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WHOLE No. CVIII

Original and Selected Papers.

NOTE ON EMULSIONS.

BY E. GREGORY.

My attention has been called to a communication from a "Student," published in the *Pharmaceutical Journal and Transactions*, for April 21st, 1877, in which he states that he was unable to produce an emulsion with Oil of Turpentine, when using formula No. 9, as given in my paper, read at the meeting of the American Pharmaceutical Association. Since nearly all my experiments had been made with that oil, and as I had experienced no difficulty in emulsifying it by the process complained of, I was a little surprised. As soon as practicable, therefore, I tried the process over again, first with one ounce and again with one drachm of Oil of Turpentine, using, in each case, the stated proportions of gum and water. Each time my emulsion was successfully finished in about five minutes, I think, therefore, that the failure of "Student" must have resulted from one of the following causes. Either the gum acacia with which he operated was not pure; or, if pure, it was not finely powdered; or his mortar was too small for the quantities used; or else, he had neglected to triturate thoroughly the gum with the oil before adding the water. Any of these causes would increase the difficulty, but should not produce a total failure. I may say that the process in question is in constant use in my store, and with unvarying success.

Lindsay, Ontario, May 17th, 1877.

NOTE BY THE EDITOR.—Since receiving the above contribution from Mr. Gregory we have noticed in the *Pharm. Jour. and Trans.* two communications bearing on the subject. Both of these confirm the author's conclusions, and show "process No. 9" to be a most satisfactory one. One of these correspondents writing from Glasgow, Scotland, says :

"In reply to "Student's" remarks, in the *Pharmaceutical Journal* of 21st inst., on the process No. 9, in Mr. E. Gregory's paper on "Emulsions," I wish to say, that after reading of his difficulty in obtaining a good result by following "plan No. 9" given by Mr. Gregory, I first prepared an emulsion according to ingredients and process given by "Student," with a most satisfactory result.

Next, I followed Mr. Gregory's "No. 9," and having "Student's" remarks in my mind, was rather astonished on, almost at once, obtaining a result by every means entitled to be "termed an emulsion."

In both cases, I first added gradually, the turpentine to the acacia, mixing them well together, then added at once, in the one case two, in the other, one and a half parts of water, both "came" quickly and beautifully, and if any difference at all, that by the process of "Student" came easiest.

Having marked both, I set them aside, on the 21st, and to-day, the 23rd, both emulsions are "as like as two peas," each having a "cream" on the surface, the under portion remaining like milk.

I repeated process No. 9 to-day, with the very same result. Perhaps "Student" may try again, after reading "how plan No. 9" behaved in the hands of another Student."

The communication of A. E. C., Leeds, is as follows: "Replying to the letter of "Student" in your last issue of the *Journal*, I beg to inform him that it is quite possible to produce a perfect emulsion according to the form No. 9 in Mr. Gregory's paper.

The *modus operandi* which has yielded in my hands the greatest satisfaction is as follows: One part acacia was put into the mortar and well triturated with two parts oil of turpentine; one and half parts of water were then added at once and well rubbed, when a beautiful emulsion was obtained in one minute. This has remained perfectly unchanged for eight hours, and is miscible with any quantity of water.

Continuing the experiment, the same proportions were used, first rubbing the water with the acacia, then adding the oil *guttatim*. This also yielded a good emulsion, but occupied half an hour to complete the trituration. I therefore consider the process No. 9, above referred to, to be by far the preferable one, and hope "Student" will persevere in his attempt to produce it."

# ON GOLDEN OINTMENT AND THE UNG. HYDRARG. OX. RUB.\*

BY R. J. DOWNES.

The following are the salient points of this paper :—

Some books state that Singleton's Golden Eye Ointment is prepared from orpiment, or yellow sulphuret of arsenic, and is mixed with an equal weight of lard (Druitt's "Surgery," 10th edition, 1870), whilst, if I remember rightly, Paris, in his "Pharmacologia," informs us that the Ung. Hydrarg. Nitratis is generally sold as "Golden Ointment," whilst Cooley's "Dictionary of Useful Receipts" announces it to be red precipitate ointment; and this is, I believe, the only work in which this fact is stated.

The contents of a pot of Singleton's ointment weigh exactly 56 grains, and having dissolved off the fat with bisulphide of carbon, I obtained a red granular and crystalline powder weighing 6·7 grains, or 12 per cent. Portions of this powder were tested for arsenic, but it was absent. Another portion was then tested for mercury, which I found to be present by the following process :—The solution in hydrochloric acid gave a white precipitate with ammonia, and a red one with iodide of potassium. On boiling with copper foil a deposit was obtained which gave metallic globules, and not octahedral crystals, when sublimed in a tube. The precipitate must therefore be mercuric oxide. The fat employed is probably mutton suet. It keeps well, and you may observe that it is covered very carefully with bladder and then with skin.

These experiments bring me to the conclusion that the Ung. Hydrargyri Oxidum Rub., B. P., having 12·4 per cent., is the proper representative.

The Ung. Hydrarg. Oxidum Rub. has always been a difficult one to keep, in consequence of the rapid deoxidation of the mercuric oxide by the fats. The old ointment, you are no doubt aware, was prepared with lard and white wax for a base: the present ointment of the Pharmacopœia, which is a much better keeping one, is made with almond oil and yellow wax, but is still liable to a change. The reason why the yellow wax is directed in preference to white is not plain. That a substance containing an oxidisable colouring matter should be used to preserve a reducible oxide does not appear intelligible. Neither of these formulæ is perfect. The wax also has a tendency to separate by rising to the surface, the oxide to separate by falling to the bottom, and it requires the entire and constant attention of the manipulator. Although the mortar will overcome the precipitation of the oxide, it does not always that of the

\*Read at an evening meeting of the Pharmaceutical Society of Ireland, and published in abstract in the *Chemist and Druggist*.

wax, which if it has been cooled too quickly, remains in the white granules through the ointment. I speak as one who must have his eyes and hands to more than one thing at a time, and who is not willing to remit all the minutiae of the chemist to others to do for him.

The author then goes on to recommend the use of vaseline as a base for the ointment. He says, in another place, vaseline has never failed in giving a satisfactory result.

It is a new form of paraffin, a perfect hydrocarbon, inodorous, tasteless, and nearly transparent, and not only has itself no affinity for oxygen, but has an exceptionally strong power of protecting any substance from the effects of atmospheric oxygen, and also in preventing the deoxidation of the peroxide. The vaseline is rather soft, and I therefore tried whether it could not be safely hardened. With this view I melted a portion with a third of its weight of pure paraffin, and allowed it to cool without stirring. I found it would cool without much separation, and immediately blended to a perfectly homogenous mass under the spatula.

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### MINERAL WATER SYRUPS.

With the assistance of the following recipes—for which we are indebted to the *Druggists' Circular* for May—and also those which have from time to time been published in this journal, we think that our readers need not be at a loss in preparing their syrups for the coming season:—

#### SIMPLE SYRUP.

White sugar . . . . . 14 pounds. | Water . . . . . 1 gallon.  
Dissolve with gentle heat in a close vessel, and strain.

#### LEMON SYRUP.

Grate off the yellow rind of lemons, and beat it up with a sufficient quantity of granulated sugar. Express the lemon juice, add to each pint of juice 1 pint of water, and 3½ pounds of granulated sugar, including that rubbed up with the rind; warm until the sugar is dissolved and strain.

#### ANOTHER FORMULA.

Simple syrup . . . . . 1 gallon. | Citric acid . . . . . 10 drachms.  
Oil of lemon . . . . . 25 drops. |  
Rub the oil of lemon with the acid, add a small portion of syrup, and mix.

#### ANOTHER FORMULA.

Dissolve 6 drachms of tartaric acid and 1 ounce of gum arabic, in pieces, in one gallon of simple syrup; then flavor with 1½ fluid

drachms of best oil of lemon. Or, flavor with the saturated tincture of the peel in cologne spirits.

MULBERRY SYRUP.

Mulberries, not entirely ripe, 6 lbs. | Sugar, coarsely powdered, 6 lbs.  
Place in a kettle over the fire, and boil, constantly stirring, until the boiling syrup marks 30° Baumé. Throw on a strainer and allow the marc to drain thoroughly.

VANILLA SYRUP.

Fluid ext. of vanilla . . . . . 1 ounce. | Simple syrup . . . . . 1 gallon.  
Citric acid . . . . .  $\frac{1}{2}$  " |  
Rub the acid with some of the syrup, add the extract of vanilla, and mix.

VANILLA CREAM SYRUP.

Fluid ext. of vanilla . . . . . 1 ounce. | Cream (or condensed milk. 1 pint.  
Simple syrup . . . . . 3 pints. |  
May be colored with carmine.

CREAM SYRUP.

Fresh cream . . . . .  $\frac{1}{2}$  pint. | Powdered sugar . . . . . 1 pound.  
Fresh milk . . . . .  $\frac{1}{2}$  " |  
Mix by shaking, and keep in a cool place. The addition of a few grains of bicarbonate of soda will for some time retard souring.

ANOTHER FORMULA.

Oil of sweet almond's . . . 2 ounces. | Water . . . . . 4 ounces.  
Powdered gum arabic. 2 " |  
Make an emulsion, and add simple syrup enough to complete two pints.

GINGER SYRUP.

Tincture of ginger . . . 2 fl. ounces. | Simple syrup . . . . . 4 pints.

ORANGE SYRUP.

Oil of orange . . . . . 30 drops. | Simple syrup . . . . . 1 gallon.  
Tartaric acid . . . . . 4 drachms. |  
Rub the oil with the acid and mix.

PINEAPPLE SYRUP.

Use pineapples of good flavor, cut or chop them up, and set aside for twenty-four to thirty-six hours, press and proceed as directed for strawberry syrup.

ANOTHER FORMULA.

Oil of pineapple . . . . . 1 drachm. | Simple syrup . . . . . 6 pints.  
Tartaric Acid . . . . . 1 " |

NECTAR SYRUP.

Vanilla syrup . . . . . 5 pints | Strawberry, raspberry,  
Pineapple syrup . . . . . 1 pint. | or lemon syrup . . . . . 2 pints.

## SHERBET SYRUP.

|                       |          |                   |         |
|-----------------------|----------|-------------------|---------|
| Vanilla syrup.....    | 3 pints. | Lemon syrup ..... | 1 pint. |
| Pineapple syrup ..... | 1 pint.  |                   |         |

## GRAPE SYRUP.

|                        |                      |                        |           |
|------------------------|----------------------|------------------------|-----------|
| Brandy .....           | $\frac{1}{2}$ pint.  | Tinct. of red saunders | 2 ounces. |
| Spirits of lemon ..... | $\frac{1}{4}$ ounce. | Simple syrup .....     | 1 gallon. |

## BANANA SYRUP.

|                      |            |                     |          |
|----------------------|------------|---------------------|----------|
| Oil of banana ... .. | 2 drachms. | Simple syrup ... .. | 6 pints. |
| Tartaric acid .....  | 1 drachm.  |                     |          |

## COFFEE SYRUP.

Coffee, roasted.....  $\frac{1}{2}$  pound. | Boiling water .....

Enough is filtered to make one-half gallon of the infusion, to which add

Granulated sugar..... 7 pounds.

## ANOTHER FORMULA.

|  |              |                       |               |
|--|--------------|-----------------------|---------------|
| Ground Java coffee ...   | 2 ounces     | Simple Syrup.....     | 2 fl.ounces   |
| Mix and pack in a percolater, and add boiling hot a mixture of |              | Distilled water ..... | 8 fl. ounces. |
| Loaf sugar .....   | 12 oz. avdp. |                       |               |

To percolate 1 pint of syrup.

## WILD CHERRY SYRUP.

Wild cherry bark (in coarse powder .....

Moisten the bark with water and let it stand for twenty-four hours in a close vessel. Then pack it firmly in a percolator, and pour water upon it until one pint of water is obtained. To this add

Sugar .....28 ounces.

## WINTERGREEN SYRUP.

|                                |                        |       |
|--------------------------------|------------------------|-------|
| Oil of Wintergreen...25 drops. | Burnt sugar (to color) | q. s. |
| Simple syrup .....             | 5 pints.               |       |

## SARSAPARILLA SYRUP.

|                                |                          |                        |                      |
|--------------------------------|--------------------------|------------------------|----------------------|
| Oil of Wintergreen...10 drops. | Fl. ext. of sarsaparilla | 2 ounces.              |                      |
| Oil of anise .....             | 10 "                     | Simple syrup .....     | 5 pints.             |
| Oil of sassafras .....         | 10 "                     | Powd. ext. of licorice | $\frac{1}{2}$ ounce. |

## ANOTHER FORMULA. (Parrish's.)

|                               |               |                        |                   |
|-------------------------------|---------------|------------------------|-------------------|
| Simple syrup .....            | 4 pints.      | Caramel .....          | 1 $\frac{1}{2}$ " |
| Comp. syrup sarsaparilla..... | 4 fl. ounces. | Oil of wintergreen ... | 6 drops.          |
|                               |               | Oil of sassafras ..... | 6 drops.          |

## MAPLE SYRUP.

|                  |           |             |          |
|------------------|-----------|-------------|----------|
| Maple sugar..... | 4 pounds. | Water ..... | 2 pints. |
|------------------|-----------|-------------|----------|

## CHOCOLATE SYRUP.

|                      |           |                  |           |
|----------------------|-----------|------------------|-----------|
| Best chocolate ..... | 8 ounces. | White sugar..... | 4 pounds. |
| Water .....          | 2 pints.  |                  |           |

Mix the chocolate in water, and stir thoroughly over a slow fire. Strain, and add the sugar.

