almonds	"
Rhubarb (tincture)	"
Starch	"
Starch caramel	"
Gum caramel	"
Cane sugar caramel	"
Milk sugar	"
Gum	"
Almonds	Raisins
Horseradish	Beetroot
Onion	"
Horseradish	Table salt
Mustard	"
Pepper (white)	"
Mustard	Tartaric Acid.
Ginger	" "
Cayenne pepper	" "
Pepper (white)	" "
Tea (black)	" "
Tobacco	" "
Quinine (Howard's)	" "
Gentian root	" "
Lemon juice	" "
Horehound	" "
Lavender water	" "
Quassia	" "
Peppermint	" "
Raw potato	Lemon juice
Rind of Lemon	"
Peruvian bark	"
Camphor (tincture)	"
Laudanum	"
Arnica (tincture)	Dilute sulphuric acid
Peruvian bark	" "
Quinine (Howard's)	" "
Iodine (tincture)	Turpentine.
Caustic potash	"
Starch	"
Starch	Iodine (tincture)
Caustic potash	Neat's-foot-oil.

It is somewhat difficult to eliminate from these experiments all error arising from difference of temperature, if the galvanometer is tolerably sensitive. Care must be taken to bring the pair of solutions operated upon to the same temperature before testing them; otherwise a thermo-electric current from the hotter to the colder liquid may effect the needle, and mask the true electrical relation between the two, so far as it depends upon their chemical nature.

Adulteration of Sulphuric Acid.

(Rev. Hebd. de Chim.)—It appears that some Continental makers of this acid are in the habit of adding to ordinary chamber acid a sufficient quantity of some cheap acid sulphate, so as to bring the sulphuric acid, as far as hydrometrical tests are concerned, up to the desired degree of density: M. Fleischer, having cause to complain about the bad quality of indigo-carmine prepared with a certain sample of sulphuric acid, was induced to evaporate some of the acid, and on doing so discovered the formation of crystals of sulphate of soda. This kind of adulteration, however readily detected, might cause in many dye and madder and garancine works very serious loss and great inconvenience, and is a gross fraud; the inducement is the saving of the cost of evaporation and apparatus connected therewith.—*Ch. News.*

Note on Virginia Opium.

About the middle of February, a note from Mr. William A. Strother, of Lynchburg, Virginia, informed us that he had sent by express a vial of Tincture of Opium, made from Opium raised in that vicinity in 1864, and further that he had no more of the opium left, the residue having been given to Mr. Gellatly, of New York, in June, 1865.

The "Laudanum," made before that time consisted of half an ounce av. of the opium to eight fluid ounces of diluted alcohol. Of this about five fluid ounces were sent, each fluid ounce representing 27.39 grains of the opium.

Mr. Strother desired to know how it compared with laudanum from Turkey opium, as persons in Virginia were inclined to give attention to opium culture, believing the culture and soil well suited.

In a second note on the subject, Mr. Strother enclosed a letter received from Mr. Powhatan Robertson, who had raised the poppies and prepared the opium from which the laudanum sent was made.

By a comparison of names, dates, etc., it was at once seen that this gentleman, Mr. Robertson, was the same noticed in Prof. I. J. Grahame's article on American Opium, in the Proceedings of the Association for 1866, and consequently that the opium of the tincture sent to me by Mr. Strother, was from the same source with that examined by Prof. Grahame. The process adopted by Prof. Grahame in the assay (The U. S. Pharm. process for morphia) not being suited to this purpose so well as Mohr's, it was determined to make a new assay.

Two fluid-ounces of the laudanum, representing 54·75 grains, was evaporated to free it from alcohol, diluted to three fluid-ounces, strained and boiled with milk of lime from an equal weight of lime for fifteen minutes, filtered, lixiviated with hot water, acidulated with hydrochloric acid, evaporated to half a fluid-ounce, neutralized with ammonia, filtered, and an excess of ammonia added and allowed to stand thirty-six hours. The crystalline precipitate, which was impure and much colored, was washed with diluted alcohol, and afterwards with other. The residue weighing 5 grains, was morphia, still considerably colored, giving well-marked reactions with nitric acid and sesquichloride of iron. The yield was equivalent to 9·15 per cent. From the manner in which this opium had been made, being all inspissated juice, it was believed that its actual strength should be greater than was indicated in the process tried by Prof. Grahame; and assuming the sample of laudanum to have been made according to the proportions given by Mr. Strother, it will appear that this opium is equal to fair Turkey Opium in strength.—*American Journal Pharm.*

Cinchonine.

The alkaloid belonging to and derived from the Cinchona-trees, known as chinidine, 2 chinidine, 2 chinine, B chinine, cinchotine, crystallised chinoidine, and pitoyline, has been christened by Hesse conchinine, because it resembles chinine as well as cinchonin. In order to prepare this cinchonine, which occurs to upwards of 1·6 per cent. in pitoya bark, the commercial chinoidine is the best source, since therein the conchinine is largely found. The chinoidine is repeatedly treated with eight times its weight of ether; this solution is filtered, and the ether removed by distillation; the residue is dissolved in dilute sulphuric acid, and afterwards carefully neutralized with ammonia. The solution is next treated with Seignette salt, whereby the tartrates of quinine and conchinine are precipitated, while the tartrates of cinchonine and cinchonine remain in solution. After having treated the previously filtered solution with animal charcoal, iodide of potassium is added to the warm solution, whereby hydriodide of conchinin is precipitated as crystalline powder; this salt is decomposed by ammonia, re-dissolved in acetic acid, re-purified with animal charcoal, and, lastly, treated with hot alcohol, from which it separates in crystalline form. The conchinine so obtained is soluble in 2,000 parts of water at 15°, in from 35 to 22 parts of ether, according to temperature, and in 26 parts of 80 per cent. alcohol; the substance melts at 168° C., without charring. The substance, which is capable of forming several hydrates, has for its formula—$C_{40}H_{24}N_2O_4+5Aq$. It forms, with acids, salts.—*Journ. f. Prak. Chem. v. Erdmann*, 1868.

Kalsomining Walls.

Kalsomining is a species of whitewashing, but differs from it in that, instead of lime, Paris white is used. This paint is a sulphate of baryta, and may be procured at any drug or hardware store. In order to prepare kalsomine, soak one fourth of a pound of glue over night in tepid water. The next day put it into a tin vessel, with a quart of water, set the pail in a kettle of water over the fire and keep it there until it boils, and then stir constantly till the glue is dissolved. Next, take from six to eight pounds of Paris white, in another vessel, pour on hot water and stir until it has the appearance of lime-milk. Add the sizing, stir well, and apply it to the wall with an ordinary white-wash brush while yet warm.

CANADIAN PHARMACEUTICAL SOCIETY.

PRESIDENT, - - - WM. ELLIOT, ESQ.

The regular meetings of the Society take place on the first Wednesday evening of each month, at the Mechanics' Institute, when, after the transaction of business, there is a paper read, or discussion engaged in, upon subjects of interest and value to the members.

The Society admits as members, Chemists and Druggists of good standing, and their assistants and apprentices, if elected by a majority vote, and on payment of the following fees:

Principals - - - - - $4 00 per Annum
Assistants & Apprentices, 2 00 "

The JOURNAL *is furnished* FREE *to all members.*

Parties wishing to join the Society may send their names for proposal to any of the members of the Society. A copy of the Constitution and By-laws of the Society will be furnished on application.

HENRY J. ROSE, *Secretary.*

CANADIAN MEDICINAL PLANTS.

PRIZES.

PRIZES are offered for collections of indigenous medical substances of vegetable origin, as follows:—

1ST PRIZE—FIFTEEN DOLLARS—a copy of *Griffith's Medical Botany*, and *Certificate.*

2D PRIZE—TEN DOLLARS—a copy of *Wood's Class-Book of Botany.*

3D PRIZE—FIVE DOLLARS—a copy of *Wood's Class-Book of Botany*, and *Certificate.*

Conditions of competition to be—

1st. *Competitors to have been engaged in the drug trade, and for not more than three years, and to be members of the Pharmaceutical Society previous to* 1869.

2. *Specimens to be forwarded (carriage paid) to the Secretary of the Society, Toronto, by 1st September,* 1869, *with a sealed letter, enclosing the address of the competitor, a certificate from his employer that the collection has been made by the competitor solely within a year; that he has been engaged in the drug trade during that time, and that he has not been more than three years so engaged at the date of this notice.*

3. *Each specimen is to be carefully prepared ready for sale or use, and packed in a paper bag. On each shall be written legibly, the common and scientific names, the date and locality of collection, and a private mark, which shall also be put on the outside of the letter accompanying the collection.*

4. *Three judges shall determine the order of merit; they shall be at liberty to withhold any or all of the Prizes, if the collections do not warrant an award, and to select such specimens as they may deem meritorious for the Museum of the Society, which specimens will have the name of the collector put upon them.*

5. *The points of competition to be number of specimens, condition, correctness of naming, and general excellence; quantity a secondary consideration.*

Collections to which Prizes are awarded will be sent to the Provincial Exhibition at the expense of the Society; and any Prizes secured there, shall be for the benefit of the collector.

