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CANADIAN

# PHARMACEUTICAL JOURNAL

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## Original and Selected Papers.

### EMPLOYMENT OF IMPERMEABLE PAPER BOXES IN PHARMACY.

BY E. B. SHUTTLEWORTH.

That ingenious people, the Chinese, to whom we are indebted for so many discoveries—the art of paper-making among the rest—have long been familiar with the mode of waterproofing tissues of vegetable fibre so that they could be employed for resisting moisture, or even for containing liquids, and for a variety of purposes to which ordinary paper is inapplicable. Western nations have been somewhat slow in taking advantage of this fact, and though considerable progress has been made, there remains a field which will no doubt, in time, be opened up, and which will well repay those who enter upon it. The manufacture of articles made of ordinary paper is being rapidly extended in hitherto unheard of directions. One of these was noticed a few months ago, in this journal. It was the application of paper or pasteboard to the construction of barrels, which, when thus made, were stated to possess many advantages over those of wood, not the least being that of cheapness. To render these barrels waterproof is the next step, and it seems possible that such an attempt might be practically successful, though the difficulties in the way of rendering large paper vessels impervious to liquids, for any considerable length of time, are, no doubt, very great.

Unshelled oysters have for the last two or three years been supplied in waterproof paper bags by the retail dealers located in some of our cities, and it is this fact which has directed my attention to the subject, and led to the inquiry whether such receptacles, or those of similar material, might not be employed for holding or conveying many of the drugs and pharmaceutical preparations which are now contained in more expensive, fragile, cumbersome, and weighty receptacles. For articles of semi-fluid or pilular consistence, as extracts, confections, honeys, ointments, and such like, which are usually put in pots, impervious paper boxes might, I think, be employed with advantage. Some extracts, as that of coloc. co., become, in time, very hard, and often they can only be removed by breaking the vessel; almost always the edges of the covered pots generally used are chipped and fractured so that they are no longer presentable. In such cases paper boxes might be made to answer well, as the edges could be cut down as the extract is removed; and, should the extract be very hard, it could be broken up by a smart blow on the side of the box. The great recommendation of such boxes would be their cheapness, as their cost would be but a fraction of that of earthenware, and, once used, they might be destroyed.

Boxes constructed of pasteboard, in the manner in which pill boxes are usually made, might be rendered tight at the joints, and otherwise impermeable, by being dipped into a suitable composition; but the seamless boxes which are made on moulds, and are now common enough, would be much more suitable.

Alkaline and deliquescent chemicals, and even caustic potash and soda, might be put in boxes prepared by paraffin, and there are many other purposes to which these boxes or bags might be applied, but as the design of this paper is merely to draw attention to this suggestion they need not now be enumerated.

For a composition to prevent the passage of aqueous liquids paraffin would answer well, and an alcoholic solution of shellac or other resin might also be employed. A dip in sulphuric acid of the proper degree of strength, as in the manner of making vegetable parchment, would much strengthen the boxes, and would also to a great extent close the pores of the paper. Amongst other compositions which might be noticed, I would mention silicate of calcium,

deposited from a bath of silicate of soda or potash, followed by chloride of calcium.

For alcoholic liquids, as well as many others, glue, or a mixture of glue and sulphur, or glue rendered insoluble by potassium bichromate, might be tried. If a paper cone, such as grocers use, be dipped into glue and allowed to dry, it will hold strong alcohol for quite a length of time. I do not mention this fact as indicating the use of paper parcels for carrying alcohol, but merely as showing the impermeability of the glue coating.

The waterproofing composition used by the Chinese consists of a mixture of three parts of blood from which the fibrine has been separated, four parts of lime, and a little alum. Straw baskets are rendered waterproof by this mixture, and paper is made impervious, and at the same time much harder and stronger.

I think that the suggestions I have made are capable of being worked up into practical shape, and I should at any rate be glad to hear them discussed.

TORONTO, April 10, 1877.