ANOTHER FORMULA.

Bark of roasted cacao bean 2 ounces.

Reduce to a moderately fine powder, mix with

Simple syrup.....2 ounces.

Pack in a percolator and exhaust with the following menstruum at a boiling temperature :

|   |            |  |             |           |
|---|------------|--|-------------|-----------|
| Sugar .....   | 12 ounces. |  | Water ..... | 8 ounces. |
| So as to obtain one pint of syrup. To the percolate add, when cold, |            |  |             |           |
| Extract of vanilla... 2 fl. drachms.                                |            |  |             |           |

COFFEE CREAM SYRUP.

|                    |          |  |             |         |
|--------------------|----------|--|-------------|---------|
| Coffee syrup ..... | 2 pints. |  | Cream ..... | 1 pint. |
|--------------------|----------|--|-------------|---------|

AMBROSIA SYRUP.

|                       |          |  |                 |           |
|-----------------------|----------|--|-----------------|-----------|
| Raspberry syrup ..... | 2 pints. |  | Hock wine ..... | 4 ounces. |
| Vanilla syrup .....   | 2 pints. |  |                 |           |

HOCK AND CLARET SYRUP.

|                        |         |  |                   |          |
|------------------------|---------|--|-------------------|----------|
| Hock or claret wine... | 1 pint. |  | Simple syrup..... | 2 pints. |
|------------------------|---------|--|-------------------|----------|

SOLFERINO SYRUP.

|              |         |  |                   |          |
|--------------|---------|--|-------------------|----------|
| Brandy ..... | 1 pint. |  | Simple syrup..... | 2 pints. |
|--------------|---------|--|-------------------|----------|

CAPSICUM SYRUP.

Tincture of capsicum 1 ounce. | Simple syrup ..... 2 pints.  
Heat the syrup, add the tincture, and when the alcohol has evaporated, mix immediately.

CHERRY SYRUP.

Take sour cherries, a convenient quantity, bruise them in a porcelain, stone or wood mortar, to break the stones or pits of the fruit ; express the juice, set it aside for three days to undergo fermentation, and proceed according to the directions given for strawberry syrup.

STRAWBERRY SYRUP.

Use strawberries of a good flavor ; do not forget that if the berries possess no flavor, you cannot expect to obtain a syrup of fine flavor. Avoid, also, rotten berries, because, unless you do, you may be sure to find as flavor the smell of the rotten berries in your syrup. Mash the fruit in a barrel or other suitable vessel by means of a pounder, and leave the pulp for twelve or twenty-four hours at a temperature between 70° and 80°, stir occasionally, press, set the juice aside for one night, add for every pound avoirdupois of juice one ounce avoirdupois of Colonge spirit or deodorized alcohol, mix, set aside for another night, and filter through paper.

For one pound of the filtered juice take one and a half-pound of A sugar, and heat to the boiling point, taking care to remove from the fire or turn off the steam as soon as the mixture begins to boil ; remove the scum and bottle in perfectly clean bottles, rinsed with a little Cologne spirit.



## Mineral Water Syrups.

This syrup, as well as those made by the same process, is strong enough to be mixed with two or three times its weight of simple syrup for the soda fountain.

### RASPBERRY SYRUP.

Proceed as directed for strawberry syrup.

### RASPBERRY SYRUP (*artificial*).

|   |  |  |
|---|--|--|
| Orris root (best) ..... 1 ounce.<br>Cochineal ..... 2 drachms |  | Tartaric acid..... 2 drachms<br>Water ..... 2 pints. |
|---|--|--|

Powder the orris root coarsely together with the cochineal, infuse in the water with the acid for twenty-four hours; strain and add four pounds of sugar, raise to the boiling point and again strain.

### PEACH SYRUP.

Proceed in the same manner as for strawberry syrup.

### BLACKBERRY SYRUP.

Prepare like either strawberry or mulberry syrup.

### ORGEAT SYRUP.

|  |  |  |
|--|--|--|
| Sweet almonds ..... 8 ounces.<br>Bitter almonds..... 2½ "<br>Sugar ..... 3 pounds. |  | Water .....26 ounces.<br>Orange flower water 4 " |
|--|--|--|

Blanch the almonds, rub them in a mortar to a fine paste with twelve ounces of the sugar and two ounce of the water. Mix the paste with the remainder of the water, strain with strong expression, add the remainder of the sugar, and dissolve it with the aid of a gentle heat. Lastly, add the orange flower water and strain the syrup again.

### CATAWBA SYRUP.

|                           |  |                            |
|---------------------------|--|----------------------------|
| Simple syrup..... 1 pint. |  | Catawba wine ..... 1 pint. |
|---------------------------|--|----------------------------|

### MILK PUNCH SYRUP.

|   |  |   |
|---|--|---|
| Simple syrup..... 1 pint.<br>Brandy ..... 8 ounces. |  | Jamaica rum ..... 8 ounces.<br>Cream syrup..... 1 pint. |
|---|--|---|

### CHAMPAGNE SYRUP.

|   |  |   |
|---|--|---|
| Rhine wine ..... 2 pints.<br>Brandy ..... 2 ounces. |  | Sherry ..... 1 ounce.<br>Granulated sugar ... 3 pounds. |
|---|--|---|

### SHERRY COBBLER SYRUP.

|   |  |   |
|---|--|---|
| Sherry wine..... 1 pint.<br>Simple syrup ..... 1 "<br>Macerate twelve hours and strain. |  | Lemon cut in thin<br>slices..... No. 1. |
|---|--|---|

### EXCELSIOR SYRUP.

|  |  |   |
|--|--|---|
| Syrup of wild cherry<br>bark ..... 4 ounces. |  | Port wine ..... 4 ounces.<br>Simple syrup ..... 1 pint. |
|--|--|---|

### FANCY SYRUP.

|  |  |                                 |
|--|--|---------------------------------|
| Vanilla syrup ..... 2 pints<br>Pineapple syrup ..... 8 ounces. |  | Raspberry syrup... .. 8 ounces. |
|--|--|---------------------------------|

## CURRANT SYRUP.

Proceed as for strawberry syrup.

## FRAMBOISE CURRANT SYRUP.

Raspberry syrup ..... 1 pint. | Currant syrup ..... 4 pints.

## CAPILLAIRE (MAIDENHAIR) SYRUP.

Maidenhair ..... 8 ounces. | Orange flower water 4 ounces.  
Boiling water ..... 5 pints. | Sugar..... sufficient.

Infuse the maidenhair in the boiling water; when nearly cold, press out and filter the liquid, add to it the orange flower water, and dissolve in it sugar, in the proportion of seven ounces to each four fluid ounces of liquid.

## ORANGE FLOWER SYRUP.

Orange flower water 1 pint. | Granulated sugar ...28 ounces.  
Dissolve without heat.

## CINNAMON SYRUP.

Oil of cinnamon .....30 minims. | Water ..... 2 pints.  
Carb. of magnesia ...60 grains. | Sugar, granulated ...56 ounces.

Rub the oil first with the carbonate of magnesia, then with the water gradually added, and filter through paper. In the filtrate dissolve the sugar without heat.

## TO MAKE THE SYRUPS FROTHY.

To each gallon of syrup, add from two to four ounces of gum arabic dissolved in its own weight of water.

## ELIXIR OF MONOBROMATED CAMPHOR.\*

BY J. MUNDAY.

As monobromated camphor is a chemical which is likely to become a favourite remedy, especially if it could be given in a liquid form, I have made other experiments since my last note.

I find that glycerine has not sufficient sweetening properties in itself to overcome the nauseous taste, I now therefore introduce the following formula, which is more agreeable and seems to answer well.

Monobromated Camphor ..... gr. xx.  
Sp. Cinnamon (1 in 50)..... ʒxv.  
Red Elixir (U. S)\*..... ʒxx.  
Syrup q. s. to make ʒiv.

\*Pharm. Jour. & Trans.

Mix the sp. cinnamon, red elixir, and syrup together, and add the monobromated camphor, and dissolve in a flask in a water bath, taking care to use no more heat than is absolutely necessary, or else the monobromated camphor will recrystallize.

The product contains two grains in each half-ounce, and I think will be found a convenient form for administering this drug where it is preferred in a liquid form.

I also give the formula for a compound elixir of the above, which is being prescribed a good deal by the profession here, under the name of

ELIXIR CAMPH. MONOBROM. CO.

|                            |         |
|----------------------------|---------|
| Croton Chloral .....       | gr. iij |
| Tr. Gelsem. Semper.....    | m. x    |
| Monobromated Camphor.....  | gr. ij  |
| Sp. Cinnam (1 in 50) ..... | ʒiiss   |
| Red Elixir .....           | ʒiiss   |
| Syrup Ad .....             | ʒiiss   |

Dissolve the croton chloral in the sp. cinnamon, mix with the red elixir, gelsemium and syrup, and dissolve the monobromated camphor as directed for the simple elixir.

14, *Rue de la Paix, Paris.*

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## INDIAN HEMP AND ITS ACTIVE PRINCIPLE.\*

The home of hemp is Persia and the high plateau of Northern India, whence it has gradually spread to other countries, so as to be domesticated at present everywhere. Its narcotic properties, however, are only developed fully in its native home in Asia, and in certain parts of Africa, where it is used as a narcotic stimulant and intoxicant by nearly 300,000,000 of inhabitants.

A preparation, called Madjoun is sold in Algiers, which is powdered *Cannabis sativa* boiled with honey for a longer or shorter time, according to the desired consistence. Usually it is kept mixed with a certain portion of *Ras-el-hanout*, a spice compound, containing nutmeg, cinnamon, cloves, various peppers, ginger, galangal and Guinea grains. This mixture is also called *Kif*. The dose varies from the size of a hazel to that of a walnut, according to the age, sex, and tolerance of the person using it. Most eaters of hashish also smoke the dried leaves of the plant, either alone or mixed with the so-called "tobacco of the desert," which, according to Dr. Guyon, is a species of hyoscyamus.

Dr. Presbraschensky, who accompanied the expedition to Chiwa in 1873, furnishes the following information on the hashish of Cen-

\*From Pharm. Zeit. f. Russel., New Remedies.

tral Asia. "This article occurs in the bazaars of large cities of Middle Asia, in the form of plates, or cakes of various shapes, mostly five to fifteen inches long, five to ten inches broad, and one to three inches thick; externally they are dark brown, internally greenish or brownish, of firm consistence, very tough, and almost incapable of being broken, but easily cut into fine shavings. They are prepared as follows: The resinous juice from the fresh unripe flower-tops is collected during Spring, mixed with sand and water to a doughy mass, which is spread upon a surface of clay and dried until it can be cut with a knife into plates. In a few days more the excess of water has evaporated, and the substance is ready for use. It is called hashish by the Russians, Nascha by the natives, Bang and Gunjah by the Persians, and is exported from Bochara to Chiwa, Tashkend, Lokant (Chokand) and other places.

The active principle of hashish has been supposed to be resin. Dr. Preobraschensky has, however, lately subjected hashish to a chemical analysis, and has found an alkaloidal body—not only in the commercial substance, but also in the flower-tops of hemp itself, and the pure extract prepared from it—which was recognized as *nicotine*. 150 gm. of the herb, distilled with water, furnished 25.4 mgm. of nicotine; 50 gm. of the herb, distilled with caustic lime and potassa, yielded 335.28 mgm.; 5 gm. of the extract of *Canabis Indica*, dissolved in alcohol and distilled, yielded a distillate containing 91.14 mgm. of nicotine, and 2 gm. of the extract, distilled with caustic lime and potassa, furnished 63.5 mgm. of the same alkaloid.

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## TINCTURE AND WINE OF QUININE.\*

Although the tincture of orange peel (in its various forms) is an agreeable and at the present time popular vehicle for the administration of quinine, it must be admitted that so far as the above preparations are concerned the officinal formulæ for both are somewhat unsatisfactory. If great care be not exercised in preparing them, and even where this care has been exercised, a considerable sediment will ultimately be thrown down which will be found on examination to contain more or less of quinine, and which of course necessarily impoverishes the preparation of its most active ingredient. The nature and cause of this deposit, so far as the tincture of quinine is concerned, have been very fully investigated, and the subject is now probably pretty nearly exhausted, but we are not aware that much attention has been given to the deposit formed in the far more popular if less important wine of quinine. Everyone who has prepared the wine according to the Pharmacopœia formula

\*Chemist and Druggist.

must have noticed immediately after effecting solution of the quinine the formation of a brown flocculent precipitate, varying probably with different orange wines somewhat in quantity, but always considerable and always of the same appearance. The precipitate is annoying, especially to makers of large quantities of the wine, as it both necessitates filtration and renders the process tedious. Moreover, a second deposit after a time almost invariably again forms, which, although smaller in quantity, is even more troublesome if it appears, as very probably it may, after the preparation has been bottled and stored. To determine the nature, cause, and extent of this precipitate, a series of investigations were undertaken, the result of which may be briefly summarised as follows, viz:—1st. The precipitate was found to be principally tannate of quinine, along with extractive and colouring matters. 2nd. The quinine recovered from the deposit varied in quantity, but was frequently found to form a large percentage of the quinine originally added to the wine. And 3rd. The deposit continued to form so long as any tannin was found to exist in the wine, after which the addition to any extent of more quinine and citric acid gave no further precipitate. The raisins from which the wine is generally fermented were at first suspected as being the primary cause of the presence of the tannin, but from further inquiries it was ascertained that tannin is very generally employed to clarify the wine in certain stages of the process of fermentation, and that the excess of tannin thus added is afterwards removed from the wine by the addition of isinglass. This process, even where carefully conducted, seems at the best to partake a good deal of the rule of thumb procedure, the principal care apparently being not to add too much of the isinglass, excess of which in the wine is in some respects even more objectionable than the tannin. Of many plans which have been tried to rid the wine of the superfluous tannin, none have been altogether successful which have not in some way or another been objectionable, so that we have come to look upon quinine wine with considerable suspicion. Even when honestly prepared, which we are sorry to say it very seldom is, it is apparent that the quinine which it contains must ultimately be an unknown factor, whilst it has this further serious objection, that in too many instances it contains also an unknown quantity of alcohol. The Pharmacopœia states that it contains about 12 per cent, but this will be found insufficient to keep it from decomposition, and as a matter of fact most commercial orange wines contains double this percentage of alcohol, and even in some instances we are aware they have contained more, thus exceeding in strength even a fortified sherry.