Address—Collections,
Canadian Pharmaceutical Society,
H. J. ROSE, *Secretary,*
September 15th, 1868. *Toronto.*

THE CANADIAN
Pharmaceutical Journal.
E. B. SHUTTLEWORTH, EDITOR.

TORONTO, ONT., JULY, 1869.

Correspondence and general communications, of a character suited to the objects of this JOURNAL, are invited, and will always be welcome. The writer's name should accompany his communication, but not necessarily for publication.

Subscriptions will not be acknowledged by letter, as our sending the paper may be taken as sufficient evidence of the receipt of the money.

All communications connected with the paper to be addressed, post-paid,
"EDITOR CANADIAN PHARMACEUTICAL JOURNAL, TORONTO."

THE FALL OF THE CHOLAGOGUES.

A belief that mercury increases the biliary secretion has been, heretofore, almost universal. It has been asserted by the highest medical authorities, promulgated by all the authorized schools, and unconditionally believed in, from time immemorial, by a medicine-taking public generally. To cast the slightest doubt on this long-established article of faith, was to sap away the chief corner-stone of medical practice; and he who attempted the sacrilege was at once denounced as an unmitigated heretic. It is true that men have been found bold enough to brave, for a time, the anathemas of the schools, but they have generally had to succumb to the all-prevailing cry of quackery, and are, thereafter, pointed at as examples of the fatal effects of therapeutical temerity.

Of late years, however, a formidable rival has appeared in the field; and, on this side of the Atlantic, at least, the followers of podophyllin have increased and waxed strong. Removed far from the loyal influences of British colleges, fostered by the care of the mother which gave it birth, and nurtured by the innovation-loving proclivities of our American neighbors, the resin of mandrake has proved itself a powerful enemy, if not a victor. Our Eclectic friends would have us believe that the death-blow has been already struck, and that podophyllin is master of the field. With that courtesy, however, to which a powerful but vanquished foe is entitled, they have allotted to mercury a sort of supplementary existence amongst a number of "obsolete remedies," there to linger out in exile a waning existence, like Napoleon on the desolate Helena.

Antagonistic influences have, also, been at work in Britain. That growing liberalism, which respects neither age nor position; which has been overturning, one by one, the time-honored institutions and ideas of our forefathers, and which has grown, of late, to such a degree of political audacity, has infected that most conservative body, the medical faculty, with unexpected force. The British Medical Association caught up the spirit, and naturally enough, one of the first blows was struck at the veteran mercury, and its rival, podophyllin. So serious were the doubts entertained of the action of these remedies, that a committee, composed of members of the Association, was appointed to investigate the matter. This investigation, which was undertaken by Drs. Hughes Bennett, Rutherford, and Gamgee, has lasted during the past two years, and has now terminated. The literary researches were conducted by Dr. Rogers, formerly of St. Petersburg, who carefully examined the writings of previous observers to find out what had already been ascertained on the subject. He arrived at the conclusion "that no exact information had yet been obtained as to the influence of mercury on the secretion of bile, or as to any other action it may exercise on the liver."

The labors of the committee were of an exceeding unpleasant character, but were, nevertheless, pursued with an ardor and endurance which could only be actuated by a love for truth, and a sense of the great importance of the work in which they were engaged. "If," says Dr. Bennett, "the refutation of a wide-spread error be as important as the establishment of a new truth, the practical advantage of demonstrating that mercury is not a cholagogue cannot be too highly estimated." We agree with a contemporary, who thinks that the refutation of a wide-spread error is far more important than the establishment of a new truth, as the injury inflicted by the assumption of a false rule in medical practice may be beyond estimation.

After the preliminary enquiry by Dr. Rogers, the labors of the committee were directed in ascertaining whether the amount of bile secreted by the liver could be ascertained by an examination of the fæces. The conclusion arrived at was that the fæces afford no indication whatever. The action of purgatives did increase the amount of unchanged bile in the stools; but this only arose from the rapidity of its passage through the intestinal canal, thereby preventing its absorbtion and decomposition. The method resorted to was the making of fistulous openings into the gall bladder, tying the common ducts, and measuring the quantity of bile produced.

Having previously ascertained that the action of mercury on dogs and men was similar; experiments were tried on forty-one dogs. The bile was collected, analyzed, and the liquid, solid and inorganic matter carefully noted. In addition to this, the bodies

of the dogs were dissected, and the same *post mortem* appearances were observed as in poisoning by mercury in man.

The committee also investigated, in the same careful manner, the influence of podophyllin and taraxacum, and finally concluded that, in common with mercury, none of these so-called cholagogues have the slightest influence in promoting the flow of bile from the liver.

The importance of the inquiry, and the benefits which are likely to arise from it, not only to the medical profession but to a suffering world at large, cannot be overrated. The thanks of all concerned are due to the committee, who so perseveringly went on amidst every opposition and discouragement, and who so successfully carried out and completed their labors.

EDITORIAL SUMMARY.

Sources of Copal.—J. R. Jackson, (*Intellectual Observer*, June,) contributes an interesting paper on this subject. In alluding to the shadowy origin of some varieties, and the difficulty in ascertaining the geographical position of the plant yielding the resin, he says that what is known in commerce as Bombay anime, is not an East Indian product at all, but is sent to Bombay from the East African coast, and then re-shipped to England. Dammar, or East Indian Copal, is furnished to some extent by *Vateria indica*, but much of the dammar seen in our market is produced by *Dammara orientalis*, a large coniferous tree, growing in the Moluccas. The variety known as Australian dammar, or kawrie resin, is the product of a New Zealand tree, *Dammara Australis*. It is dug from a depth of two or three feet below the surface of the ground. The natives are very quick in discovering it, probing the ground with long iron spikes. The resin is sometimes found in masses as large as a man's head. To the trees enumerated by Dr. Daniell, (*Pharmaceutical Journal*, 1857,) as yielding the American copal, Mr. Jackson thinks the *Hymenæa courbaril* should be added, knowing that large quantities of gum are exuded by it. This tree is found in most of the tropical parts of South America, and sometimes grows to an enormous size; sixty feet circumference is nothing unusual, and, in regard to age, it has been computed that some specimens must have been large trees at the commencement of the Christian era. From the materials sent to Kew, by Lieut. Col. Playfair, it seemed tolerably clear that Zanzibar copal was the produce of *Trachylobium Mossambicense*, and Dr. Kirk, the present Vice-Consul, has confirmed this in a recent letter. The tree is known to the natives as the M'Sandarusi, or tree of copal; an examination of the tree showed the trunk and main limbs to be covered with a resinous substance; from the upper branches it dropped to the ground, but not in a fluid state. This kind of gum is called by the natives Sandarusi za-m'ti, or copal from the tree, and is exported to India, but not to Europe. The second variety of resin produced by the *trachylobium*, is dug from the ground, but is a comparatively modern deposit, being found either near the roots of living trees, or in that part of the country where the trees at present exist. This kind is called by the merchants *chakazzi*, from which the name has been corrupted into "jackass." The third sort, known as the true Sandurusi, fetches the highest price, and is the true copal or anime of the English markets. It forms the bulk of the Zanzibar copal, and is dug from the soil of extinct forests, further inland than where the tree is now seen. This kind is less soluble than the other varieties, but produces a more elastic and brilliant varnish. The quantity of copal exported from Zanzibar, has been known to amount, in some years, to 800,000 lbs., valued at £60,000, sterling, Dr. Kirk considers the supply unlimited, and that a little system and industry are all that are required to make the trade very remunerative.

ANNUAL REPORT, 1869.

In submitting the customary report it becomes the duty of the Council to review the operations of the Society during the year, and, in the present instance, the task is one of pleasure. Although, in some particulars, success has not been realized to that extent which was foreshadowed by our too sanguine hopes, yet a due degree of prosperity has attended the Society, and a steady advance has been made in the direction of organization and establishment.