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## FRACTIONAL NOTES.*

*Pill Excipients—Sulphate of iron* gives always more or less trouble in the formation of a good pill mass, which trouble a little glycerin does away with; for instance, the following often prescribed formula: Extr. nuc. vomic. gr. x, ferri sulphat. gr. xx. quiniæ sulph. gr. xl, gives with glycerin gtt. v—vi. an unexceptionable pill mass. (Maisch.)—The well-known Blaud's pills (sulphate of iron and carbon. of potassa) are best made with powdered tragacanth and simple syrup: For instance, ferri sulph. 1 drachm, potass. carb. 1 drachm, give a good pill mass with pulv. tragac. ½ drachm and syrup. simpl. gtt. v—vi (Maisch.)—Where these latter pills are often prescribed, it becomes easier to keep a pill mass on hand. Rub together 15 parts each of sulphate of iron and carbonate of potassa, add 3 parts sugar; a somewhat soft mass results, the protocarbonate of iron of which is perfectly preserved by the sugar. For every 30 parts prescribed (*i. e.*, of each 15 parts) take 33 parts of said mass and add about 6 parts powdered marsh-mallow root.—*Pil. coloc. comp.* Add to 100 parts from 6-7 parts water and beat well.—*Creasote pills.* For 1 drop of creasote take 4 grains of powd. soap, 3

*From the Druggists' Circular.

grains bread crumb, and 1 grain lycopodium.—*Resina jalapæ.* 20 grains resin require 4 drops alcohol; must be rolled out quickly.—*Scammony.* 40 grains, about 5 drops alcohol.—*Quiniæ sulphas.* For large quantities, the following from the *Druggist' Circular*, '74, p. 195, is superior to any other: Add to each ounce quinine 2 drachms tartaric acid, 1 drachm wheat flour and 5 (five) drops water (no more water! !) Beat well. An old mass worked a little over in the hands gets soft enough. For small quantities I do not know of any excipient better than plasma (glycerolate of starch).—*Aloes.* To 1 drachm aloes take 6 grains powd. marsh-mallow root and about 6 drops glycerin. A good pill excipient to keep on hand is 6 fl. drachms glycerin and 2 drachms powd. tragacanth. (Wiegand).

*Volatile Liniment.*—A combination of ammonia and olive oil, which not only forms a white mixture, but is expected to keep so. Nowadays, with the misnamed olive oils (in reality cottonseed oil, lard oil, etc.), it is impossible to prevent it from separating after a couple of hours. Rother, observing that a good liniment was obtained by using green olive oil (ol. olivar. commune), and noticing that said oil is always more or less rancid, bethought himself of adding a little oleic acid to liniments made with the yellow oil commonly found. By adding 4-5 drops oleic acid to every pint of liniment, it will keep as well as it used to do in olden times.

*Show Colors, Freezing Prevented.*—Bullock found by experiments that

½ pint gylcerin in 1 gallon water freezes at 30° F.
1 pint glycerin in 1 gallon water freezes at 24° F.
1½ pints glycerin in 1 gallon water freezes at 18° F.
2 pints glycerin in 1 gallon water freezes at 10° F.
3 pints glycerin in 1 gallon water remains fluid at 3° F.

*Sugar and Syrup.*—The spec. grav. of sugar is 1·58. Its bulk when dissolved is ⅔ (12 ozs. equal 8 fluid ozs.) One pint of syrup requires 13¾ ozs. augar and 7⅜ fl. ozs. water. One pound avoirdupois sugar requires 8⅛ fl. ozs. water and should measure nearly 18 fl. ozs. (Pile, jr.)

*Vital Force.*—(Patented England, October 3, '66, Number 2536, by C. E. Brooman.) Whenever nitrogen and carbon are brought into contact (or nitrogenized and carbonated bodies) there is disengaged an imponderable fluid. It is collected, manifested and transmitted by currents, like the electric fluid. This current can pass through conductors which are insulating for electricity—*Apparatus.* A bladder (or porous vessel) is filled with water of ammonia and immersed up to the neck in molasses. A silk cord is attached to the neck of the porous vessel, and the end of another silk is placed in the molasses. By the union of both silks the "vital force" current is established.