## STANDARD FORMULÆ FOR CERTAIN NEW PREPARATIONS.\*

The Societe de Pharmacie of Paris some time ago appointed a commission, consisting of Messrs. Schaeufele (president), Baudrimont, Gobley, Marais, and Petit (reporter), to prepare standard formulæ for certain new preparations, from whose report we select the following:

1. *Salicylic Acid.* A concentrated solution of commercial caustic soda is exactly neutralized with crystalized phenol, the liquid is evaporated in an iron kettle, and constantly stirred, until a pulverulent mass remains. This is sodium phenate, which is very hygroscopic, and must be kept, unless used immediately, in hermetically sealed vessels. This salt is introduced into a tubulated glass retort placed into an oil-bath, and as soon as the temperature has reached 100° C., a current of dry carbonic acid gas is passed through the contents of the retort. The temperature is gradually allowed during 3 or 4 hours to raise to 180° C. It requires some time before phenol begins to distil over, which is obtained in considerable quantity. Finally, the heat is raised to 220° C., and lastly to 250° C. The operation is finished as soon as the current of carbonic acid gas, at this temperature, carries over no more traces of phenol. The retort then contains only brown basic sodium salicylate. This is dissolved in water and decomposed by hydrochloric acid. The crude salicylic acid is transferred to a filter, drained and washed, and once or twice recrystallized from boiling water. It may be obtained very pure by sublimation in brilliant needles.†

2. *Thymic Acid.* Add an aqueous solution of potassa or soda (1 : 10) to oil of thyme, and agitate repeatedly to facilitate combination. Thymic acid or thymol enters into solution, while thymene, the accompanying hydrocarbon, remains unacted upon. The solution is filtered and treated with an acid, hydrochloric acid for instance, which liberates the thymic acid. The crude acid is washed with water, and, after drying, distilled. Thymic acid thus prepared is liquid, but it may be obtained crystalline by exposing oil of thyme for some time to the cold. It is but little soluble in water, but very soluble in alcohol. It is strongly caustic.

3. *Crystallized Aconitine.* Exhaust the powdered root of *Aconitum ferox* with concentrated alcohol, to which  $\frac{1}{100}$  part of tartaric acid has been added. The solution is distilled at a moderate heat, out of contact with air, to recover the alcohol. The residue is taken up by water, which leaves all fatty or resinous substances be-

\*From Repert. de Pharm., in New Remedies.

†Complaints have been made of the sublimed acid being not sufficiently pure. Dialysed salicylic acid has been placed upon the market by E. Schering, and is no doubt the purest form in which it can be used. See New Rem., v., 329.

hind. The watery solution, which contains the aconitine as tartrate, is shaken with ether, which removes coloring matters, then mixed with alkaline bicarbonate, until effervescence ceases, whereby the alkaloid is set free. The solution is again shaken with ether, which dissolves out the alkaloid, and leaves the latter behind on evaporation. To obtain it in crystals, some petroleum-ether should be added to the ethereal solution. It forms colorless or hexagonal rhombic tables, soluble in alcohol, benzine, and chloroform; insoluble in petroleum-oils and glycerine.

4. *Ammonium Bromide*. Bromine is added very slowly to water of ammonia, under constant stirring, and until the liquid shows a faint excess of bromine. A few drops of ammonia are then added to overcome this excess, and the solution is evaporated to the point of crystallization. The salt appears in long colorless prisms, volatile without decomposition, and very soluble in water. Its watery solution must not become colored on addition of a few drops of concentrated hydrochloric acid, and on adding to it a small quantity of starch-paste and slightly yellowish nitric acid, no blue or violet color must make its appearance.

5. *Apomorphia*. Introduce 1 part of pure morphia and 20 parts of pure hydrochloric acid into a strong glass tube, closed at one end, and capable of holding at least 15 times the quantity. Close the open end of the tube by fusion, and insert into a cast-iron tube closed (at one end) with a screw plug. Place the whole apparatus into an oil-bath, and heat for 3 hours to between 140 and 150° C. After cooling, the tube may be opened without risk for there is no pressure of gas inside. The solution is poured out, diluted with water, neutralized with sodium bicarbonate, and, finally, an excess of this salt added, which throws down apomorphia and any remaining unaltered morphia. The supernatant liquid having been decanted, the precipitate is taken up or exhausted by ether or chloroform, which only dissolve the apomorphia. To the ethereal or chloroformic solution enough hydrochloric acid is added to neutralize the base, which separates now from the solution spontaneously and settles upon the walls of the vessel. These crystals are rapidly washed with cold water, and purified by crystallization from boiling water. The pure alkaloid may be obtained by precipitating the solution of the muriate with sodium bicarbonate; a white precipitate is obtained, which rapidly turns green in the air. It must be quickly washed and dried. Its solution soon turns green and spoils, but sugar or exclusion of air prevent the change.

6. *Theine or Caffeine*. Exhaust good green or black tea with boiling water to obtain a concentrated solution, which is precipitated by a slight excess of basic lead acetate. Add to the magma a small quantity of ammonia, filter and separate the excess of lead in the liquid by a current of sulphydric acid gas. Filter again, and evaporate slowly. On cooling an abundant crop of nearly pure crystals of

caffeine is deposited. The mother-liquor yields more crystals on further evaporation.

7. *Bibasic Calcium Phosphate.* Dissolve 608 parts of crystallized calcium chloride in 1,000 parts of distilled water, and add to it gradually a solution of 1,000 parts of crystallized sodium phosphate in 10,000 parts of water. Let the precipitate subside, wash five or six times by decantation, with about 10,000 parts of water each time. Transfer the magma to a muslin-strainer, and allow it to drain. As soon as its consistence permits, cut it into pieces, which should be exposed to the air upon blotting-paper. It dries rapidly by spontaneous evaporation, and forms a very white and light salt.

8. *Syrup of Calcium Chlorhydrophosphate.*

|  |             |
|--|-------------|
| Calcium phosphate, bibasic.....                          | 12.5 parts. |
| Chlorhydric acid, pure (only just enough, or about)..... | 8 “         |
| Distilled water .....                                    | 340 “       |
| White sugar, in coarse powder.....                       | 630 “       |
| Essence of lemons.....                                   | 10 “        |

Mix the calcium phosphate intimately with the water, add the chlorhydric acid in just sufficient quantity to dissolve the lime-salt, then add the sugar, and dissolve cold or with a *very* gentle heat. Filter and add the essence of lemons to the cold syrup.

9. *Syrup of Calcium Lactophosphate.*

|   |             |
|---|-------------|
| Calcium phosphate, bibasic .....                            | 12.5 parts. |
| Lactic acid, concentrated (only just enough, or about)..... | 14 “        |
| Distilled water .....                                       | 340 “       |
| White sugar, in coarse powder.....                          | 630 “       |
| Essence of lemons.....                                      | 10 “        |

Mix the calcium phosphate intimately with the water, add the lactic acid in just sufficient quantity to dissolve the lime-salt, then add the sugar, and dissolve cold or with a *very* gentle heat.

10. *Syrup of Acid Calcium Phosphate.* This is prepared exactly like the preceding two syrups, substituting a sufficient quantity of medicinal phosphoric acid, spec. grav. 1.45, or about 18 grammes.

11. *Glycerole of Calcium Saccharate.*

|                                   |          |
|-----------------------------------|----------|
| Burnt lime, clean and white ..... | 80 gm.   |
| Sugar, powdered.....              | 160 “    |
| Glycerine.....                    | 160 “    |
| Water, q. s. to make.....         | 1 litre. |

To the lime and sugar add gradually and in small portions 700 grammes of water. After 24 hours of contact, filter, add the glycer-



ine and sufficient water to make 1 litre. This glycerole is used for preparing the following:

12. *Liniment of Calcium Saccharate.*

Olive oil..... 200 parts.

Glycerole of calcium saccharate..... 100 “

Mix.

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## THE QUALITATIVE EXAMINATION OF CINCHONA AND OPIUM.\*

In the “*Guide pratique pour servir à l'examen des caractères physiques, organoleptiques, et chimiques des préparations pharmaceutiques,*” published by Messrs. Lepage and Patrouillard, the authors give the following processes:

*Cinchona.*—Take a fragment from several barks in the same bundle and reduce to a fine powder; suspend 1 gram of the powder in 10 grams of distilled water containing 1 gram of dilute sulphuric acid, and leave them in contact two or three hours, agitating frequently. At the end of this time add 70 grams of distilled water and leave in contact several hours more, still taking care to agitate the mixture frequently. Then allow it to deposit, and afterwards filter. If the cinchona be of good quality, solution of the double iodide of cadmium and potassium, prepared by dissolving 2.80 grams of iodide of cadmium and 2.50 grams of iodide of potassium in 50 grams of distilled water, when poured in slight excess into this liquid, should produce at once an abundant turbidity, resulting after some hours in a voluminous precipitate. If the bark contain no more than 10 or 12 parts of alkaloid per 1000 the reagent does not give rise to any turbidity, or at most to a slight opacity. The yellow, red and grey barks may be examined in this manner.

*Opium.*—Reduce 0.10 gram to powder in a glass mortar and suspend the powder in 25 grams of distilled water; leave the mixture in contact during half an hour agitating occasionally, and then filter. Take two-thirds of this liquor, which should possess a markedly bitter taste, and pour into it some drops of solution of iodide of cadmium and potassium. If the opium be of good quality an abundant turbidity is produced to which rapidly succeeds a flocculent precipitate; whilst if it contain not more than 4 or 5 per cent. of alkaloid or less, at the most a slight turbidity will be produced. The one-third part of the solution that is reserved, when tested with very dilute perchloride of iron ought to acquire a decided red colour, which is the reaction characteristic of meconic acid.

\*From the *Pharmaceutical Jour. & Trans.*

## II.—EXPLOSIONS AND METHOD OF TESTING PETROLEUM OIL.\*

BY R. S. MERRILL.

*Condensed Report by the Committee on Papers and Publications.*

In the early days of manufacturing petroleum little attention was paid to its fire-test, the aim of the manufacturer being to produce a large quantity of distillate that would burn freely, and the fractioning was so manipulated that the naphthas were allowed to mingle largely with the heavier and more fixed oils, thus rendering the whole product of very low fire-test.

The occurrence of frequent explosions and accidents from the use of such oils caused some of the manufacturers to change their system and separate the naphtha entirely from the oil, thus raising its fire-test. One hundred and ten ( $110^{\circ}$ ) degrees F. was selected, by general consent, as a standard of safety for the following reasons: The cost, and the fact that in the lamps and burners in common use a high-test oil would not burn freely. The aim of nearly all inventions in both lamps and burners, for the last fourteen years, has been to produce appliances for burning the thin mobile oils of  $110^{\circ}$  fire-test, and, with but few exceptions, no efforts have been made to burn the safer oils of higher test. Many of the explosions which happen with an oil of  $110^{\circ}$  F. are attributed to accident or ignorance, rather than to the fact that oil of this standard is always dangerous to handle. A lamp holding such oil is always in an explosive condition, if the temperature of the oil within has risen to  $75^{\circ}$  F. (always providing that the lamp be not entirely full, as some space for holding the mixture of vapor and air is necessary to an explosion.

My present object is to show by experiment the erroneous character of the general belief, that an oil is safe from explosion if not heated above its flashing point; this flash point is determined in the ordinary manner.

By the present method of testing, the flashing point is from  $10^{\circ}$  to  $15^{\circ}$  below the igniting point; but I have discovered, by the aid of an apparatus hereinafter described, that refined petroleum gives off explosive vapor from  $10^{\circ}$  to  $15^{\circ}$  below the flash point, and from  $25^{\circ}$  to  $30^{\circ}$  below the burning point. These experiments will also show that there is a vapor eliminated from oil, when tested in an open vessel in the ordinary manner, which is so thin and light, that it is blown away from the surface of the oil and lost. These vapors, however, are slowly collected in a lamp, and only await ignition to produce an explosion.

\*Read before the American Chemical Society, and published in the *American Chemist*.

The accidents which are of two kinds: either the direct result of an explosion of the vapors, or caused by breakage of the lamp, spilling, and consequent ignition of the oil.

It is not the explosion, but the invariably resulting ignition, in the case of all low-testing oils, which causes the damage. The manner in which the explosions are caused is not generally evident, since they occur suddenly and without due warning. They usually occur after the lamps have been burning for some time in a room the temperature of which ranges from 70° to 80°. If the temperature of the room, however, is higher (100° or more), an explosion becomes impossible, since the vapors are given off in such quantities that the air becomes laden with an excess. This would not prove that such an oil was safe, as the spilling of the liquid, under such circumstances, would speedily show. While with whale or sperm oil a large amount of heat is necessary to generate, by chemical decomposition, any gases which will burn with a flame, in petroleum we find these gases or vapors ready formed, and prepared to ignite at low temperature, and burn so fiercely that nothing but absolute deprivation of oxygen will extinguish them.