The first efforts of the Society were directed to the matter of legislation, and, by the Council which preceded us, we were charged with the importance of doing all in our power, for the furtherance of this object. We have endeavored to carry out this injunction, and have, in part, succeeded. Finding that an Act embracing the pharmaceutical interests of the whole Dominion was not, at that time, likely to succeed, a local measure was prepared, which was placed in the hands of Dr. McGill, and by his exertions was brought before the Legislature of Ontario during last session. The Bill obtained a first reading, but owing to the late season at which it was introduced, further action was then rendered impossible. It remains for our successors to bring the matter to an issue; and it should be borne in mind that on this point depends to a great extent the ultimate success and permanence of the Society. The laudable example set by the Pharmaceutical Society of Great Britain, and their untiring exertions exercised during many years in endeavoring to promote the passing of the recent Pharmacy Act—and more than all, the glorious success with which their efforts were finally crowned—gives encouragement to renewed and accellerated action on our part.

In regard to pharmaceutical education, progress has been made. At the commencement of the lecture season arrangements were made with Dr. May, of this city, to deliver a course of lectures on chemistry to the apprentices and assistants connected with the Society A goodly number of young gentlemen attended, who at the subsequent examination—which was conducted by Prof. Croft, of the University of Toronto—acquitted themselves creditably. The importance of education is a paramount consideration, and as such it should be regarded by the coming Council. It is the grand source of power and can be the only true means of attaining that standing which is so much desired by those who wish to raise the dispensing of medicine above the level of a mere commercial pursuit. There is, however, much work to be done—the fitting up of a laboratory, and employing of professors—the collection and purchase of a library and the establishment of a museum are all, as yet, in the future.

The constitution has undergone no material change during the year, except in regard to the third Article, which has been from time to time suspended, in view of anticipated legislation. A provisional clause has also been inserted, requiring the endorsing of application for membership by actual members of the Society, to whom the applicant must be personally known as a *bona fide* druggist, or the assistant or apprentice of such.

The Council are pleased to report that the membership of the Society is still steadily increasing. During the year, one hundred and twenty-nine new members have been elected. The Society has now upon its books the greater part of the respectable druggists in the province.

The getting up of a conversazione has engaged the attention of the Council, but as it would probably meet with better success later in the season, the consideration of the matter will have to be taken up by the coming council. It is generally thought that a meeting of this kind would be highly conducive to the welfare of the Society and the interests of its members, in promoting harmony and good feeling. Little doubt is felt about the practicability of the undertaking, as the necessary assistance could be readily procured. A similar meeting was held recently in con-

nection with the Society in England, and met with unbounded success.

A balance sheet is hereby appended. No item calls for particular remark.

All of which is respectfully submitted.

H. J. Rose, *Secretary.* Wm. Elliot, *President.*

RECEIPTS.

Balance on hand July 1st, 1868,...	$419 40
Amount received from subscriptions.....	424 00
	$843 40

EXPENSES.

Amount disbursed.....	$498 82
Balance on hand July 1, 1869	344 58
	$843 40

We have examined the above accounts and found them correct.

Wm. Brydon, E. B. Shuttleworth, } *Auditors.*

CANADIAN PHARMACEUTICAL SOCIETY.

The regular monthly, and second annual meeting of this Society was held in the usual place, on Wednesday evening, 7th inst., with the President in the chair.

In opening the meeting, the Chairman said, that he regretted that the attendance was not larger, but during the hot weather the retail business in Toronto extended to a late hour, and prevented many from attending who otherwise would do so. He called on the Secretary to read the minutes of last meeting, after which, the following new members were proposed and received :—

PRINCIPALS.

Frank Gemmell	Sarnia.
C. G. Rich, ...	St. Thomas.
C. H. Simpson.....	Newmarket.
T. A. Parrish.....	Wallacetown.
Geo. Orchard	Strathroy.
R. H. Foster	Meaford.
R. A. Wood.....	Toronto.
J. C. Huffman.....	Napanee.

ASSISTANTS.

John Hurdon.....	Kincardine.
Ernest Brown.....	Sarnia.
C. Mitchell	St. Thomas.
Geo. Wood, ...	Strathroy.
M. Barrett, ...	Toronto.

The Treasurer enquired whether the applications for membership were endorsed by a member of the Society. The Chairman said he would certify to the standing of those members whom he had proposed, and the Secretary said the others had given references which were acceptable.

Mr. Shuttleworth brought forward a motion, of which notice had been given at the May meeting of the Society.

"That applications for membership must be endorsed by one or more members of the Society, to whom the applicant must be personally known as a *bonâ fide* Druggist."

The Chairman and other members urged the advisability of the course, and the motion was carried.

After the reading of the Annual Report, several members congratulated the Society and the Council on the progress made by the Society, and the amount of good which had been effected during the past year, showing, as the rolls of the Society do, that a very large majority of the druggists of Ontario had testified their approval of the working and object of the Society by becoming members. On motion the annual report was adopted.

In reply to a question by one of the members, Mr. Shuttleworth said that the number of members in arrears for subscriptions was, in a great measure, owing to an insufficient notification, and the attention of the Society was called to the fact. The President then said that before proceeding to the business of the annual meeting, namely, the election of officers for the ensuing year, he wished to place his resignation in the hands of the Society, because he felt that he had not been as regular an attendant at the meetings as a president of the Society ought to be; the reason being that on Wednesday evenings, when the Society meets, he had another engagement which he believed had a higher claim on his time and services. It was suggested by the Vice-President that the night of meeting be changed, and it being the wish of the members present, a notice of motion altering the by-law to that effect was given, Friday evening being the time thought most suitable.

The election of officers of the Society was then proceeded with, and the scrutineers, Messrs. Hodgetts and Brydon, give the following result.

President—W. Elliot.
Vice-President—H. Miller.
Treasurer—W. H. Dunspaugh.
Secretary—Henry J. Rose.
Cor. Secretary—W. Brydon.
Librarian—E. B. Shuttleworth.

COUNCIL.

R. W. Elliot, Toronto.
J. T. Shapter, "
C. E. Hooper, "
Geo. Hodgetts, "
J. L. Howarth, "
Wm. Saunders, London.
A. Hamilton, Hamilton.
W. Massey, Ottawa.

Mr. R. W. Elliot then read a paper on "Marseilles and its Commerce," and at its close received a warm expression of thanks.

Mr. Elliot then handed over to the Society the following donations, obtained by him when in Europe, for the Museum :

From M. Henri Depousier, of Marseilles, samples of essential oils, of very fine quality, and the plants from which they were obtained; also, samples of virgin and refined oil of sesame, with specimen of seed.

From Mr. Collins, Curator of the Museum of the Pharmaceutical Society of Great Britain; a specimen of *Chuquiraga insignis*, a newly-discovered plant of Peru.

From Mr. Elliot; specimens of iron pyrites, used in Europe for the manufacture of sulphuric acid, embracing varieties from Spain, said to contain 50 per cent. of sulphur, and samples from Norway and other localities.

The Chairman said that the librarian was the custodian of the specimens, and they were accordingly handed to him. Meeting adjourned.

Henry J. Rose, *Secy.*

BOOK NOTICES.

The Chemical Testing of Wines and Spirits. By John Joseph Griffin, F.C.S. London : J. J. Griffin & Sons.

This work is calculated to be of considerable practical utility to those in any way interested in the manufacture or sale of wines and spirits. To druggists, and manufacturing chemists, it will be found invaluable, as containing all the necessary information on the mixing of alcohol, the approximate composition and characters of the different kinds of wine, and full directions for performing the necessary experiments in testing the purity of this class of substances. The processes recommended are, generally, of easy management, and can be performed by those of moderate chemical knowledge.

A considerable amount of space is devoted to tables for the dilution of spirits—hydrometrical equivalents—comparative tables of the different hydrometers in use in various countries, &c. The percentage tables of Tralles, and Gay-Lussac, are also given, in which the necessary corrections have been made for temperature. It will be remembered, that in the tables of Tralles, water is taken as the standard of comparison, and is supposed to be weighed as unity at a temperature of 40° F. while the diluted alcohols are taken at 60° F. This constitutes, to most persons, a source of error. If water be taken as 1·000 at 40° F., its specific gravity will be ·9991 at 60° F., and of course the alcohol follows in the same proportion. With water at 60°, as a standard, the specific gravity of absolute alcohol becomes ·7946—at 40° it would be ·7939—this density corresponds with 175·25 degrees of Sikes' hydrometer. Mr. Griffin had introduced a column in which these corrected figures are shown, and has also given many useful rules for finding the quantity of spirit in various mixtures, &c.

A chapter is devoted to the estimation of free acid in wines; the standard of comparison being a solution of tartaric acid, of the strength of 500 grains to the gallon of water. From experiments made with a great num-

ber of wines, the following conclusions are arrived at:—

1. Good wines contain a quantity of acid that is equivalent to from 300 to 450 grains of crystallized tartaric acid in a gallon.