*A Scientific Jailer.*—A visitor to a French prison, upon inquiring how the prisoners were fed, received the following information:

Each prisoner receives per diem 33 p. c. nitrogenous matter, 27 p. c. albuminoid, 15 p. c. gelatin, 18 p. c. fibrin, 7 p. c. hydrated matter, and the right to 10 cubic metres of air. (*Ch. News*, xvii., p. 56.)

If any of our readers is of a *mathematical turn* of mind, here is a titbit for him: The frequency of the pulse in man, as connected with his stature, is in the ratio of the ninth root of the fifth power of the height. (VOLKMANN. *Ch. News*, xvii, p. 72.)

*Extraordinary Use of Distilled Water.*—In the rainless region of South American (between the 18th and 28th parallel south—600 miles) people have for many years derived their supply of portable water from the sea of the Pacific, distilled in greater part by coal imported from England at $15 per ton. Even the locomotives. (Capiapo and Caldeira) are driven with distilled water. (*Ibid.* xvi, 24.)

*Essay on Coal*, delivered 1858 by an Oxford candidate: Coal is a black mineral. The way they produce it is this: First they dig a large pit in the earth. Then they cut down a quantity of timber and put it in the pit, and cover the whole with peat. Then they burn the timber. After it has been burnt once it becomes charcoal, and out of the charcoal they make *oxygen* gas, with which we light our streets and houses. (*Ibid.* xvii, 253.)

*Syrup Bottles.*—Nothing is more disagreeable than the cementing of the stoppers; in order to remedy this a peculiar kind of glass stoppers with very slender body has been invented. Stoppers are not at all necessary—a metal cap (as we use for soda water syrups), or, cheaper still, the lower part of magnesia boxes, answers every purpose, it being only necessary to keep out the dust. A better way is to discard syrup shelf bottles entirely, and use plain bottles, which are stood on a piece of felt in jars; another piece of felt, forming a kind of cylinder, protects them against breakage. The bottles can be easily cleaned, and the surrounding air (as a bad conductor of heat) will prevent the syrup from spoiling so soon.

*Ointment Jars.*—Before filling in a new batch, be sure to scald out the jars to render them perfectly sweet. As this scalding out cannot well be done where the jars are provided with glass labels, the best way is to get hold of cheap tumblers of size to fit in the jars, and put the ointment in the tumblers. These can easily be scalded out. To guard the tumblers against being broken, stand them on a piece of thick hatter's felt, and cut another piece to form a kind of cylinder round the tumbler.

*Black Ink.*—Nutgall ink writes very pale at first: manufacturers used to "age" it by keeping it several months, stirring two or three times daily, in order to darken the color. This time can be considerably shortened by blowing air throngh the ink, which can very conveniently be done by means of a soft rubber syringe. Since the idea is to oxidize the iron salt, the oxidation can be obtained in a short time by putting chlorate of potassa and cupric oxide (or powd-

ered glass, or similar substance) in a test-tube; close the latter with a cork, through which passes a bent tube, and heat over a spirit lamp. Oxygen will be evolved, and five grains of the salt, equal to three fluid ounces of oxygen, will considerably darken half a gallon of ink. The use of the addition of cupric oxide to the chlorate is merely mechanical, to facilitate its fusion.

*Red Ink.*—Attention is called to the new color, Eosin, it gives a fiery red or soft rose-leaf color, according to the strength of the solution, without the least admixture of blue shade, which makes the fuchsin ink so vulgar looking. It is rather expensive $1.50—$2.00 per oz.; but this is compensated for by its great tinctorial power—four grains per fluid ounce being rather too strong. By the way, ANILINE INKS ARE IMPROVED in fire by using a decoction of quillaya bark (say, one in twelve) instead of water, to dissolve them in.