The inflammability of naphtha petroleum was here shown by setting fire to woollen dolls saturated with oils of various burning test—the one moistened with 150° fire-test oil requiring less than half a minute to ignite. In the case of the oil, explosive vapors are also formed at a comparatively high temperature.

This temperature is, however, some ten or fifteen degrees below its flashing point. To illustrate this was employed the apparatus invented by Mr. S. S. Mann, consisting of a water-bath, under which is set a common brass lamp similar to those used in factories, the burner of which has been replaced by a brass tube screwed into the collar, and closed by a rubber ball. Through the side of the lamp, near the top, a half-inch tube, with a valve opening inwardly, and closed by the slightest pressure from within, is inserted. A thermometer is set in another brass tube. In this lamp is placed the oil to be tested. The temperature of the oil is slowly raised by heating the surrounding water, and, during this process, the nature of the vapors frequently tested by applying a flame to the opening in the valved tube. The exploding point of the vapors will then be shown by the rapid expulsion of the rubber ball from the neck tube of the lamp. By means of this apparatus I am thus enabled to show that 150° oil will explode at 115°, and 110° oil at 75°.

In conclusion, I should consider the flash-test to be of far more importance than the fire-test, and that it should be fixed at not less than 140° F. Such oil, which, when lighted, will burn freely, is not easily ignited, and will certainly never explode at the average temperature of dwelling-houses.

## ACTION OF METALS ON WINE.\*

Some suggestive experiments were lately made at the Agricultural School of Montpellier to determine the chemical and organoleptic changes produced in wine by contact with various common metals. Plates, of determinate size and shape, of wrought and cast iron, sheet iron tinned, zinc, tin, copper, brass, gun-metal, and lead, were immersed, separately, in about half a pint of good, sound, two-year-old Bordeaux wine, for the space of 17 days. The weights of the plates before and after immersion, and the composition and colour of the wine and of the filtered precipitate, were duly noted in each case.

It was found that cast iron was most easily soluble. A cast iron plate lost 0.8015 grammes per decimetre of immersed surface in 17 days. Taking this solubility as 100.00, the other metals stood as follows:—Wrought iron, 97.17; zinc, 92.07; lead, 6.26; tinned sheet iron, 2.90; tin, 1.59; gun-metal, 0.72; copper, 0.46; brass, 0.28.

Contact with cast and wrought iron produced a proportionately larger precipitate in the wine, which was rendered turbid by the formation of tannate of iron, and lost colour. Zinc and gun-metal caused a large precipitate. With zinc the wine became turbid, but showed no traces of *mycoderma vini*; with gun-metal it remained clear, but separated an enormous proportion of *mycoderma*; with tinned iron and tin an adhesive crust was formed, and with the latter a very large amount of *mycoderma* separated; with brass the precipitate was scarcely perceptible, the wine remaining limpid, with no traces of ferment; with lead the wine remained limpid, and *mycoderma* were in insignificant quantity.

The conclusions arrived at were that contact with all the commoner metals is injurious to wine, because (1) some, as iron, zinc and tin, occasion a large precipitate of the colouring principle; (2) others, like tin and gun-metal, produce a very large separation of fermentative matter; others, like iron and zinc, are speedily corroded; others, again, as zinc and lead, form deleterious soluble salts with the acetic acid in the wine.

Where the contact is likely to be prolonged, as with the fastenings, linings, &c., of vessels in which wine is kept, taps, &c., if the use of metal is unavoidable, tinned iron is least objectionable, as it corrodes but little, and does not effect the colour; copper and brass may also be used, as their solubility is so slight that any deleterious salts formed by them in such cases will be insignificant in quantity. Where the contact is with large surfaces, and of shorter duration, as in some of the processes of wine-making, the formation of deleterious soluble salts is most to be feared. Here sheet iron, copper, brass, gun-metal, and tin are best, as being least readily soluble.

\*Gaceta Industrial (Madrid), November 10, 1876, in Chemist and Druggist.

## LABORATORY NOTES \*

BY T. A. EDISON.

1. Hard rubber or vulcanite, placed for several weeks in nitrobenzol, becomes soft and pliable like leather, and easily broken.

2. The vapor of chloral hydrate is a solvent of cellulose. I have found the corks of bottles containing the crystals eaten away to the depth of a quarter of an inch, the cork being resolved into a black semi-liquid. Certain kinds of tissue paper are partially dissolved in time, if thrown in a bottle containing the crystals.

3. A very difficult substance to dissolve is gum copal. I have found that aniline oil dissolves it with great facility.

4. Hyposulphite of soda is apparently soluble to a considerable extent in spirits of turpentine. Large crystals of "hypo" melt down to a liquid after several weeks, and if the bottle be shaken, partially disappear. The turpentine smell nearly disappears.

5. The vapors of iodine, in the course of several months, will penetrate deeply into lumps of beeswax.

6. If to a solution of bisulphide of carbon there be added twice its bulk of potassic hydrate in sticks, and the bottle be well sealed, the whole will, in two months, become an intense reddish, syrupy liquid, with scarcely any free bisulphide of carbon.

7. Some substances in solution form crystals or deposits on the sides of the bottles containing them, generally above the water line. Among such solution in 100 c.c. of rain water may be mentioned a 14-gramme solution of acetate of uranium, 8-gramme do. of protoacetate of copper, 5-gramme do. of acetate of morphine, 10-gramme do. formiate of copper, 20-gramme do. of tannate of iron. These deposits invariably take place on that part of the bottle most *exposed to light*. This phenomenon may be due to heat, but deposits or films occur in some solutions *within the liquid* as well as above it—especially noticeable with tannate of iron, the film of which adheres strongly to glass.

Menlo Park, N. J., Nov. 16, 1876.

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## THE ANALYSIS OF THE DIAMOND.

The great French chemist, Lavoisier, undertook the examination of the diamond, and it is worth while noticing how carefully he went to work, how he proceeded slowly from one step to another in logical sequence until he arrived at the true solution of the question he had undertaken to investigate—that is, until he was able to tell us exactly what happens when the diamond evaporates in the free fire, and why it did not do so when surrounded by charcoal. In

the first place, he evaporated the diamond by means of the burning glass, and he observed that no visible vapor or smoke was given off, but that the diamond disappeared. He thought that perhaps the solid diamond had in some way been dissolved by the water, and that by evaporating the water which was in the lower part of the bell-jar in which he burnt the diamond he might obtain the constituents of the diamond in a solid form; but he found that no solid residue was left on evaporation, and thus no trace of the diamond could be found. His next experiment was that of placing a diamond in a focus of a less powerful lens than the one he had formerly used, so that the diamond was not heated to so high a temperature as before, again placing it, however, in a bell-jar over water. He then found that the diamond, when not heated quite so strongly, lost only about one-quarter of its weight; it did not disappear altogether, but the remarkable fact was noticed that it became covered with a black substance, which Lavoisier describes as being exactly like lampblack or soot, so that it dirtied the fingers when touched, and made a black mark upon paper. Hence he concluded that the diamond is susceptible of being brought, under certain circumstances, into the condition of charcoal, so that it really belongs to the class of combustible bodies. He was, however, yet far from having proved this point, and he went on experimenting. He next measured the volume of air in which he was going to burn the diamond, and found it to be eight cubic inches. Then he burned the diamond in this volume of air by means of a lens, and found that the air had diminished to a volume of six cubic inches, thus showing that the air had undergone some change by the combustion of the diamond, and that two out of the eight volumes of air had disappeared. The next experiment he made was to examine the condition of the air in which the diamond had been evaporated. What changes had gone on in the air in consequence of the evaporation of the diamond? After allowing the glass in which he had burned the diamond to stand for four days, he poured clear lime-water into the jar in which the diamond had been evaporated, and he says this lime-water was at once precipitated, in the same manner as if it had been brought into contact with gas evolved in effervescence and fermentation, or that given off in cases of metallic reduction. Here then, he had got on the track of what he wanted. Hitherto the diamond had apparently disappeared, and nothing was found to account for its disappearance; but now he had found that there was something contained in the air in which the diamond was burned which was not contained in that air before. The next step he took was to examine the white precipitate or powder which was formed, and he found that the substance thus precipitated from lime-water by the air in which the diamond had been evaporated effervesced on treatment with acid, and evolved what was then known as fixed air, but which we now know as carbonic acid gas. Here then, in his last experiment, he completes his

proof, showing that exactly the same effects are observed when charcoal is experimented upon instead of diamond. Lavoisier had now run his quarry to earth; he had determined exactly what it is that is formed when a diamond is burned. He has shown that a diamond, when burned, produces exactly the same substance that is produced when common charcoal is burned, and he, therefore, legitimately concludes that the diamond is only another form of the element carbon. The reason that the diamond did not burn in the furnace when surrounded by a mass of charcoal was that the air, or rather the oxygen of the air, could not get to the diamond, because it was kept off by the charcoal, which burned instead of the diamond.—*Professor Roscoe.*

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#### REPORT OF THE COMMITTEE ON PRIZE ESSAYS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.

The undersigned Committee, having carefully examined the papers presented at the meeting of the American Pharmaceutical Association held at Philadelphia in September last, and printed in the Proceedings, have arrived at the decision, that none of the essays offered come fully within the terms of the stipulation made by the donor, restricting the award "to the best essay or written contribution containing an *original* investigation of a medicinal substance, determining new properties or containing other meritorious contribution to knowledge; or for improved methods of determined merit, for the preparation of chemical or pharmaceutical products."

In view of the apparent difficulty of obtaining, by the present method, original communications of sufficient importance and merit to justify the awarding of a prize, the Committee would respectively suggest the following modification of the present plan, which is believed to give better results, and does not conflict with any of the stipulations in the original grant.

1. The duties of the Committee on Prize Essays shall be twofold, viz.:

a. To select from the queries proposed at any one meeting, those, a satisfactory reply to which would be a valuable addition to our knowledge, and would be worth competing for. They shall publish these selected questions within four weeks after the annual meeting.

b. To examine and determine the merits of the answers to the queries designated as worthy to be competed for by their predecessors.

2. All answers presented with a view to compete for the prize shall be handed in anonymously, but distinguished by a motto, and

accompanied by a sealed envelope, directed to the President, enclosing the author's name and address, and bearing on its face the same motto as the essay.

3. The Committee shall determine, within eight weeks after the annual meeting, which, if any, of these anonymous essays may be worthy of the prize, and they shall apprise the President of their decision, who shall communicate to them the name of the author. The unsuccessful papers shall be returned to the President, who alone shall be authorized to return them to their authors on demand. The successful essay shall then be handed to the Publishing Committee.

4. Should none of the papers, expressly offered as competing for the prize, be found deserving thereof, the Committee may select any other paper presented to the Association, either as answer to a query, or as a volunteer essay, which they consider of sufficient merit to be entitled to the award.

Respectfully submitted,

CHARLES RICE,  
GEORGE C. CLOSE,  
EDW. P. NICHOLS,

*Committee.*

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## ŒNOKRINE.

This is the name of a test-paper sold in Paris for the purpose of detecting the fraudulent coloration of wines. With a genuine red wine, the colour produced is a greyish blue, which becomes lead-coloured on drying. With magenta and other aniline colours, it turns a carmine red; with ammoniacal cochineal, a pale violet; with elderberries, the petals of roses, etc., a green; with logwood and Brazil wood, the colour of dregs of wine; with Pernambuco wood and phytolacca, a dirty yellow; with extract of indigo, a deep blue. The manipulation required is very simple. A slip of the paper is steeped in pure wine for about five seconds, briskly shaken in order to remove the excess of liquid, and then placed on a sheet of white paper to serve as a standard. A second slip of test-paper is then steeped in the suspected wine in the same manner and laid beside the former. It is asserted that 1-100,000th of magenta is sufficient to give the paper a violet shade, whilst a larger quantity produces a carmine red. The inventors of the test-paper, MM. Lainville and Roy, are also said to have discovered a method of removing magenta from wines without injuring their quality—a fact of some importance, if it be true that several hundred thousand hectolitres of wine sophisticated with magenta are in the hands of merchants.—*Four. of Applied Chemistry.*



## Editorial.

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### THE APPROACHING ELECTION OF COUNCIL.

The two years during which the present Council hold office have now almost rolled by, and, by the fourth of next month, a choice for the next term will have to be made. Very little interest was taken in the last election, and though the selection then made was a very happy one, it might not always be well for things to go as it were by default. Members sometimes forget that the law requires some little formality in the manner of conducting the election, and a want of attention to these particulars often nullifies the efforts of those who wish to exercise their rights as electors. It may, therefore, be well for us to remind our readers of these matters.

The Pharmacy Act requires the Registrar to publish, on the 15th of June, a list of all those members who are in good standing, and have paid their fees for the current year. This forms the voting list, not only embracing the names of all those entitled to vote, but those who are eligible for election. It is also intended to stand as legal evidence of the right of those enumerated to dispense poisons, and to sell liquors for medicinal use during the ensuing year.

Every member in good standing has the privilege of nominating thirteen persons as members of Council, but the nominations must be sent in to the Registrar between the 4th and 18th June, inclusive. It then becomes the duty of the Registrar to notify the parties nominated, and who may decline or accept the nomination; but in any case, must inform the Registrar of their intention, so that their replies may be received by the 25th.