2. Wines with less than 300 grains of acid are too flat to be drinkable with pleasure.

3. Wines with more than 500 grains of acid are too sour to be drinkable with pleasure.

These conclusions are, however, subject to some modification on account of the presence of sugar, or strong flavoring ingredients. In the cases of port of port and sherry, in which the acid is often as low as 250 grains, the absence of acid is compensated by an enormous quantity of alcohol and sugar. We might add that individual taste has a great deal to do with modifying Mr. Griffin's conclusions—that which by one person might be regarded as veritable nectar of the gods, by another would be accounted execrable.

In regard to the importance of phosphorus in wines, about which so much has been said in advertisements, Mr. Griffin speaks very lightly. It requires 1000 to 2000 parts of wine to yield one of phosphoric acid, and this is the state of combination in which the phosphorus exists. All that is requisite in an examination for this element is a large stock of wine, and plenty of patience.

The last few chapters of the book are devoted to some points in connection with the making of grape and domestic wines, with a short outline of the quick process of maturing devised by M. Pasteur.

Pharmaceutical Society of Great Britain.

Former members of the English Society will be pleased to read the following account, which we have condensed from a lengthened report in the last number of the *Pharmaceutical Journal*:

The annual conversazione, in connection with the Society, was held at London on the 18th of May last. The attendance was unusually large, and the collection of articles exhibited exceedingly varied and interesting. A number of experiments were performed by gentlemen present, illustrating novelties in chemical and physical science. Professor Tomlinson demonstrated his theory of catharism, in relation to crystalization, ebullition and distilation, and Mr. Roberts performed a very interesting experiment, showing the expansion of palladium by hydrogen. By means of the spectroscope, Mr. Browning exhibited the spectrum of the supposed new element, *jargonium*; as also that of *turacine*, the pigment contained in the red feathers of several species of turacoes; the green line of copper was plainly visible. The Photo-Relief Printing Company exhibited their process in operation, and the London Stereoscopic Company showed some fine Photographs of Abyssinia, designed to illustrate the application of the oxy-hydrogen dissolving view apparatus, to lecture illustration. A great number of models of apparatus were shown in operation, amongst which may be mentioned a design for transporting freight in localities unprovided with railways. It consists of an endless wire rope supported on pulleys. The load is attached to the wire by boxes, which are enabled to pass the pulleys by a peculiar mechanism. The wire is set in motion by a steam engine. The cost is said not to exceed, greatly, that of the erection of an ordinary telegraph line. An apparatus for atmospheric telegraphy attracted considerable attention. Its application for communicating orders on ship board, showing red and green lights, were satisfactorily shown. A self regulating apparatus for preparing nitrous oxide gas, was exhibited by Mr. Porter, in which danger is effectually provided against, dentists will find this apparatus a great acquisition.

To enumerate the endless variety of articles on exhibition would take several columns, but we may say that nearly everything new and interesting in the line of chemistry, and the allied sciences, was embraced. Nor was art forgotten, as evinced by the fine display of paintings and photographs.

The twenty-eighth anniversary meeting was held on the day succeeding the conversazione. An examination of the accounts revealed the fact that the finances of the society were in a very flourishing condition. The annual receipts for 1868-9 amounted to £6,496 stg., while the sum of the expenses was about £4,300, leaving a balance in the hands of the treasurer of £2,200 stg. In addition to this there was standing to the account of the society, at the Bank of England, on the 31st December, 1868, the sum of £19,490, of which nearly £10,000 belonged to the benevolent fund.

After the annual meeting, the president of the society, G. W. Sandford, Esq., was presented with an elegant assortment of plate, of the value of two hundred guineas. It may be remembered that it was principally to the indefatigable exertions of Mr. Sandford that the passing of the Pharmacy Act of 1868 may be attributed. A fund was raised by the society for the purpose of purchasing a suitable testimonial. The amount subscribed was about £500 stg., part of which was expended in the purchase of the plate referred to.

After the presentation, a complimentary dinner was given in the Freemason' Tavern. The number of guests present was over one hundred. After the usual loyal toasts, the health of Mr. Sandford, who had been for six years President of the Pharmaceutical Society, was proposed, and received with great enthusiasm; Mr. Sandford responded in a very happy manner. Mr. H. S. Evans then proposed "the Medical Profession," which was responded to by Dr. Silver. "Success to Pharmacy" was given by Mr. Randall, to which Mr. Deane was called upon to respond. Mr. Joseph Ince, true to his colors, proposed "Success to Pharmaceutical Education," with which the name of Dr. Redwood was associated. Dr. Redwood returned thanks for the compliment, and ventured to express a hope that he might be able to devote many more years to the cause of education. He alluded to the time when education was commenced by the Society, and when a great many practical men looked with shyness on the undertaking, fearing less the student should be led to feel himself above his business. These fears were now removed, and the same result had been attained, as in the wider field of education generally. The doctor spoke of pharmaceutist education as the great source of power.

After the health of the chairman, and others connected with the society, had been severally proposed and responded to, the company separated.

Selections.

Action of Iron.

Iron is probably one of the most certain remedies to directly promote oxidation we possess; and, when used in right quantity and at the right time, it seems as though its progress could be watched, and its benefits accurately determined, by the improved colour of the blood. When a soluble salt of iron is taken, some of it is converted into a sulphuret in a few hours, or is reduced to an oxide in the bowels, and, thus losing its solubility and power of diffusion, it is thrown out of the system as perfectly inoperative as if it had never been taken. Another part escaping precipitation remains dissolved, and passes in from seven to ten minutes, when the stomach is empty, into the blood and urine, where it may be detected by the ordinary chemical tests partly oxidized, if capable of oxidation. This also is perfectly useless, unless some local action of iron is required on the urinary passages, or bladder. A third part, instead of passing off in the urine, diffuses from the liquor sanguinis, not only into every texture, but also into the blood globules and white corpuscles, causing a greater formation of hæmoglobulin, and thereby promoting that combination with protagon on which the production of new blood gobules depends. These blood globules exercise a chemical action on the oxygen of the air, which the membrane of the air vesicles transmits, and they and the fibrin together appropriate the incoming oxygen, and carry it to the capillaries, whence it must diffuse into each and every structure to support the oxidation which takes place everywhere. Hence, speaking generally, the more iron we absorb the more blood gobules we may, and probably will form, the muscles also become richer in hæmoglobulin, more oxygen is taken to the capillaries, and more oxidation takes place in the tissues and in the blood.—*Bence Jones.*

Tinctura Ferri Perchloridi, B.P.

Dr. Attfield says:—Why is a spirituous solution of perchloride of iron used in medicine at all? Why are spirituous solutions of any kind used? The answer to this second question is, that, firstly, some substances are only soluble in spirit, or better dissolved by spirit than by water; and, secondly, that spirituous solutions (tinctures) of many vegetable substances can be kept without spoiling for a far longer period than aqueous ones. But perchloride of iron is more readily soluble in water than in spirit; and spirit, so far from preserving perchloride of iron, decomposes it with precipitation of a basic chloride of iron, —in fact, in common language, spoils it. Tincture of perchloride of iron will not keep at all unless it is acid, and not then for any length of time. Why, then, is it ordered in the British Pharmacopœia? Because there is a demand for it by medical men. And why do medical men use it? Because their fathers used it before them, and because they do not know that an aqueous solution is as good and better.—*London Pharm. Journal.*

Researches on the Preparation, Properties, and Composition of Emetine.

M. Lefort contributes to the *Journal de Pharmacie et de Chimie* some remarks, and the record of some experiments on the preparation, properties, and composition of emetine. Referring briefly to the researches of Pelletier, Dumas, Calloud, Merck, and Leprat, chiefly in respect to their methods of extracting the emetine contained in ipecacuanha, the author proceeds to describe the process adopted by him, which is essentially that of Leprat, although subjected to important modifications. Leprat's process may be outlined as follows:—Powdered ipecacuanha is exhausted by alcohol, and the partially clarified tincture evaporated to a syrup consistence on the water-bath. The residue is introduced into a stoppered bottle, together with some strong solution of caustic potash, containing a quantity of potash equivalent to two parts for every hundred of powder employed, and chloroform nearly equal in bulk to that of the mixture. The emetine is coupletely extracted by the addition and removal of successive quantities of chloroform, the operation being continued until the chloroform ceases to become colored by contact with the mixture. The whole of the chloroform charged with emetine is then filtered and distilled; the emetine is extracted from the residue by means of a feeble acid, and precipitated from the solution thus obtained by the addition of the exact quantity of ammonia necessary to neutralize the acid; the precipitate is washed by decantation, dried at a temperature below 120° F, and the last traces of resinous matter removed by treatment with a little sulphuric ether. Emetine thus prepared is in the form of a very light grey powder; if very pure, it is white. The author then details the more important physical and chemical properties of emetine, and publishes the results of some experiments made with the object of discovering the exact composition of emetine and its salts; the uncrystalizable nature of the latter renders this a matter of some difficulty.