*Ether and Chloroform.*—Never use a glass stopper, but only a good velvet taper cork; it prevents evaporation. Put the same quantity in two bottles—one glass stoppered, the other stoppered with cork and you will find after a month a marked difference in the quantities.

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## ON EMULSIONS.*

BY E. GREGORY, LINDSAY.

"There exists so much difference of opinion as to the comparative success of various methods for producing emulsions, that it gives rise to a suspicion, there may be an equal difference in the estimate of what qualities are essential to the constitution of a perfect emulsion. Hence the necessity of a fixed standard of excellence. Such a standard we find in the milk of the cow. An emulsion, then, should be white as milk, and should have its fat-globules too small to be visible to the unassisted eye, and so well suspended that, although on standing a cream-like layer may rise to the top, it will readily reunite on shaking. Adopting this standard, the writer will endeavor to enumerate the various methods proposed for making emulsions, and to give the results of actual experiment. Considering oil of turpentine as a fair type of the volatile oils, and that they are the most difficult class of substances to operate with, researches have been mostly confined to that drug. Premising these remarks, I proceed to consider—

*Read at the last meeting of the American Pharmaceutical Association, in answer to Query 39: How much acacia is needed to emulsify perfectly the fixed or volatile oils and balsams?"

1. The method which directs that equal parts of mucilage of acacia and oil should be put into a bottle and well shaken together, the requisite quantity of water being gradually added. If the mucilage be fresh, the bottle only partially full, and the shaking very vigorous, tolerable results can be obtained with castor oil, moderate results with balsam copaiva, and with oil of turpentine a total failure. But in all cases the oil-globules are distinctly visible to the naked eye.

2. Equal parts of oil and mucilage are put into a mortar together, and briskly triturated.

This gives barely tolerable results with the balsam and thicker oils, but with the oil of turpentine is a total failure, no amount of labor producing the slightest effect.

3. Equal parts of oil and mucilage, the oil to be gradually added, triturating briskly after each addition until the portion added is emulsified.

A fair result can be obtained by this process, if the operator have plenty of patience, and a liberal supply of muscle, but the product is too dark in color. The oil-globules are not visible to the naked eye, but can be easily seen with a magnifying power of three diameters. It separates into two layers in two and a half hours, the lower layer being dark, but not watery.

4. The next process is that wherein equal parts of mucilage, water and oil are put into a suitable vessel, and agitated with an egg-beater until emulsionized.

This yields a tolerable result, is simple, and requires no skill, but is rather laborious, and yields a product very dark in color. The oil-globules are not visible to the naked eye, but quite distinctly under a power of three diameters. It separates into three layers in three hours, the lower layer being very watery.

5. The next process tried was that of Mr. Charles F. Hartwig (published in the *Pharmacist*, Oct., 1875), in which one part of mucilage and one part of water are put into a suitable vessel, thoroughly mixed by being drawn up into and ejected from a small vaginal syringe, and one part of oil having been added, the emulsion is produced by the use of the syringe alone in the same way.

This process yields excellent results, but the emulsion is not quite as white as it should be; the process is rather tedious, and the after-cleaning very troublesome. It is the best of the processes in which officinal mucilage is employed. The oil-globules are invisible to the naked eye, but are distinctly seen with a power of three diameters. It separates into two layers in twenty hours, the lower layer being milky in appearance.

6. A process, published in the *Journal of Pharmacy* in February, 1872, by Mr. J. Winchell Forbes, and apparently designed more especially for oil turpentine, in which he directs that one part of oil shall be put into a bottle and shaken, then one-eighth part pulverized

acacia, and after thorough agitation half a part of water added, the whole to be then vigorously shaken until emulsified.

The resulting emulsion is deficient in whiteness. The oil-globules are distinctly visible, as a multitude of gem-like points, under a magnifying power of three diameters, and are also visible to the naked eye, if a drop be placed on a plate of glass and held up between the eye and the light. It separates into two distinct layers in fifteen minutes, the lower layer being quite watery, but it easily reunites on shaking.