On the 27th of June the Registrar will send to each person entitled to vote a voting paper containing the names of those who have been nominated, and who are legally entitled to become candidates for election. Members signify their selection by making a cross or mark opposite the names of the candidates, and are requested to forward the cards by return post to the Registrar.

At noon, on Wednesday, July 4th, the papers will be inspected by the scrutineers, and the result will appear in next month's JOURNAL.

As we have stated on occasions similar to the present, it is the wish of the Council that the various sections of the Province should be represented as equally as possible, and we therefore reproduce an enumeration of electoral divisions corresponding with the number of the members of Council. This list was carefully drawn out some six or seven years ago, and was based on the number of druggists resident in each section. At that time it was as correct as we were able to make it, though, at present, it may not be so, but at all events, in the absence of a better guide, it may now serve a useful purpose.

| NAME OF DIVISION. |               | COUNTIES.  |
|-------------------|---------------|--|
| Ottawa            | District..... | { Glengarry, Prescott, Stormont, Russell, Dundas,<br>Carleton, Grenville, Lanark, Renfrew. |
| Kingston          | “ .....       | { Leeds, Frontenac, Lennox, Addington, Prince<br>Edward, Hastings.                         |
| Peterboro         | “ .....       | Northumberland, Peterboro, Durham, Victoria.   |
| York              | “ .....       | Ontario, York, Peel, Halton.   |
| Toronto           | “ .....       | City of Toronto (2).   |
| Simcoe            | “ .....       | Simcoe and Muskoka.  |
| Owen Sound        | “ .....       | Grey, Bruce, Huron.  |
| Wellington        | “ .....       | Cardwell, Wellington, Perth.   |
| Hamilton          | “ .....       | Wentworth, Brant.  |
| Niagara           | “ .....       | Welland, Monck, Lincoln, Norfolk.  |
| Oxford            | “ .....       | Oxford, Waterloo.  |
| London            | “ .....       | Middlesex, Elgin.  |
| Western           | “ .....       | Kent, Essex, Bothwell, Lambton.  |

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### PHARMACY IN NOVA SCOTIA.

We are glad to learn that the druggists of Nova Scotia have been successful in organizing an association similar to that which we have in Ontario, and also in obtaining an Act of Incorporation, which, in intent, resembles our own, and, in some respects, is a decided improvement.

The Act is now in force, and, until December, 1877, all persons who, at the time of the passing of the Act, were actually in business as chemists and druggists, and all persons who at that time had served at least seven years at the business, and had attained the age of twenty-one years, are entitled to registration, on payment of a fee of four dollars, which must be continued yearly. All other persons, save those holding diplomas from other colleges, can only be admitted by examination before a Board consisting of five persons ;

two of whom are appointed by the Provincial Government and three by the Pharmaceutical Council. These examiners hold office for three years. The candidate must show evidence of his having served at least three years as assistant, during one of which he must have been actually employed in the dispensing of prescriptions. The examination fee is five dollars, and, should the candidate be successful, he must pay a further fee of five dollars, which entitles him to a diploma and to registration as a member of the Society.

Members failing in the payment of the annual fee of four dollars shall forfeit their places on the register, and shall cease to be members; but the names of such persons may be replaced at the discretion of the Council and on payment of arrears. The Council consists of twelve members, six of whom retire, by lot, every year. Retiring members are eligible for re-election.

The regulations regarding the sale of poisons are different from those in force in Ontario. There are no restrictions as to the purchaser, nor need sales of poisons be recorded. This appears to us to be an important omission. The registration of sales of poison incurs a very trifling amount of trouble on the part of the druggist, and not only throw many obstacles in the way of those who desire to purchase poisons for illegal purposes, but often furnishes most important assistance in carrying out the ends of justice. In Nova Scotia the registered druggist may sell poisons without let or hindrance, but none save registered persons may sell, attempt to sell, have exposed for sale, or keep open shop for retailing, dispensing, or compounding those articles which are enumerated in a schedule attached to the Act. This list is a pretty full one, and embraces a number of poisons which are not usually given in schedules of this kind. Besides those poisons mentioned in the Ontario Act there are nitric, muriatic and carbolic acids; tincture of cantharides; chloral hydrate, and croton-chloral hydrate; chloride of zinc; colchicum and preparations; creasote; cyanides; digitalis and preparations; mercury and all poisonous compounds thereof; phosphorus; all poisonous vegetable alkaloids and their salts; essential oils of almonds, rue and tansy; preparations of iodine, and ergot. Some of these additions, as chloral hydrate, are important, but as to the mineral acids, and phosphorus—articles used almost exclusively for manufacturing purposes—we cannot see that their sale should be hampered by any restrictions.

The subjects upon which candidates are examined, and the general scope and extent of the examinations, as indicated by the Regulations of the Board, are almost identical with our own and those of Great Britain. The number of marks which the candidate must obtain in order to pass is, however, some sixteen per cent. under our standard. The Council may, at their discretion, accept as sufficient evidence of qualification, the diploma of any other competent examining body outside the province, and may thereupon issue a certificate.

The present officers of the society are Mr. H. A. Taylor, *President*; Mr. H. L. Atkins, *Vice-President*; Mr. A. Forsyth, *Treasurer*; Mr. W. H. Webb, *Secretary*; Mr. J. H. Angwin, *Registrar*. *Council*: Messrs. Kent, Forsyth, Fraser, Jackson, Walsh, Webb, (W. H.) Atkins, Angwin, McKenzie, Simson, Taylor, Webb, (J. W.) *Examiners*: Messrs. Atkins, Simson, Waddell, Webb, (J. W.) and Dr. Reid.

The "Nova Scotia Pharmaceutical Society" has our best wishes, and we shall always be pleased to hear of its progress, and to offer it any assistance in our power.

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## Editorial Summary.

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ADULTERATION OF CACAO-BUTTER.—Mr. E. Lamhofer (*Am. Jour. Pharm.*) has gone over a field of investigation similar to that of Mr. Ramsperger, whose conclusions were noted in our April number, page 333. He finds that the melting point of cacao-butter cannot be relied on as an indication of purity, and thinks that the best test is ether or benzin. The pure oil dissolves entirely in ether or benzin, separating out in minute granular crystals when immersed in water of 32° F., the liquid portion remaining transparent until, after thirty or forty minutes, the whole of it is solidified. 2d. When, after solidification, the oil is left to remain at a temperature of about 85° F., it will redissolve, forming a transparent solution. Adulations with animal fats are indicated, 1st, by the cloudy appearance of the solution which follows after immersing in water of 32° F.; 2d, by the slow and incomplete congealment of the oil when subjected to the test with petroleum benzin. The amount of sophistication is shown, 1st, by the more or less intense cloudiness, and by the slow or rapid formation of it with the above test. Largely adulterated oils congeal almost instantly, while the turbidity of a solution with

2 per cent. of stearin becomes visible only after two minutes. 2d. By the more or less complete congelment of the oil when treated with petroleum benzin. 3d. By the more or less intense cloudiness of a congealed solution when left for twelve hours at 58° F. If largely adulterated, the mixture will not become liquid at all at that temperature. The reason for the different behavior of adulterated oils is found in the fact that pure cacao butter when subjected to this test separates from its solution in minute granular crystals, which are gradually formed, while animal fats, under the same circumstances, congeal at once and "en masse." When, therefore, mixtures of these fats are tested in this way, the animal fat will separate at once, causing a turbidity, and thereby delaying or obscuring the formation of the small crystals of cacao butter.

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ELIXIR OF LIQORICE.—Two papers on this subject appear in the *American Journal of Pharmacy* for May. Mr. G. W. Kennedy proposes a formula which is said to produce a preparation, one ounce of which will completely mask the bitterness of ten to 12 grains of quinine or render palatable from 15 to 20 grains. It is prepared by percolating two ounces of best licorice root, in moderately coarse powder, with a mixture of six fluid ounces of alcohol mixed with an equal quantity of water; or adding diluted alcohol until twelve ounces of percolate are obtained; to this adding six fluid ounces of simple syrup, and one and a half drachms of spirit of orange peel and eight minims of spirit of cinnamon. These spirits or essences are made by dissolving one part of oil in fifteen of alcohol, by measure. The formula given by Mr. J. P. Remington belongs to the polypharmacy order, and contains thirteen ingredients. A teaspoonful of the elixir is used with each dose of quinine—which should not be dissolved—and when the dose has been swallowed, a second teaspoonful of elixir is required to remove all traces of bitterness. The quantities are stated in grams and are as follows: Cinnamon, six; star anise, four; coriander, seven; carraway, seven; tonqua, four; canella, two; nutmegs, two; cloves two. These aromatics, in fine powder, are to be percolated with a mixture of 532 grams of alcohol, 475 water, and two grams fresh oil of orange. The percolate should weigh 1000 grams, to this should be added an equal weight of syrup, and forty grams of ammoniacal glycyrrhizin previously dissolved in a small quantity of boiling water. If an agreeable simple elixir is at hand, the ammoniacal glycyrrhizin may be dissolved in it, in the proportion of one gram in fifty.

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ADULTERATION OF ACONITE ROOT.—Mr. E. M. Holmes (*Pharm. Jour. & Trans.*) notices an admixture of about five per cent. of the

rootstock of masterwort, *Imperatoria Ostruthium*, with a sample of aconite root, of German origin. The price of aconite, in England, is only about 6*d.* per pound, and the root is first sold by German peasants to German dealers, who again obtain a profit, so that it is obvious that the price paid to the peasant is too small to pay for careful collection. The admixture is probably accidental, and this is rendered more likely from the fact that the value of masterwort is much greater than aconite. The rootstock of masterwort is much less tapering than aconite root, is slightly compressed, and exhibits several warty zones indicating periods of growth. It is finely wrinkled transversely, so as to give it a somewhat annulated appearance. The central portion is of a yellowish white color, and exhibits a more or less complete ring of brownish dots, while next the bark there are also dots of a paler color. By the aid of a lens these are shown to be filled with an oily or resinous substance, and serve to distinguish the root from aconite. A spirituous tincture, when dropped into water, gives a blue fluorescence, like quinine, and a slight milkiness, and communicates to the water a characteristic odor. This odor and appearance, if present in tincture of aconite root, might throw discredit on the dispensing department, and might be the cause of uncertainty and doubt in the mind of the pharmacist.

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FORMATION OF SALICYLIC ETHER IN WINE.—Mr. H. Endemann, (*Druggists' Circular*), explains a circumstance relating to the preservation of wine by salicylic acid which is worthy of note. A New Jersey dealer sold a twelve gallon keg of wine, of the keeping qualities of which he was not perfectly satisfied, as the wine was young, and prone to a second fermentation. To obviate this he added one grain of salicylic acid, as recommended by Newbauer, who directs that from 20 to 60 milligrams be used to each litre. The customer kept the wine for some time, and remarked that it lost entirely its natural flavor, and acquired that of camphor. Mr. Endemann at once referred the latter taste to salicylic ether, and the truth of this supposition was rendered evident when a drop of oil of wintergreen was added to some new wine, by which addition the identical flavor was produced. This formation of the ether is explained on the ground that the quantity of acid used was insufficient to prevent the further fermentation of the wine, and being thus presented in the nascent state to the acid, at once combined, forming salicylic acid. The author refers to a similar action in the case of the fermentation of mash, for vinegar, by which acetic ether is, in like manner, produced.

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GLYCEROLE OF SALICIN, AND SALICIN AND PEPSIN.—Mr. A. W. Postans, (*Pharm. Jour. and Trans.*), finds that salicin is soluble

in glycerine, thus forming a useful solution. Five grams of salicin and one drachm of glycerine are rubbed together and solution is effected by the aid of a gentle heat. For the preparation of a glycerole containing pepsin, fresh pig's stomachs are washed in water until all traces of food are removed, and, the cardiac end being rejected, are cut into shreds and digested, for a week, in as much glycerine as will cover. The solution is then strained and filtered; one drachm, mixed with an ounce of water, and acidulated with fifteen minims of muriatic acid, dissolves 700 grains of moist fibrin at 100° F. A mixture of the two glyceroles produces a very desirable preparation.

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**BALSAM OF PERU FOR WOUNDS.**—At a meeting of the Berlin Medical Society, Dr. Wiss read a paper in which Peruvian balsam was greatly extolled as an application to recent wounds, which, thus treated, heal quickly by first intention; suppuration and putrid decomposition are altogether prevented, and inflammation quickly subsides. The application of the balsam is attended with very slight pain, and after a short time all pain ceases, even in the most severe and painful wounds.

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**OINTMENT OF OXIDE OF ZINC.**—For the preparation of this ointment a considerable expenditure of muscular force is required, and several methods to render the process less tedious have been proposed and noted in this Journal. Mr. J. Ruan, (*Amer. Journal Pharm.*), now finds that by using a little water—an addition which we consider very questionable—the amount of elbow grease may be reduced to a minimum. Eighty grains of oxide with about half a drachm of water are rubbed to a smooth paste, on a tile, with a spatula and 400 grains of ointment of benzoin are added. With larger quantities it is recommended that the water be driven off by a gentle heat.

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**MODE OF MAKING THIN PENCILS OF LUNAR CAUSTIC.**—According to M. A. Huber, (*Schweiz. Woch. f. Pharm.*) thin pencils of lunar caustic may be prepared by fusing the nitrate in a porcelain dish and carefully drawing the liquid, by suction, into glass tubes slightly larger than the intended stick. When the nitrate has set, and become thoroughly cold, the tubes must be warmed over a spirit lamp, until the stick of caustic becomes loosened, when it may be pushed from the tube with a knitting needle or peice of stiff wire.