On the Assay of Opium.

M. Saint-Plancot, in a communication to the *Revue Médicale de Toulouse*, draws attention to the very troublesome assays of opium, and of the various results which are obtained by different chemists of undoubted skill. The author acknowledges the accuracy of the process indicated by Mr. Guilbourt, but condemns it because it is long and has other objections fatal to its employment in ordinary assays. The process published by M. Guil lermond is also condemned by the author on account of the following objections: in the first place, the quantity of alcohol is too small to effect complete exhaustion of the opium; secondly, twelve hours do not suffice for the c mplete crystallization of the morphine; lastly, the narcotine is not entirely separated from the morphine by washing with water. The author adds, further, that by following literally the instructions given by Guillermond, he has sometimes failed to obtain much, or any, morphine from samples of opium of good appearance, and which gave good results by the process he was about to describe. The author also condems, on similar grounds, the modification of Guillermond's process, introduced by his son.

The author's process differs but little from that of MM. Guillermond; its superiority depends on the addition of a slight excess of ammonia to the alcoholic solution of opium and subsequent ebullition, and on the separation of the narcotine by means of ether. The following are the details: Take 15 grammes of opium, triturate with 110 grammes of spirit containing 70 per cent. of real alcohol. When solution is effected, ascertain that the total weight is 125 grammes; agitate, filter, and collect a known portion of the tincture in a porcelain capsule; add a slight excess of ammonia, heat to boiling, and then set aside for twenty-four hours. Decant the liquor, and wash the precipitate with water by decantation; triturate the precipitate with ether, collect on a weighed filter, wash with more ether, and weigh. The relation of the morphine to the opium may be obtained by calculation.

The Silvering of Glass

Several methods have been published from time to time for coating mirrors and lenses with metallic silver by chemical deposition. Liebig recommends the following as being best suited for the purpose:—

a. 1 part of nitrate of silver is dissolved in 10 parts of water.

b. Pure nitric acid of commerce is saturated with carbonate of ammonia, and diluted until it has the density of 1·115; or, *c*, 242 grammes of sulphate of ammonia are dissolved in water, and the solution made up to 200 cubic centimetres.

d Solution of caustic soda, free from chlorine, of a density of 1·05.

A. *The Silver Solution.*—This is prepared by adding 100 volumes of the solution of ammoniacal salt (*b* or *c*) to 140 volumes of the solution of silver (*a*), and then 750 volumes of the solution of soda (*d*) in small successive portions. After three days' repose, decant the bright liquor.

e. 50 grammes of white sugar-candy, and 3·1 grammes of tartaric acid are dissolved in a little water, and heated to ebullition for an hour, then diluted to 500 cubic centimetres.

f. 2·857 grammes of dry tartrate of copper are mixed with water, sufficient soda added, drop by drop, to effect solution, and then diluted to 500 cubic centimetres.

B. *The Reducing Solution.*—This is obtained by mixing equal volumes of *e* and *f* adding 8 volumes of water.

C. *The Silvering Mixture.*—50 volumes of A, 10 volumes of B, and 250 to 300 volumes of water. The temperature of the mixture should be 70° or 80° F.; if necessary, therefore, warm water may be used.

Ordinary glasses may be supported in this liquid vertically; but lenses, etc., destined for optical instruments, should be suspended horizontally at the surface of the liquid. The layer of silver is brilliant, and of sufficient adherence to admit of polishing. The copper salt is necessary to the production of a uniform deposit.—*Pharmaceutical Journal*, (Eng.)

M. Claude Bernard on Opium and its Alkaloids.

The effect of extract of opium as compared with that of morphine, is thus illustrated by M. Claude Bernard. A pigeon got ten centigrammes of extract of opium under its skin, and another pigeon had inserted into it in the same manner ten centigrammes of chlorohydrate of morphine. At the end of five minutes, the first pigeon was seized with slight convulsive movements, which soon increased, and became so intense that the bird rapidly died in convulsions. The pigeon which got the same quantity of morphine as the other had of extract of opium, remained, on the contrary, absolutely unharmed. Retained before the eyes of the audience during an entire lecture without showing the slightest trace of *malaise*, he survived the experiment as though nothing had been done to him. Subsequently M. B. stated that pigeons are very refractory to stupefying agents. Bernard infers that there are eminently different agencies in opium. In fact, out of the six alkaloids of opium, three are soporific and three are convulsive. The first three, stated in the order of intensity of soporific action, are narceine, morphine and codeine; the second class, ranged in the order of intensity of convulsive action, are thebaine, papaverine and narcotine. Again, the three hypnotic alkaloids, notwithstanding their mutual analogy, present real differences *inter se*. Thus, narceine causes profound sleep, but as soon as that sleep is awakened from, the faculties are quickly recovered. It is not so with morphine. M. Bernard relates this fact. Into one of two dogs accustomed to play together he injected five centigrammes of morphine; into the other, the same quantity of narceine. They both went to sleep; but, on awaking, the animal which had been poisoned by morphine was morose and flurried, not recognizing his companion, while the other immediately resumed his playfulness. The following day the experimenter reversed the conditions, causing the animals to interchange their *rôles*; and the result obtained confirmed by the counter experiment the first demonstration.

. . . . . .

Clinical experience amply sustains the following inference drawn by Bernard. The hypnotic alkaloids of opium have two successive periods of action—the first, that of excitement; the second, that of stupor.

Our author now makes a further classification of the alkaloids of opium, dividing them into three classes, in the order of their intensity of action, as follows:—

Exciting.	*Soporific.*	*Convulsive.*
2. Morphine.	2. Morphine.	2. Narcotine.
1. Codeine.	1. Narceine.	1. Thebaine.
3. Narceine.	4. Codeine.	3. Papaverine.*

Bernard claims to have demonstrated that the common opinion is correct, that the immediate action of narcotics is upon the brain. —*Boston Medical and Surgical Journal.*

To Bleach Sponges.

Remove the sand by shaking; wash the sponges in hot water and press as dry as possible. Then place in a bath of dilute muriatic acid for half an hour; remove from bath, and after washing well in hot water place in a bath of fresh acid, to which has been added 6 per cent. of hyposulphite of soda, and allow it to remain 24 hours. The sponge is then finished by washing in water and drying.—*Druggist Circular.*

* Previously, Bernard is reported as placing papaverine 2d, and narcotine, 3d. There is, therefore, a misprint somewhere.

Comparison between the Ipecacuanhas of Brazil and New Granada.

In the *Journal de Pharmacie et de Chemie*, Mr. J. Lefort gives the details of a comparative examination of the ipecacuanhas from Brazil and that from the borders of the River Magdelena. The conclusion he arrives at may be enumerated as follows.—That the estimation of the emetine by means of tannin shows that the ipecacuanhas from New Grenada contains somewhat less alkaloid than that from Braxil; that an estimation of the emetine in both varieties, by a process which takes advantage of the insolubility of the nitrate of this alkaloid, points out similar relative proportions; that the odour and irritating property peculiar to ipecacuanha is less strongly developed in that from New Grenada than in that from Brazil; that the root from New Grenada derives no advantage in virtue of it superior size over that from Brazil, inasmuch as the greater thickness of its cortical part is accompanied by a corresponding increase in the amount of the meditullium.

Although the ipecacuanha from New Granada possesses a composition and properties very closely resembling those of the Brazilian root, the author does not consider that the one should be replaced by the other in pharmacy. Notwithstanding he is of opinion that in the event of a decrease in the supply from Brazil, medicine would find a very precious substitute in the ipecacuanha from New Granada.

Treatment and Pathology of Hooping-Cough.

Professor Oppolzer, in the *Wiener Medizinische Presse*, No. 36, 1860, states that, in the treatment of hooping-cough, he prefers before other narcotics the powdered belladonna root. This is administered to patients from one to two years of age, in doses of five *milligrammes*, gradually increased to one *centigramme*. The powder is given twice in the day, in the morning and evening. For adults and intelligent children, Oppolzer prescribes a solution of bicarbonate of soda, to be taken in small quantities whenever the attack of coughing is threatened. Emetics are not given until the third stage of hooping-cough, when the respiration is impeded by great accumulation of mucus in the bronchi. In this last stage astringents, particularly tannin, are administered. The patient should be isolated, and kept in a warm room with a constant temperature. Change of locality frequently brings about a great and permanent amelioration in the frequency and intensity of the paroxysms. Oppolzer holds that hooping-cough is due to the action of a contagium carried in the sputum and exhalations of patients similarly affected. This view is supported by the fact that, among adults, females are more frequently attacked than males; and weakly, strumous, and phthisical children are more disposed to the malady than those who are strong and healthy. In accordance with this view, Oppolzer recommends isolation of patients suffering from hooping-cough. —*British Medical Journal.*

Notes on the Manufacture of Soap.

It is a well-known fact that, by an indirect process, a potassa soap may be converted into a soda soap. This is done by adding to a boiling solution of potassa soap a very concentrated solution of common salt; and it is generally taken for granted that, if enough of the latter has been added, the potassa is converted at least chiefly into soda, while chloride of potassium is formed. Neither in chemical nor in technological works the question, *how much* of the potassa is substituted by soda, has been answered. Hence it occurred to Dr. Oudemans to ascertain this point, he having a good opportunity to do this by being acquainted with the proprietors of large soap-works. Without entering into the full details of this published paper on the subject, we quote the results obtained, which are these :—By the process as executed on a large scale, and yielding excellent produce, only a little more than half, to wit 53·7 per cent., is replaced by soda, while 46·3 per cent. of potash is left among the other alkali combined with fatty acids in the curd soap.—*Journ. f. Prak. Chem. v. Erdmann.*

Detection of Sulphur by means of Potassium or Sodium.

Dr. Schönn, at Stettin, recommends the use of either of these two methods for ascertaining presence of sulphur in oxidised or non-oxidised state in inorganic compounds; a small quantity of the substance to be tested for sulphur is pulverised and placed in a dry test tube, a small piece of potassium or sodium is then added, and upon it a small quantity of the powdered substance which is to be tested is again placed in the test tube; heat is applied, reduction takes place, and sulphide of the metal is formed. The test tube, after cooling, having been broken, its contents are placed in a small quantity of water rendered acid by a few drops of sulphuric acid; sulphuretted hydrogen is evolved. If the quantity of sulphide formed is likely to be very small, nitroprusside of sodium should be used as a test. Care should be taken that only small quantities of substance are operated upon in this manner, especially since substances as realgar, orpiment, and others containing sulphur and arsenic, at the same time, violently explode and detonate when ignited with the above-named metals.—*Zeitschr f. Anal. Chem.*

For Detecting Sulphur in Organic Substances, especially of Animal Origin. —(*Zeitschr. f. Anal. Chem*, 1860.)—The same process is available Hair and feathers, and dry skin and nails, may be at once submitted to ignition with the metal. White of egg, emulsin, saliva, and muscle, should first be calcined on a piece of platinum, and the animal charcoal so obtained be ignited along with potassium or sodium. In most cases of this kind, nitro-prusside of sodium will be required to make the presence of sulphur absolutely evident.

Oxychloride of Bismuth in Commercial Subnitrate of Bismuth.

In the *Repertoire de Pharmacie* M. LeMoine draws attention to the adulteration of subnitrate of bismuth with the oxychloride. In proportion equivalent to five per cent. or under, the author considers that it may be looked upon as an accidental impurity, inasmuch as commercial nitric acid invariably contains a small amount of hydrochloric acid; but if the proportion exceeds this per-centage, it must be regarded as an adulteration. To determine the amount of oxychloride in any sample of subnitrate of bismuth, M. Le Moine recommends that the chloride be estimated as chloride of silver, and the corresponding amount of oxychloride calculated therefrom. To effect this, dissolved a weighed quantity of the subnitrate in hot nitric acid, precipitate the chlorine by the addition of a slight excess of nitrate of silver, and wash the precipitate several times by decantation with boiling water. Dry and weigh. The The composition of oxychloride of bismuth being represented by the formula Bi ClO, 143·5 parts of chloride of silver will represent 259·5 of that substance.

Leeches.

Paris is the best market in Europe for leeches. The mouth of the Danube is now the best fishing ground, and no less than £120-000 in value of leeches are annually sent to Paris from Trieste. The best leech is said to be a native of Australia, as he does his work in a shorter time than any other. The Viceroy of Egypt has granted a monopoly of 3,000,000 leeches annually, which are to be found in the bed of the Nile after the periodical inundation of that river, to a French dealer. On arriving in Paris, those not required for active duty are sent to Gentilly, where they are lodged in reservoirs provided with greasy mud and filled with greenish water.—*Jour. Soc. of Arts.*

Impurity of Commercial Chloroform.

M. Personne has demonstrated the nature of the alteration effected in chloroform by exposure to air and light. Chloroform thus exposed becomes acid, and emits irritating white vapors, which are, according to M. Personne, chiefly those of chlorocarbonic acid derived from chlorocarbonic ether accidentally contained in the chloroform, and not formed directly at the expense of the chloroform. The removal of the chlorocarbonic ether would therefore probably increase the unalterability of chloroform. M. Personne, has, in fact, found that rectification over caustic potash will effect the destruction of this ether, and insure the continued purity of the sample so treated.

Note.—The statement made by M. Personne, regarding the white vapors emitted from altered chloroform, does not appear to be correct. One of the leading characteristics of chlorocarbonic acid on phosgene, as given by Watts, is that it does *not* fume in the air.—[Ed. Ph. Jour.]

Miscellaneous.

Warts.—Caustic potass, one ounce; water, two ounces, gum arabic, half ounce. Flour sufficient to make a paste. Mix well. Cut a hole in a piece of sticking plaster the size of the wart. Apply the plaster, leaving the wart to protrude through the hole, then apply the paste to the wart and cover with a rag; leave for a few hours. The wart will fall off.– *Ex.*

To Remove the Bitterness of the Sulphate of Magnesia.—Boil a little coffee in the solution of sulphate. The flavor of the decoction of senna may be covered in the same manner.

MOLYBDIC ACID A TEST FOR MORPHIA.—*Zeitschr. f. Anal. Chem.*, 1869.)—M. Almén has thoroughly tested the value of Fröhde's test for morphia—sulphuric acid which is contaminated with, or contains molybdic acid, purposely added. A beautiful purple tint is produced when such acid is brought into contact with either pure morphia or its salts.

PREPARATION OF PERFECTLY PURE OXYGEN GAS.—(*Bul. Men. da Soc. Chim. de Paris*, 1869, No. 2.)—Böttger recommends, for this purpose, to heat permanganate of potash: it is true that this salt only yields about 10 per cent of oxygen, but it is perfectly free from chlorine, as well as from ozone. There remains, as residue, a mixture of manganate of potash and oxide of manganese, readily re-convertible into permanganate.

Notes and Queries.

A correspondent, Mr. McConnell, of Cobourg, sends the following formulæ for some preparations of bismuth, which are said to yield excellent results:—

BISMUTH ET AMMON. CIT.

I. Dissolve a troy oz. of bismuth subcarb. in 720 grs. nitric acid, and add aqua ℥iss.
II. Dissolve 600 grs. potassæ citras in the Oij. aqua dest.

Mix the two solutions; nitrate of potash remains in solution, citrate of bismuth being precipitated; wash and dry on bibulous paper; rub up the citrate of bismuth in a little water, till it forms a paste, and add slowly ammon. fort till saturated; filter solution; evaporate and dry on glass.

LIQ. BISMUTHI.

Take 260 grs. of the prepared salt, and dissolve in aqua ℥xiv.

Add a little liq. ammonia fort (I add ℥iij.) and sp. vin. rect. ℥ij.

Dose of the salt gr. ij.—liquor ℥j.

Subscriber wants to know the best way to make EXT. VANILLA. There are several methods employed; as that by maceration of the bean, cut in small pieces, or rubbed up with loaf sugar. Maceration is never effectual in exhausting vanilla, unless a large quantity of spirit is used, or the partially exhausted materials are subjected to a repetition of the process. It is sometimes recommended to digest the bruised beans in hot water, for a short time, and then to add the spirit. This is also objectionable, as the volatile matters are, to some extent, driven off, and the resulting tincture is not as bright as it might be. The best way, in our opinion, is to cut up the beans with a knife, or scissors, and then give them a thorough pounding in an iron mortar, with the addition of a large proportion of clean broken glass; when the whole has been rendered as fine as possible pack tightly, and percolate with proof spirit (6 alcohol to 4 water, by measure.)

W. P., asks "what is '95 alcohol,' and why is it so designated? The number 95 refers to the percentage of absolute alcohol, by volume, which is supposed to be contained in the spirit. We say, 'supposed,' for in reality but a small proportion of alcohol marked 95% is really such. United States spirit is generally branded in this way, as the alcoholometer of Tralles is adopted by that country. By the process of ordinary distillation,—and that only as practised by the best operators—spirit cannot be made containing more than 95%, by volume, or about 92%, by weight. This corresponds, very nearly, with what is known in England, and this country, as 65 over proof—having a specific gravity of ·817 at 60° F."