ELIXIR OF MONOBROMATED CAMPHOR. M. I. Munday, of Paris, communicates to the *Pharm. Jour. and Trans.* a formula for an elixir containing one per cent. of the camphor compound. It is prepared by mixing twelve grams of alcohol, ten of glycerine, and eight of orange flower water, and in this dissolving, by the aid of a gentle heat, thirty centigrams of monobromated camphor.

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SUGAR IN BEET LEAVES.—M. Pierre has examined the leaves of the beet for sugar and finds it to be present in an amount equivalent to 275 cubic centimetres of 68 per cent. alcohol in 158 kilogrammes of leaves. The yield of absolute alcohol from the leaf crop of a hectare—about two and a half acres—of land would be 173 litres—about 38 imperial gallons.

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PRESENCE OF AMMONIA IN SUBNITRATE OF BISNUTH.—Mr. W. G. Piper, *Pharm. Jour. and Trans.*, reports the presence of ammonia in several samples of commercial subnitrate of bismuth. The quantity varied from .008 to .076 per cent., and of course might be disregarded but for the fact that it communicates a characteristic odor which might give rise to question.

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## PROSECUTIONS FOR SALE OF LIQUOR BY DRUGGISTS.

### LICENSE INSPECTOR *vs* M. B. MALLORY.

The defendant, who is in business at Napanee, was charged with selling liquor for other than strictly medicinal purposes, and, on Friday, May 11th, appeared before H. Forward, Esq., J. P., Mayor of Napanee, and M. Neville, Esq., J. P., and in answer to the charge pleaded not guilty. W. A. Reeve, Esq., County Attorney, conducted the prosecution, and D. H. Preston, Esq., appeared for Mr. Mallory. The following contains the salient points of the examination:

MARSHALL SCHUMAN, sworn.—I live at Hay Bay; am a farmer. I am not acquainted with Mr. Mallory, but would know him if I saw him. I was in his drug store on Saturday last, I saw some one there. I had been drinking and don't know whether I bought liquor or not. It was then about noon. I had been drinking before I went there. I have a dim recollection of signing my name on something. I was in Culhane's. I got liquor from W. McHenry under Grieve's shed; don't know where he got it. He said he got it at the drug-



gist's. I heard that 12 ozs. of liquor could be got there. Jas. McHenry and I went to Detlor & Scott's and he got a bottle of liquor which we drank under the Campbell House shed. I don't remember distinctly anything which happened after that. I took no liquor home. I tried to get liquor at Perry's, but he said he kept none except alcohol. I think I got some at Mallory's, but cannot say positively. I don't remember going to any other place except those named. I identify my signature on the book produced, showing that I got 12 ozs. of proof whiskey for putting on camphor. I don't know what became of the bottle. I told my mother in the morning that if she would give me a bottle I would get her some whiskey. She uses it with saltpetre for rheumatism.

DANIEL LUCAS, sworn.—I live in North Fredericksburgh; am a farmer; was in Napanee on the 5th instant; was in Mallory's drug store at about 10 or 11 a.m.; went for proof whiskey, asked for it, got it, and paid for it. I left town late at night; did not take any liquor home with me. I drank some through the day and treated my friends; don't know how many; treated all I thought were dry in Paisley's, Culhane's, and McDonald's. I bought it to drink; was asked what I wanted it for and said I wanted it to put on camphor. I signed my name in a book. I got 12 ozs. of whiskey in the afternoon of the same day. I was asked what I wanted it for and what I did with the other bottle. I said I spilled it and wanted this to take home. I signed my name, got the whiskey, and my friends and I drank it. I went back the second time to get it to drink. I only asked for 12 ozs. because I understood they could not sell any more. I was sober when I went to Mallory's. I drank enough that day to intoxicate me. I had not been in the habit of dealing at Mallory's before. I did not get any other liquor that day at drug stores. I led Mr. Mallory to believe I wanted it for medicine; I don't know that he thought I wanted it for anything else.

J. W. GEORGE, sworn.—I live in Napanee; was in Mallory's on Saturday night about 8 o'clock. I went for whiskey and got it. He said there was 12 oz. I paid for it, and took it away, I drank a portion of it and gave the rest away. It was drunk on the street. I got it to drink. Mr. Mallory was not present. His clerk asked me if I wanted it for medicinal purposes. I don't recollect what else was said, if there was anything. I signed the book. My statement to the clerk that I wanted it for medicinal purposes was not true. I have bought liquor at Mallory's twice before this. The last time was three months ago. I bought other liquor on that day besides what I got at Mallory's; did not record my name at the other places. Others treated me. I bought liquor at Grange's. All I bought was used for drinking and none at all for medicinal purposes. I tried to impress upon the clerk the truth of what I told him, and have no reason to believe he suspected otherwise.

JOHN GRAHAM, sworn.—I live in Napanee; was in Mallory's

drug store on the 3rd or 4th of May. I went for whiskey; got some in the morning and again in the evening, and paid for it. I got 12 ozs. Mr. Wright gave it to me. I drank part of it and gave part away. I have been in the habit of taking some every day for the last eight years by my doctor's orders. I asked for 12 ozs. and the clerk asked me if I wanted it for medicine as they could only sell it for that. I gave a prescription from Dr. Newton, of Mill Point, and signed the register. I was in Mill Point the day before to see the Dr., but did not see him. I met him in town next day. I use whiskey for asthma. I never got it before at the drug store.

JAS. CULHANE, sworn.—I keep a public house in Napanee. I know Marshall Schuman and the McHenry's; saw them in Napanee on Saturday last; they were at my house between 2 and 3 p. m. They had flasks with them and drank whiskey from them. I am not sure about Schuman, he had a flask or bottle, but I don't know what was in it. Daniel Lucas and Jas. McHenry had whiskey. Schuman and Lucas were pretty drunk at the time. I called Mr. Morden's attention to their condition and gave information in this case.

JOHN PAGE, sworn.—I was in Mallory's drug store one day last week and got 12 ozs. of whiskey and used it all with maple syrup for a cold. I told him what I wanted it for and signed the register.

MR. REEVE asked the Bench to look at the register and see how many sales of liquor had been made that day.

MR. PRESTON declined to have the book inspected except as to those cases about which evidence has been given. He claimed that the prosecution had failed as it had not been proven that liquor had been sold for other than strictly medicinal purposes, nor in any case in a larger quantity than 12 ozs. The first witness was not reliable.

For the defence,

ALBERT WRIGHT, sworn.—I am in the employ of M. B. Mallory; don't know Schuman, I never saw him that I know of until he came into the store on Saturday last about 11.30 a.m. He wanted a quart bottle filled with whiskey to put on camphor. I gave him 12 ozs. Whiskey on camphor makes a tincture which I know would be dangerous if drunk. I thought he was perfectly sober. I had no suspicion that he wanted it for any other purpose than what he told me. I know Lucas, he was in the store and asked for whiskey to put on camphor; he came in a second time, and said he had spilled the first quantity. I know Whit. George. Liquor was sold to him for sickness. My instructions are to sell liquor only in accordance with the law.

M. B. MALLORY, sworn.—I am the defendant in this case. Mr. Page was the only one of those sworn to whom I sold liquor. No liquor has been sold to my knowledge in quantities greater than 12 ozs., except on a doctor's certificate, and none at all for other than strictly medicinal purposes. I never suspected that the liquor sold to the parties sworn, or to any others, was to be used for any other

purpose than that stated. I sold to 24 parties on Saturday and refused at least 25. It had been gratuitously advertised that I sold liquor and in that way, largely, I account for the increased sale since the first May. The closing of the hotel-bars has also had an effect in that direction. My sales are from one-half to double as much as before May 1st. The largest sale on any one day prior to that was April 28th, when liquor was sold to 13 persons.

CHAS. ROOT, sworn.—I was in Mallory's on Saturday when Schuman was there, Mr. Wright was the only other person in the store. Schuman did not act as if he were under the influence of liquor, and I saw nothing to lead me to think he was.

This closed the evidence and an adjournment till 7.30 took place, when Mr. Preston claimed that the law only required that the sales should be *bona fide* for medicinal purposes, and as it has been proved they were such the case should be dismissed. Mr. Reeve said the whole case turned upon the construction given to sec. 27 of the Act of 1874. If there were two constructions, one of which would defeat, and the other assist in carrying out the object for which the law was made, and the latter was the true one. The construction should be a strict one for that very word was used. He thought it was not a forced argument to say that if a druggist choose to sell without a doctor's certificate, he assumed the same responsibility as the doctors, and was bound by what was done after the sale of the liquor.

The magistrates then gave judgment fining Mr. Mallory \$20, and costs \$10.50, or 15 days in gaol at hard labour. Mr. Preston gave notice of appeal.

#### LICENSE INSPECTOR VS. ORANGE BROTHERS—*First charge.*

The magistrates hearing the charge were Messrs. Williams and Forward, W. A. Reeve, Esq., for the prosecution, and Cartwright and Gibson for defendants. The charge was selling liquor in a larger quantity than 12 oz., without a doctor's certificate. John Bowen, of Camden, was sworn, and testified that he had bought liquor on Saturday from Mr. A. W. Grange, on a certificate from Dr. Shirley, and used it for medical purposes. Mr. A. W. Grange testified that he sold Bowen 20 ozs., and produced a certificate from Dr. Shirley as authority therefor. Dr. Shirley was called, and testified that he was a regularly licensed physician but had not been registered, and had been practising in Napanee since 1843. Mr. Gibson claimed that it was not the duty of the druggist to run around and ascertain if each practising physician was properly registered. Mr. Reeves said the Act expressly stated that a larger quantity than 12 ozs. could not be sold except on the certificate of a properly registered physician, and as Dr. Shirley was not registered the prosecution asked for the strict enforcement of the law. Messrs. Grange Bros. were fined \$20 and \$6.70 costs, or 15 days in gaol at hard labor.

LICENSE INSPECTOR vs. GRANGE BROTHERS—*Second charge.*

The charge in this case was the same as in Mallory's. The magistrates were Messrs. Williams and Forward, W. A. Reeve for the prosecution, Cartwright & Gibson for the defendant. Plea—Not guilty.

NELSON VANALSTINE, sworn.—I am a carter; I went into Grange Bros.' drug store one day last week to get some proof liquor to put on camphor; I got 12 ozs. The clerk gave it to me. I paid for it. I used it to put on camphor for use in the house for headaches, &c. I tasted it but did not drink any. The clerk asked my name and entered it

JOHN BOWEN, sworn.—I was in Grange Bros. on Saturday forenoon between 10 and 11 a.m. I bought a number of things, including a small quantity of whiskey. The clerk gave it to me. I bought it to drink. I don't think the clerk asked me anything about what I wanted it for. I got it in a flask which held about a pint and a half, and it was about half full. I swear the clerk did not ask me anything about what I wanted it for, and I did not tell him.

DARIUS HUFF swore that he got 15 cents worth of liquor at Grange Bros.' store, and used it all for medicinal purposes.

J. R. SPENCER swore that he got 8 ozs. of whiskey at Grange Bros. on Saturday, and used it for medicinal purposes. He tasted it both before and after he got home.

G. H. WILLIAMS swore that he got 12 ozs. of brandy at Grange Bros., and used it for medicinal purposes, the remainder has not been, but would be used in the same way.

DR. R. B. CLARK, sworn.—Tincture of camphor is made with rectified spirits of alcohol. Whiskey and camphor will not make a tincture. Whiskey will only dissolve camphor in proportion to the quantity of alcohol it contains

A warrant was issued for the apprehension of J. W. George, and the Court adjourned.

At 7:30 p.m. the Court resumed.

J. W. GEORGE, sworn, under protest, as he had not been paid.—I was in Grange Bros. on Saturday night; went to get liquor and got it; suppose the quantity was 12 ozs.; asked for whiskey. It was about 10 o'clock. I drank a portion of the liquor, gave some away, and took the rest home. Mr. Alex. Grange gave it to me, and said they were only allowed to sell it for medical purposes. I told him I wanted it for sickness; was not asked who was sick nor what was the matter. I was not sick. My object in getting the whiskey was to drink it and treat my friends. I swear to the best of my knowledge and belief that I did not say I had a cold and wanted to get a sweat.

For the defence,

A. W. GRANGE, sworn.—I am one of the defendants. I recollect the conversation with the last witness late on Saturday night.

He applied to me for liquor, and said he had taken cold and was going home to have a sweat. I served Bowen with liquor on Dr. Shirley's certificate. There is no other record of his having got any. I did not serve him more than once. We often sell whiskey to put on camphor, and often put it on ourselves at the request of customers. We record all sales; are registered under the Pharmacy Act.

A. M. RUTTAN, sworn.—I am clerk for Grange Bros. I recollect Bowen being in the store on Saturday; Alex. Grange served him. I do not recollect giving him any liquor. I always register sales. I have been instructed to sell liquor only for medicinal purposes. I generally take the purchaser's word for it.

A. W. GRANGE, re-called,—I asked the Inspector if we could use our discretion in selling liquor to a person who said it was for medicinal purposes, and understood him to say we could.

W. GRANGE testified that a record of all sales was kept, and that Bowen would not have been served without his knowledge.

Judgment reserved until 7th June.

LICENSE INSPECTOR VS. DETLOR & SCOTT.—*First Charge.*

The charge was the same as in Mallory's case, the magistrates and prosecuting counsel the same as in previous case, and Mr. Preston the defendant's counsel.