Changes.

Mason & Hamilton, Brantford, have been burnt out. Stock partially saved. Insured for $2,000, which will not cover the loss.

A. A. Merrick, Merrickville, is not able to pay his creditors.

John A. Chase has bought the business lately carried on by Parker & Cattle, in Paris, Ont.

J. H. Nasmyth has commenced business at Stratford.

A new business at Stouffville has been opened by W. Fead.

Trade Report.

Reviewing the general condition of trade for the past half year, *stagnation*, and *drifting*, will best express the condition of affairs. There have been some few items maintained at high rates, but this has arisen more from real or supposed short supplies, than from active demand; the general course of prices has been downward. Payments have been slow, arising from the blocking up of roads by severe snow-storms in winter, and latterly by the heavy withdrawal of circulation by all the banks, in anticipation of the Government issue scheme. The case which would have naturally followed the postponement of that measure, was prevented by the stoppage of the Royal Canadian Bank. Trade has presented the apparent anomoly of the farming and artizan classes being fully employed, and doing well, while traders are suffering. This condition of affairs has been caused by over-importation and overtrading, and will find its cure either in an expansion of the consumptive wants of the country, or the weeding out of the superabundant trades, and promises to be a slow process by either method. We repeat our warning to all, reduce expenses, engage in no doubtful speculations, collect accounts as promptly as possible, buy no goods that cannot be paid for at maturity. These measures will mitigate the pressure, if they do not avert the storm.

Drugs—Cantharides are scarce, and slightly higher. Ergot scarce. Gum Arabic dearer. Gum Assafætida scarce and dear. Gum Tragacanth, all qualities dearer, the best especially. Almond Oils lower. Caster Oil lower for forward delivery, but in low stock for the moment. Oil Lemon, super, low. Oil Bergamot advanced. Opium is lower, with very little doing. The speculation in this article has been maintained by the outlay of a large amount of money, and in face of what appears to have been a full average crop. The new crop is said to be largely contracted at prices equal to $10 here, but cannot appear in this market until about October. Meantime, outside parcels are offered at a reduction from the extreme prices of March and April. White Hellebore has been in very active demand. Ipecac and Jalap are lower. Rhubarb without change. Canary Seed lower. Cardamons very dear.

Chemicals.—Ammonia products are dearer. Camphor, crude and refined, lower. Glycerine lower. Iodine and Iodides firm. Bromides dearer. Morphia held at former rates. Potash Bichromate lower. Cream Tartar firm. Quinine has varied from time to time; with a tendency to higher prices. Sodas are dull, lower, and altogether unprofitable to all concerned.

Dyestuffs.—Anilines, Cochineal, Indigo, Madder, Logwood and Extract are all higher and quite firm.

Spices.—The only change of importance is in Cassia, which is higher than for many years.

Paints are without features of interest. The demand has been pretty good. Prices uniform.

Sundries.—The wholesale drug trade are devoting more attention to this branch, and have generally stocks so well assorted as to preclude the necessity for going to fancy goods houses to make up wants in the retail branch of the business. In this department it is almost impossible to sell or quote without reference to actual stock.

Oils, &c.—Olive and Salad are lower. Lard very scarce and dear. Cod firm. Seal low. Linseed has been sold at low rates, but there are indications of an advance.

WHOLESALE PRICES CURRENT.—JULY, 1869.

Drugs, Medicines, &c.	$ c.	$ c.
Acid, Acetic, fort	0 12	@ 0 15
" Benzoic, pure	0 28	0 35
" Citric	0 83	0 90
" Muriatic	0 05	0 07
" Nitric	0 11½	0 15
" Oxalic do	0 26	0 32
" Sulphuric	0 04½	0 07
" Tartaric, pulv.	0 36	0 45
Ammon., carb. casks	0 17	0 19
" " jars	0 18	0 20
" Liquor, 880	0 18	0 25
" Muriate	0 12½	0 15
" Nitrate	0 45	0 60
Æther, Acetic	0 45	0 50
" Nitrous	0 22½	0 25
" Sulphuric	0 48	0 55
Antim. Crude, pulv.	0 10	0 12
" Tart. "	0 50	0 60
Alcohol, 95%	1 67½	2 00
Arrowroot, Jamaica	0 21	0 22
" Bermuda	0 60	0 65
Alum	0 02½	0 03½
Balsam, Canada	0 32	0 40
" Copaiba	0 75	0 80
" Peru	2 90	3 00
" Tolu	1 20	1 40
Bark, Bayberry, pulv.	0 20	0 25
" Canella, "	0 17	0 20
" Peruvian, yel. pulv	0 42	0 45
" " red "	1 50	1 60
" Slippery Elm, g. b.	0 18	0 20
" " flour, pkt's	0 28	0 32
" Sassafras	0 15	0 18
Berries, Cubebs, ground.	0 30	0 40
" Juniper	0 06	0 10
Beans, Tonquin	0 60	1 10
" Vanilla	9 00	10 00
Bismuth, Alb.	6 20	6 40
" Carb.	6 20	6 40
Camphor, Crude	0 46	0 50
" Refined	0 60	0 65
Cantharides	0 90	1 00
" Powdered	1 00	1 10
Charcoal, Animal	0 04	0 06
" Wood, pow'd.	0 12	0 15
Chiretta	0 55	0 65
Chloroform	1 40	1 50
Cochineal, S. G.	0 90	1 15
" Black	1 30	1 75
Colocynth, Pulv.	0 50	0 80
Collodion	0 55	0 60
Elaterium oz.	4 50	5 00
Ergot	1 08	1 15
Extract, Belladonna	2 00	2 20
" Colocynth, Co.	1 25	1 75
" Gentian	0 50	0 60
" Hemlock, Ang.	1 12	1 25
" Henbane, "	2 40	2 60
" Jalap	5 00	5 50
" Mandrake	1 75	2 00
" Nux Vomic. oz	0 60	0 70
" Opium "	Variable.	
" 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 26	0 35
" Chamomile	0 36	0 45
Gum, Aloes, Barb. extra	1 00	1 10
" " " good	0 50	0 55
" " Cape	0 15	0 20
" " " pow'd	0 25	0 30
" " Socot.	0 80	0 90
" " " pulv.	0 90	1 00
" Arabic, white	0 42	0 65
" " " pow'd	0 57	0 65
" " sorts	0 34	0 37
" " " pow'd	0 50	0 60
" " com. Gedda	0 13	0 16
" Assafœtida	0 32	0 40
" British or Dextrine	0 13	0 15
" Benzoin	0 48	0 55
" Catechu	0 15	0 20
" " pow'd	0 25	0 30
" Euphorb, pulv.	0 32	0 40
" Gamboge	1 40	1 60
" Guaiacum	0 32	0 50
" Myrrh	0 48	0 60
" Sang Dracon	0 60	0 70
" Scammony, pow'd	5 60	—
" " Virg. "	14 50	—
" Shellac, Orange	31	0 35

Drugs, Medicines, &c. *Continued.*	$ c.	$ c.
Gum, Shellac, liver	0 24	@ 0 28
" Storax	6 65	0 75
" Tragacanth, flake.	0 70	1 00
" " common	0 30	0 35
Galls	0 32	0 37
Gelatine, Cox's, Gd.	1 10	1 20
Glycerine, com.	0 30	0 40
" Vienna	0 35	0 45
" Price's	0 65	0 75
Honey, Canada, best	0 16	0 20
" Lower Canada	0 12½	0 13
Iron, Carb. Precip.	0 20	0 25
" " Sacchar.	0 40	0 45
" Citrate Ammon.	0 90	1 00
" " & Quinine oz.	0 43	0 48
" " & Strychnine "	0 17	0 25
" Sulphate, pure	0 08	0 10
Iodine, good	4 50	5 00
" Resublimed	5 60	6 00
Jalapin oz.	1 50	2 00
Kreosote	1 60	2 50
Leaves, Buchu	0 30	0 50
" 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 20
Lime, Carbolate brl.	5 50	—
" Chloride	0 04½	0 06
" Sulphate	0 08	0 12½
Lint, Taylor's best	1 12½	1 25
Lead, Acetate	0 14	0 17
Leptandrin oz.	0 65	—
Liq. Bismuthi	0 50	0 75
" Opii, Battley's	7 60	9 00
Lye, Concentrated	0 00	2 00
Liquorice, Solazzi	0 40	0 45
" Cassano	0 30	0 40
" Other brands	0 14	0 25
Liquorice, Refined	0 35	@ 0 45
" " Hessin's doz	2 00	—
Magnesia, Carb oz.	0 22	0 25
" " 4 "	0 17	0 20
" Calcined	0 65	0 75
" Citrate. gran.	0 40	0 50
Mercury	0 65	0 75
" Bichlor	0 70	0 80
" Biniodid oz.	0 25	0 35
" Chloride	0 90	1 00
" C. Chalk	0 45	0 60
" Nit. Oxyd	0 90	1 00
Morphia, Acet. } about	8 00	—
" Mur. } about		
" Sulph. } about	—	—
Musk, Pure grain oz.	22 00	—
" Canton	1 75	2 00
Oil. Almonds, sweet	0 48	0 55
" " bitter	14 00	15 00
" Anniseed	4 00	4 50
" Bergamot, super.	6 50	7 00
" Carraway	4 00	4 20
" Cassia	3 00	3 20
" Castor, E. I.	0 17	0 20
" " Crystal	0 22	0 25
" " Italian	0 26	0 28
" Citronella	1 65	2 00
" Cloves, Ang.	1 00	1 10
" Cod Liver	1 40	1 50
" Croton	2 50	3 00
" Geranium, pure, oz.	2 00	2 20
" Juniper Wood	0 90	1 00
" " Berries	6 00	7 00
" Lavand, Ang.	21 50	22 00
" " Exot.	1 40	1 60
" Lemon, super.	3 30	3 60
" " ord.	2 70	2 80
" Orange	3 00	3 20
" Origanum	0 65	0 75
" Peppermint, Ang.	16 00	17 00
" " Amer.	5 00	5 50
" Rose, virgin	7 75	8 00
" " good	4 40	5 50
" Sassafras	1 30	1 40
" Wintergreen	4 90	5 50
" Wormwood, pure	5 80	50
Ointment, blue	0 65	0 70
Opium, Turkey, about	11 25	—
" " pulv.	13 40	—
Orange Peel, opt.	0 65	0 75
" " good	0 12½	0 20
Pill, Blue, Mass.	0 70	0 75

Drugs, Medicines, &c. *Continued.*	$ c.	$ c.
Potash, Bi-chrom.	0 15	@ 0 20
" Bi-tart.	0 25	0 28
" Carbonate	0 16	0 20
" Chlorate	0 40	0 45
" Nitrate	8 50	9 00
Potassium, Bromide	1 90	2 00
" Cyanide	0 70	0 75
" Iodide	3 80	4 50
" Sulphuret	0 25	0 35
Pepsin, Boudault's oz.	1 65	1 80
" Houghton's, doz	8 00	9 00
" Morson's. oz.	0 82	1 10
Phosphorus	0 75	0 85
Podophyllin	0 60	0 75
Quinine, Pelletier's	1 70	—
" Howard's	1 70	1 80
" " 100 oz. case	0 00	—
" " 25 oz. tin	0 00	—
Root, Colomba	0 14	0 20
" Curcuma, grd.	0 12½	0 17
" Dandelion, "	0 25	0 35
" Elecampane	0 14	0 17
" Gentian	0 08	0 12½
" " pulv.	0 15	0 20
" Hellebore, pulv.	0 18	0 25
" Ipecac "	2 40	2 60
" Jalap, Vera Cruz.	1 55	2 —
" " Tampico	0 90	1 —
" Liquorice, select.	0 13	0 17
" " pow'd	0 12½	0 16
" Mandrake, "	0 20	0 25
" Orris "	0 20	0 25
" Rhubarb, Turky.	5 25	5 50
" " E. I., China	1 50	1 75
" " " pulv.	1 60	1 85
" " " 2nd	1 30	1 50
" " French	0 75	—
" Sarsap., Hond.	0 45	0 50
" " Jam.	0 75	0 80
" Squills	0 10	0 15½
" Senega	0 40	0 50
" Spigelia	0 35	0 40
Sal., Epsom	3 00	4 00
" Rochelle	0 28	0 35
" Soda	0 02	0 03
Seed, Anise	0 16	0 30
" Canary	0 05½	0 07
" Cardamon	2 90	4 00
" Fenugreek, gr'd.	0 10	0 15
" Hemp	0 06	0 07
" Mustard, white	0 14	0 16
Saffron, Amer.	1 25	1 50
" Spanish	14 00	16 00
Santonine	11 50	12 50
Sago	0 07½	0 09
Silver, Nitrate, cash	14 90	16 50
Soap, Castile, mottled	0 12½	0 14
Soda Ash	0 03	0 04
" Bicarb. Newcastle.	4 00	5 00
" " Howard's.	0 14	0 16
" Caustic	0 04	0 05
Spirits Ammon., arom.	0 25	0 35
Strychnine, Crystals	2 65	3 00
Sulphur, Precip.	0 10	0 12½
" Sublimed	0 4	0 05
" Roll	0 03	0 04½
Tamarinds	0 15	0 20
Tapioca	0 20	0 23
Veratria oz.	0 25	0 30
Vinegar, Wine, pure	0 55	0 60
Verdigris,	0 35	0 40
" Pow'd	0 45	0 50
Wax, White, pure	0 85	0 90
Zinc, Chloride oz.	0 20	0 25
" Sulphate, pure	0 10	0 15
" " com.	0 06	0 10
Dyestuffs.		
Annatto	0 40	@ 0 60
Analine, Magenta, cryst	Variable.	
" " liquid	2 50	—
Argols, ground	0 15	0 25
Blue Vitriol, pure	0 08	0 10
Camwood, pure	0 06½	0 09
Copperas, green	0 01½	0 02½
Cudbear	0 16	0 25
Fustic, Cuban	0 03	0 04
Indigo, Bengal	2 40	2 50
" Madras	1 15	1 20
" Extract	0 28	0 35
Japonica	0 05½	0 06½
Lacdye, pow'd.	0 35	0 40
Logwood	0 02½	0 03

Dyestuffs—*Continued*	$ c.	$ c.
Logwood, Camp	0 02½	@ 03½
" Extract	0 13½	14
" " 1lb bxs	0 15	—
" " ½lb "	0 16	—
Madder, best Dutch	0 16½	0 18
" 2nd quality	0 14	0 15
Quercitron	0 04	0 05
Sumac	0 06½	0 08
Tin, Muriate	0 10½	0 12½
Redwood	0 05	0 06
Spices.		
Allspice	0 08½	@ 0 10
Cassia	0 44	0 45
Cloves	0 13	0 14
Cayenne	0 18	0 25
Ginger, E. I.	0 12	0 14
" Jam.	0 28	0 30
Mace	0 78	0 90
Mustard, com.	0 20	0 25
" D. S.	0 40	0 45
Nutmegs	0 45	0 75
Pepper, Black	0 11½	0 12½
" White	0 20	0 22
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
" Red	0 08	0 10
Green, Brunswick	0 07	0 10
" Chrome	0 20	0 25
" Paris	0 30	0 35
" Magnesia	0 20	0 25
Litharge	0 08	0 09
Pink, Rose	0 12½	0 15
Red Lead	0 06½	0 08
" Venetian	0 02½	0 03½
Sienna, B. & G.	0 10	0 15
Umber, "	0 07	0 10
Vermillion, English	0 90	1 00
" American	0 25	0 35
Whiting	0 85	1 25
White Lead, dry, gen.	0 07½	0 09
" " " No. 1	0 06½	0 08
" " " No. 2	0 05½	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 32	0 37½
Red, Venetian	0 07	0 10
Patent Dryers, 1lb tins	0 14½	0 16
Putty	0 03¾	0 04½
Yellow Ochre	0 08	0 12
White Lead, gen. 25lb tins	2 35	—
" " No. 1 "	2 10	—
" " No. 2 "	1 90	—
" " No. 3 "	1 65	—
" " Com. "	1 30	—
White Zinc, Snow	2 75	3 25
Naval Stores.		
Black Pitch	4 50	@ 5 50
Rosin, Strained	3 75	4 50
" Clear, pale	6 50	10 00
Spirits Turpentine	0 48	0 55
Tar Wood	4 00	5 00
Oils.		
Cod	0 65	@ 0 70
Lard, extra	1 25	—
" No. 1	1 12½	—
" No. 2	0 95	—
Linseed, Raw	0 76	0 82
" Boiled	0 81	0 87
Olive, Common	1 25	1 45
" Salad	1 80	2 00
" " Pints, cases	4 25	4 50
" " Quarts	3 60	3 75
Seal Oil, Pale	0 80	0 00
" " Straw	0 70	0 75
Sesame Salad	1 60	1 75
Sperm, genuine	2 40	—
Whale, refined	0 90	1 00