HUGH LOWRY, sworn.—I am a farm laborer and live in North Fredericksburgh. I was in Detlor & Scott's drug store on Saturday last and asked for whiskey and got it. Mr. Detlor gave it to me. I drank some of it and gave some to my friends. I was drunk at Culhane's. I told him I wanted it for sickness, that was not true. For anything I wanted I went to Detlor & Scott's. I was employed by John Getty. I went to the drug store because I did not know where else to get it. He asked my name. I think he believed what I told him, and I intended that he should.

NELSON VANALSTINE, sworn.—I got 8 ozs. of brandy at Detlor & Scott's. Mr. Detlor gave it to me. I told him I wanted it to put on camphor. The liquor I had on it did not dissolve it. I used it for that purpose. I tasted it and let my little boy have a taste. Mr. Detlor told me he could not sell it for other than medicinal purposes.

SAMUEL HAYES swore he got 10 ozs. of brandy at Detlor & Scott's for medicinal purposes and used it in that way.

JOHN HUFF testified that he got 12 ozs. of brandy at Detlor & Scott's for medicinal purposes, and used it for nothing else.

For the defence.

W. S. DETLOR, sworn.—I am a member of the firm of Detlor & Scott, and am the person referred to by the witness, all of whom are customers. We are registered druggists. Did not know any of the witnesses were addicted to drinking. Did not

know Lowry was a drinking character, but believed him to be trustworthy. He asked me for 11 or 12 oz. of whiskey. I asked what he wanted it for and he said for sickness. I said we could only sell it for medicinal purposes; he answered that that was all he wanted it for, and I believed him. I believed the same in each of the cases. We make a record of all sales, the names, quantity, kind, and date, as required by law. Lowry asked for 11 or 12 ozs. and I gave him 10 ozs. I had heard Mr. Getty, his employer, say he was trustworthy.

Judgment reserved until 7th June.

LICENSE INSPECTOR VS. DETLOR & SCOTT.—*Second charge.*

Immediately after the close of the previous case, the second charge was proceeded with. It was that liquor had been sold in greater quantities than 12 ozs. without a certificate.

JOHN BOWEN, sworn.—I was in Detlor & Scott's on Saturday to buy liquor; the clerk gave it to me. I showed him an order from Dr. Shirley; he took it and laid it on the counter. While he was getting the whiskey I took the order and put it in my pocket. The sale was entered in a book. I used it for medicinal purposes. The doctor asked me no questions. I thought I had not enough, and got some more at Grange's on the same order.

W. S. DETLOR, sworn.—We keep a record of sales; it says Bowen got 28 ozs. on a certificate from Dr. Shirley dated 5th May. I have known Dr. Shirley as long as I can remember as a medical practitioner, and almost daily filled his prescriptions. I had no reason to doubt that he had a right to practice or that his prescriptions were legal. We have endeavored to fulfil the law in every respect.

DR. SHIRLEY testified that he had a diploma, but had neglected to register under the late Act. He gave Bowen a certificate for liquor.

MR. MORDEN, in reply to some strictures by Mr. Preston, said that the Commissioners and not the Inspector were responsible for these charges, and had no other object than the carrying out of the law.

MR. DETLOR said that had they been notified that Dr. Shirley's certificates were illegal there would have been no occasion for any prosecutions.

The case was decided in favor of the prosecution, and Messrs. Detlor & Scott were fined \$25 and \$6.25, or 15 days in gaol at hard labor.

The defendants appealed.

The Court then adjourned.

INSPECTOR VS. FRANK PRIEST.

Defendant is in business at Bath, and from what we have been able to learn was charged with selling liquor without registration.

It appears he was ignorant of the requirements of the law, but the magistrates, Messrs. Williams and James, decided that though they did not believe that Mr. Priest intended to evade or violate the law, yet the only course open was that of conviction, and consequently they had to impose a fine of \$20, and \$7.50 costs, or, in default, fifteen days in gaol with hard labor.

## Varieties.

**BARBER'S WAX.**—A good formula for preparing this cosmetic is the following: Mix 1 part of best lamp-black and 8 parts of brown ochre under constant stirring with a melted mixture of 40 parts of yellow wax, 30 parts of lard, and 1 part of oil of bergamot; then pour it into moulds of about thickness of a finger, and cover with foil. Another formula is the following: Yellow or white wax 90 parts, sweet almond oil 30 parts; melt them, and while stirring add powdered Venetian soap 100 parts, powdered gum arabic 90 parts, glycerine 10 parts, rose water 140 parts or a sufficient quantity, oil of rose 1 part, and oil of lemons 2 parts. Pour the mass into moulds. The so-called "Hungarian Wax" is jet-black, and of about the composition of the first-named formula.—*New Remedies.*

**TEST FOR SULPHUR IN PETROLEUM.**—Vohl recommends that if a piece of sodium is boiled in the petroleum for some time, and a little water added to oxidize the sodium and dissolve the sodic sulphide. Sodic nitroprusside is then added, and turns the solution blue if sulphur is present.

**GLYCERINE JELLY.**—White soft soap, 4 oz., pure glycerine, 6 oz., almond oil, 3 lbs. in Summer, 4 lbs. in Winter, otto of thyme, 2 drachms. Mix the soap and glycerine in a mortar, add the perfume to the oil, and rub it in gradually, taking care not to add the oil faster than it can be incorporated.

**IMPROVED CATHARTIC PILLS.**—Compound extract of colocynth, 24 grains; extract of jalap, 12 grains; resin of podophyllum, 6 grains; extract of leptandra, 12 grains; extract of hyoscyamus, 12 grains; oil of peppermint, 6 drops. To be divided into twenty-four pills. Dose, the same as the ordinary anti-bilious pills.—*Druggists' Circular.*

**TO BLEACH COTTON SEED OIL.**—The crude oil is heated to about 90° F. by means of steam coils, and a cold solution of caustic soda of 40° Baumé is slowly added, while the whole is vigorously agitated. One gallon of the alkaline liquor usually suffices for twenty gallons of oil, but sometimes more is needed to bring it to a light straw color. The mixture is then allowed to settle, and the supernatant oil separated and filtered.—*Druggists' Circular.*

**TO BLEACH LEAVES.**—Mix 1 drachm chloride of lime with 1 pint water, and add sufficient acetic acid to liberate the chlorine. Steep the leaves about 10 minutes, and until they are whitened; remove them on a piece of paper, and wash in clean water.

WHOLESALE PRICES CURRENT.—JUNE 1877.

| DRUGS, MEDICINES, &c.    |      | \$ c. | \$ c.  | DRUGS, MEDICINES, &c.—Contd |       | \$ c. | \$ c. |
|--------------------------|------|-------|--------|-----------------------------|-------|-------|-------|
| Acid, Acetic, fort       |      | 0 13  | @ 0 14 | Sang Dracon                 |       | 0 60  |       |
| Benzoic, pure            |      | 0 22  | 0 27   | Scammony, powdered          |       | 5 50  | 6 00  |
| Citric                   |      | 0 82  | 0 85   | "    Virg.                  |       | 14 50 | —     |
| Muriatic                 |      | 0 03½ | 0 05   | Shellac, Orange             |       | 0 30  | 0 35  |
| Nitric                   |      | 0 10  | 0 13   | Gum, Shellac, liver         |       | 0 27  | 0 34  |
| Oxalic                   |      | 0 15  | 0 17   | Storax                      |       | 0 40  | 0 45  |
| Sulphuric                |      | 0 03  | 0 05   | Tragacanth, flake           |       | 1 10  | 1 75  |
| Tartaric, pulv.          |      | 0 44  | 0 47   | "    common                 |       | 0 53  | 0 65  |
| Ammon, carb. casks       |      | 0 18  | 0 20   | Galls                       |       | 0 22  | 0 30  |
| "    jars                |      | 0 18  | 0 20   | Gelatine, Cox's 6d          |       | 1 15  | 1 20  |
| Liquor, 88o.             |      | 0 20  | 0 22   | Glycerine, common           |       | 0 25  | 0 28  |
| Muriate                  |      | 0 14  | 0 15   | "    Vienna                 |       | 0 30  | 0 32  |
| Nitrate                  |      | 0 45  | 0 60   | Prices                      |       | 0 60  | 0 75  |
| Æther, Acetic            |      | 0 45  | 0 50   | Honey, Canada, best         |       | 0 16  | 0 17  |
| Nitrous                  |      | 0 25  | 0 38   | "    Lower Canada           |       | 0 10  | 0 12  |
| Sulphuric                |      | 0 45  | 0 50   | Iron, Carb. Precip.         |       | 0 16  | 0 20  |
| Antim. Crude, pulv.      |      | 0 15  | 0 17   | "    Sacchar                |       | 0 40  | 0 55  |
| Tart                     |      | 0 50  | 0 55   | "    Citrate Ammon.         |       | 1 10  | 1 20  |
| Alcohol, 95 per ct.      | Cash | 2 18  | 0 00   | "    & Quinine, oz          |       | 0 50  | 1 30  |
| Arrowroot, Jamaica       |      | 0 18  | 0 22   | "    & Strychine            |       | 0 17  | 0 20  |
| Bermuda                  |      | 0 50  | 0 65   | "    Sulphate, pure         |       | 0 05  | 0 17  |
| Alum                     |      | 0 02½ | 0 03   | Iodine, good                |       | 4 00  | 4 25  |
| Balsam, Canada           |      | 0 33  | 0 38   | "    Resublimed             |       | 4 75  | 5 00  |
| Copaiba                  |      | 0 65  | 0 70   | Jalapin                     |       | 1 25  | 1 50  |
| Peru                     |      | 2 10  | 2 20   | Kreosote                    |       | 2 50  | 2 60  |
| Tolu                     |      | 4 00  | 4 25   | Leaves, Buchu               |       | 0 22  | 0 32  |
| Bark, Bayberry, pulv.    |      | 0 18  | 0 20   | "    Foxglove               |       | 0 25  | 0 30  |
| Canella                  |      | 0 17  | 0 20   | "    Henbane                |       | 0 35  | 0 40  |
| Peruvian, yel. pulv.     |      | 0 35  | 0 50   | "    Senna, Alex            |       | 0 27  | 0 60  |
| "    red                 |      | 1 60  | 1 70   | "    "    E. I.             |       | 0 14  | 0 20  |
| Slippery Elm, g. b.      |      | 0 18  | 0 20   | "    "    Tinneville        |       | 0 20  | 0 30  |
| "    flour, packets      |      | 0 28  | 0 32   | "    Uva Ursi               |       | 0 15  | 0 17  |
| Sassafras                |      | 0 12  | 0 15   | Lime, Carbolate             | (brl) | 5 50  | —     |
| Berries, Cubebs, ground  |      | 0 20  | 0 25   | "    Chloride               |       | 0 05  | 0 06  |
| "    Juniper             |      | 0 06  | 0 10   | "    Sulphate               |       | 0 08  | 0 12½ |
| Beans, Tonquin           |      | 1 00  | 1 20   | Lead, Acetate               |       | 0 13  | 0 14  |
| Vanilla                  |      | 18 00 | 24 00  | Leptandrin                  | oz.   | 0 60  | —     |
| Bismuth, Alb             |      | 2 25  | 2 50   | Liq. Bismuth                |       | 0 45  | 0 55  |
| "    Carb                |      | 2 40  | 2 65   | Lye, Concentrated           |       | 1 30  | 1 50  |
| Camphor, Crude           |      | 0 33  | 0 35   | Liquorice, Solazzi          |       | 0 50  | 0 55  |
| "    Refined             |      | 0 50  | 0 40   | "    Cassano                |       | 0 23  | 0 40  |
| Cantharides              |      | 1 50  | 1 60   | "    Other brands           |       | 0 14  | 0 25  |
| "    Powdered            |      | 1 60  | 1 70   | Liquorice, Refined          |       | 0 35  | 0 45  |
| Charcoal, Animal         |      | 0 04  | 0 06   | Magnesia, Carb.             | 1 oz. | 0 20  | 0 25  |
| "    Wood, powdered      |      | 0 10  | 0 15   | "    "    1 oz.             |       | 0 19  | 0 20  |
| Chiretta                 |      | 0 23  | 0 30   | "    "    Calcined          |       | 0 60  | 0 65  |
| Chloroform               |      | 0 90  | 1 55   | "    "    Citrate           | gran. | 0 60  | 0 75  |
| Cochineal, S. G.         |      | 0 85  | 0 90   | Mercury                     |       | 0 70  | 0 80  |
| "    Black               |      | 88    | 0 93   | "    Bichlor                |       | 0 68  | 0 70  |
| Colocynth, pulv.         |      | 0 60  | 0 65   | "    Chloride               |       | 1 00  | 1 05  |
| Collodion                |      | 0 70  | 0 80   | "    C. Chalk               |       | 0 65  | 0 55  |
| Elatarium                | oz   | 3 20  | 4 00   | "    Nit. Oxyd              |       | 1 15  | 1 23  |
| Ergot                    |      | 0 85  | 0 90   | Morphia Acet                |       | 3 15  | 3 25  |
| Extract Belladonna       |      | 1 65  | 1 80   | "    Mur.                   |       | 3 15  | 3 25  |
| "    Colocynth, Co       |      | 1 25  | 1 75   | "    Sulph                  |       | 3 30  | 3 40  |
| "    Gentian             |      | 0 50  | 0 60   | Musk, pure grain            | oz    | 25 00 | —     |
| "    Hemlock, Ang        |      | 0 10  | 0 95   | "    Canton                 |       | 0 60  | 0 70  |
| "    Henbane             |      | 2 50  | 2 60   | "    Almonds, sweet         |       | 0 55  | 0 60  |
| "    Jalap               |      | 4 50  | 5 00   | "    "    bitter            |       | 8 00  | 8 50  |
| "    Mandrake            |      | 1 75  | 2 00   | "    Aniseed                |       | 2 75  | 3 00  |
| "    Nux Vom.            |      | 0 40  | 0 50   | "    Bergamot, super        |       | 5 75  | 6 00  |
| "    Opium               | oz   | 1 25  | —      | "    Caraway                |       | 3 20  | 3 50  |
| "    Rhubarb             |      | 5 00  | 5 50   | "    Cassia                 |       | 1 40  | 1 60  |
| "    Sarsap. Hon. Co.    |      | 1 00  | 1 20   | "    Castor, E. I           |       | 0 13½ | 0 15  |
| "    "    Jam. Co.       |      | 3 50  | 4 00   | "    Crystal                |       | 0 22  | 0 25  |
| "    Taraxacum, Ang      |      | 0 70  | 0 80   | "    Italian                |       | 0 24  | 0 26  |
| Flowers, Arnica          |      | 0 21  | 0 25   | Citronella                  |       | 1 00  | 1 10  |
| "    Chamomile           |      | 0 30  | 0 35   | Cloves, Ang                 |       | 3 20  | 3 50  |
| Gum, Aloes, Barb. extra. |      | 0 70  | 0 80   | Cod Liver, Imp. Gal         |       | 2 00  | 2 10  |
| "    "    good           |      | 0 40  | 0 50   | Croton                      |       | 1 40  | 1 50  |
| "    "    Cape           |      | 0 16  | 0 20   | "    Juniper Wood           |       | 0 81  | 1 00  |
| "    "    powdered       |      | 0 20  | 0 30   | "    Berries                |       | 2 75  | 3 00  |
| "    "    Socot.         |      | 0 50  | 0 75   | Lavand, Ang.                | oz.   | 0 00  | 1 00  |
| "    "    pulv           |      | 1 00  | 0 00   | "    Exotic                 |       | 1 25  | 1 50  |
| Arabic, White            |      | 0 31  | 0 58   | Lemon, super                |       | 3 25  | 3 50  |
| "    "    powdered       |      | 0 60  | 0 75   | "    ord.                   |       | 0 00  | 0 00  |
| "    "    sorts          |      | 0 90  | 0 24   | Orange                      |       | 2 40  | 2 60  |
| "    "    powdered       |      | 0 42  | 0 50   | Origanum                    |       | 0 65  | 0 75  |
| "    "    com. Gedda     |      | 0 13  | 0 16   | Peppermint Ang.             |       | 14 00 | 15 00 |
| Assafetida               |      | 0 15  | 0 20   | "    Amer.                  |       | 4 00  | 5 00  |
| British or Dextrine      |      | 0 13  | 0 15   | Rose, Virgin                |       | 8 25  | 8 50  |
| Benzoin                  |      | 0 35  | 0 75   | "    good                   |       | 6 00  | 6 25  |
| Catechu                  |      | 0 12  | 0 15   | Sassafras                   |       | 0 80  | 0 90  |
| "    powdered            |      | 0 25  | 0 30   | Wintergreen                 |       | 4 00  | 4 25  |
| Euphorb, pulv            |      | 0 40  | 0 45   | Wormwood, pure              |       | 5 00  | 6 00  |
| Gamboge                  |      | 1 00  | 1 20   | Ointment, blue              |       | 0 60  | 0 70  |
| Guaiacum                 |      | 0 35  | 1 00   | Opium, Turkey               |       | 7 25  | 7 50  |
| Myrrh                    |      | 0 50  | 0 80   | "    pulv.                  |       | 9 75  | 10 00 |



WHOLESALE PRICES CURRENT.—JUNE.

| DRUGS, MEDICINES, &c.—Cont'd |       | \$ c.       | \$ c. | DYESTUFFS—Continued.          |             |
|------------------------------|-------|-------------|-------|-------------------------------|-------------|
| Orange Peel, opt.            |       | 0 35        | 0 36  | Japonica                      | 0 06½ 0 07  |
| " good                       |       | 0 15        | 0 20  | Lacdye, powdered              | 0 33 0 38   |
| Pill, Blue, Mass.            |       | 0 56        | 0 60  | Logwood                       | 0 02½ 0 03  |
| Potash, Bi-chrom             |       | 0 14        | 0 16  | Logwood, Camp                 | 0 02½ 0 03  |
| Bi-tart                      |       | 0 30        | 0 32  | Extract                       | 0 12 0 13   |
| Carbonate                    |       | 0 13        | 0 15  | " 1 lb. bxs.                  | 0 11 —      |
| Chlorate                     |       | 0 27        | 0 30  | " ½ lb. "                     | 0 16 —      |
| Nitrate                      |       | 9 00        | 9 80  | Madder, best Dutch            | 0 09 0 10   |
| Potassium, Bromide           |       | 1 00        | 1 10  | 2nd quality                   | 0 08 0 09   |
| Cyanide                      |       | 0 55        | 0 61  | Quercitron                    | 0 03 0 05   |
| Iodide                       |       | 4 25        | 4 51  | Sumac                         | 0 06 0 08   |
| Sulphuret                    |       | 0 25        | 0 35  | Tin, Muriate                  | 0 10½ 0 12½ |
| Pepsin, Boudault's           | oz.   | 1 25        | —     | Redwood                       | 0 05 0 06   |
| Houghton's                   | doz.  | 8 00        | 9 00  |                               |             |
| Morson's                     | oz.   | 0 85        | 1 10  | SPICES.                       |             |
| Phosphorus                   |       | 1 10        | 1 20  | Allspice                      | 0 13 @ 0 14 |
| Podophyllin                  |       | 0 50        | 0 60  | Cassia                        | 0 25 0 28   |
| Quinine Pelletier's          |       | —           | —     | Cloves                        | 0 48 0 50   |
| Howard's                     | about | 4 90        | —     | Cayenne                       | 0 17 0 20   |
|                              |       | —           | —     | Ginger, E. I.                 | 0 14 0 15   |
|                              |       | —           | —     | Jam                           | 0 25 0 30   |
| Root, Colombo                |       | 0 13        | 0 20  | Mace                          | 1 10 1 10   |
| Curcuma, grd                 |       | 0 12½       | 0 17  | Mustard, com                  | 0 20 0 25   |
| Dandelion                    |       | 0 17        | 0 20  | Nutmegs                       | 1 00 1 05   |
| Elecampane                   |       | 0 16        | 0 17  | Pepper, Black                 | 0 15 0 16   |
| Gentian                      |       | 0 08        | 0 10  | White                         | 0 26 0 28   |
| " pulv                       |       | 0 15        | 0 20  | PAINTS, DRY.                  |             |
| Hellebore, pulv              |       | 0 01        | 0 50  | Black, Lamp, com              | 0 09 @ 0 10 |
| Ipecac                       |       | 2 20        | 2 30  | " refined                     | 0 25 0 30   |
| Jalap, Vera Cruz             |       | 90          | 1 15  | Blue, Celestial               | 0 08 0 12   |
| " Tampico                    |       | 0 70        | 1 00  | Prussian                      | 0 65 0 75   |
| Liquorice, select            |       | 0 12        | 0 13  | Brown, Vandyke                | 0 10 0 12½  |
| " powdered                   |       | 0 15        | 0 20  | Chalk, White                  | 0 01 0 01½  |
| Mandrake                     |       | 0 20        | 0 25  | Green, Brunswick              | 0 07 0 10   |
| Orris                        |       | 0 20        | 0 25  | Chrome                        | 0 16 0 25   |
| Rhubarb, Turkey              |       | 2 10        | 2 25  | Paris                         | 0 26 0 28   |
| " E. I.                      |       | 1 00        | 1 10  | Magnesia                      | 0 20 0 25   |
| " pulv                       |       | 1 10        | 1 20  | Litharge                      | 0 07 0 09   |
| " and                        |       | 0 60        | 0 70  | Pink, Rose                    | 0 12½ 0 15  |
| " French                     |       | 0 75        | —     | Red Lead                      | 0 06½ 0 07½ |
| Sarsap, Hond                 |       | 0 31        | 0 50  | Venetian                      | 0 02½ 0 03  |
| Jam                          |       | 0 95        | 1 00  | Sienna, B. & G.               | 0 07 0 08   |
| Squills                      |       | 0 10        | 0 15½ | Umber                         | 0 07 0 10   |
| Senega                       |       | 0 90        | 0 95  | Vermillion, English           | 0 85 0 90   |
| Spigelia                     |       | 0 30        | 0 31  | American                      | 0 25 0 35   |
| Sal., Epsom                  |       | 2 00        | 2 50  | Whiting                       | 0 85 1 00   |
| Rochelle                     |       | 0 30        | 0 32  | White Lead, dry, gen          | 0 08½ 0 09  |
| Soda                         |       | 0 01½       | 0 02  | " No. 1                       | 0 07 0 08½  |
| Seed, Anise                  |       | 0 13        | 0 16  | " No. 2                       | 0 05 0 07   |
| Canary                       |       | 0 06½       | 0 07  | Yellow Chrome                 | 0 09 0 15   |
| Cardamon                     |       | 1 60        | 1 70  | " Ochre                       | 0 02½ 0 03½ |
| Fenugreek, g'd.              |       | 0 08        | 0 09  | Zinc White, Star              | 0 09 0 11   |
| Hemp                         |       | 0 06        | 0 07  | COLORS, IN OIL.               |             |
| Mustard, white               |       | 0 16        | 0 17  | Blue Paint                    | 0 12 @ 0 15 |
| Saffron, American            |       | 0 50        | 0 60  | Fire Proof Paint              | 0 06 0 08   |
| Spanish                      |       | 10 00       | 11 00 | Green, Paris                  | 0 30 0 37½  |
| Santonine                    |       | 2 00        | 22 00 | Red, Venetian                 | 0 07 0 10   |
| Sago                         |       | 0 08        | 0 09  | Patent Dryers, 1 lb tins.     | 0 10 0 12   |
| Silver, Nitrate              | Cash  | 14 90       | 16 00 | Putty                         | 0 03½ 0 04½ |
| Soap, Castile, mottled       |       | 0 11        | 0 14  | Yellow Ochre                  | 0 08 0 12   |
| Soda, Ash                    |       | 0 03½       | 0 05  | White Lead, gen. 25 lb. tins. | 2 20 —      |
| Bicarb. Newcastle            |       | 4 00        | 4 25  | " No. 1                       | 1 05 —      |
| " Howard's                   |       | 0 14        | 0 16  | " No. 2                       | 1 70 —      |
| Caustic                      |       | 0 03½       | 0 04  | " No. 3                       | 1 45 —      |
| Spirits Ammon., arom.        |       | 0 38        | 0 4   | " com                         | 1 30 —      |
| Strychnine, Crystals         |       | 1 70        | 1 80  | White Zinc, Snow              | 2 50 2 75   |
| Sulphur, Precip              |       | 0 12        | 0 13  | NAVAL STORES.                 |             |
| Sublimed                     |       | 0 03½       | 0 05  | Black Pitch                   | 3 00 @ 3 25 |
| Roll                         |       | 0 03        | 0 04½ | Rosin, Strained               | 3 75 4 00   |
| Vinegar Wine, pure           |       | 0 55        | 0 60  | Clear, pale                   | 4 50 6 00   |
| Verdigris                    |       | 0 35        | 0 40  | Spirits Turpentine Imp. Gall. | 0 58 0 60   |
| Wax White, pure              |       | 0 70        | 0 80  | Tar Wood                      | 4 50 4 75   |
| Zinc. Chloride               | oz    | 0 10        | 0 15  | OILS.                         |             |
| Sulphate pure                |       | 0 10        | 0 15  | Cod Imp. Gall.                | 0 84 @ 0 86 |
| " commo                      |       | 0 06        | 0 10  | Lard, extra "                 | 1 25 1 27   |
| DYESTUFFS.                   |       |             |       | No. 1 "                       | 1 14 1 16   |
| Annatto                      |       | 0 35 @ 0 60 |       | No. 2 "                       | 1 02 1 05   |
| Aniline, Magenta, cryst      |       | 2 00        | 2 00  | Linseed, Raw per 7½ lbs.      | 0 70 0 71   |
| " liquid                     |       | 2 00        | —     | Boiled "                      | 0 74 0 75   |
| Argols, groun                |       | 0 15        | 0 25  | Olive, Common Imp. Gall.      | 1 26 1 30   |
| Blue Vitro. pure             |       | 0 07½       | 0 09  | Salad                         | 2 01 2 10   |
| Camwood                      |       | 0 07        | 0 08  | " Pints, cases                | 4 00 4 20   |
| Coppera, Green               |       | 0 01½       | 0 02  | " Quarts                      | 3 25 3 50   |
| Cudbear                      |       | 0 16        | 0 25  | Seal Oil, Pale Im. Gall.      | 0 80 0 81   |
| Fustic, Cub n                |       | 0 03        | 0 04  | " Straw "                     | 0 75 0 80   |
| Indigo, Benga                |       | 2 40        | 2 50  | Sesame Salad                  | 1 56 1 60   |
| Madras                       |       | 0 60        | 0 65  | Sperm, genuine                | 2 70 2 75   |
| Extract                      |       | 0 25        | 0 30  | Whale refined                 | 0 00 0 00   |