7. If, however, in the preceding process, three-eighths of a part pulverized acacia be used instead of one-eighth, a very good result is obtained, the product being much whiter, the oil-globlues about half the size, and quite invisible to the naked eye. It now takes twelve hours to separate into two layers, the lower layer, however, being still watery.

8. The next process for consideration is described on page 343 of *Mohr and Redwood's Pharmacy*, English edition of 1849, in which one part of pulverized acacia and one and a half parts water are put into a mortar, and after thorough trituration three parts of oil are added gradually, each separate portion being emulsified before another is added. The results are admirable, the product being as white as milk. The oil-globules are not visible to the naked eye, but slightly so under the power of three diameters, and it does not separate into two layers under twenty-four hours, the lower layer having the appearance of milk.

9. The last process which will be referred to is recommended by Mr. Hans M. Wilder, in the *Druggists' Circular* for December, 1874. One part of pulverized acacia and two parts of oil are put into a mortar and rubbed up together; one and a half parts of water are then added at once, and with a few revolutions of the pestle the whole is emulsified.

It has yielded in my hands the very best results. The emulsion is beautifully white, scarcely to be distinguished from milk, and the necessary manipulations are very speedy and simple. The oil-globules are totally invisible to the naked eye, and not very perceptible with a power of three diameters. It separates into two layers in twenty four hours, the lower layer being quite like milk, whilst the upper would pass for cream, and at the time of writing this, four days after making, retains the same appearance, and is by far the best out of six samples that are standing undisturbed before the writer.

In summing up results, the conclusion must be arrived at, that those who desire an unexceptional emulsion, must abandon those processes in which officinal mucilage is used, and adopt one, which calls for pulverized acacia. Any inquirer, who will take the pains to prepare a series of emulsions according to the formula as given above, and will set the bottles in a row before him, will in a few

hours receive a striking lesson. Of these processes No. 9, of Hager and Mohr, noticed by Mr. Hans M. Wilder, is the quickest, is simple, demands no apparatus that does not exist in every pharmacy, and yields unexceptionable results. Next to this comes process No. 8, taken from *Mohr and Redwood's Pharmacy*, which yields an admirable product, but is a little more tedious than the preceding. No. 7, Mr. Winchell's process improved, is admissable when a pestle and mortar cannot readily be obtained from any accidental cause, but it will scarcely succeed with the more viscid oils or balsams, such as castor oil or balsam copaiva. Of the processes using officinal mucilage, the only one yielding a good result is that of Mr. Hartwig, No. 5, in which the vaginal syringe is used.

In answer, then, to the query at the head of this paper, the writer would say, that three drachms of acacia in fine powder are necessary to emulsify one ounce of any of the volatile oils, and that a little less (about two drachms) will answer for the fixed oils and balsams, and that to this quantity of gum four drachms and a half of water must be added (no more and no less), and that either the water or oil may be added first to the gum, but it is quickest to add the oil first, and well triturate before adding the water. Less gum can be made to yield a good result by a careful operator, but as a general practical working rule it may be said that three drachms are necessary for one ounce of oil.

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## DR. WILKS ON ALCOHOLISM.*

The *British Medical Journal* of a few weeks back reports a clinical lecture at Guy's Hospital delivered by Dr. Samuel Wilks, F. R. S., lecturer on medicine at the hospital. The remarks of Dr. Wilks are of great weight, especially at a time when a whole array of whiskies, brandies, sherries, and other alcoholic beverages more or less deadly are being hallelujahed through the country by the opinions of the medical press and testimonials from private practitioners.

We quote from Dr. Wilks's lecture :—

I do not know of any subject that is of greater importance to consider, both with reference to diet and medicine than that of alcohol, You must be well acquainted with the evil effects of drinking in this great city, whether you look in the medical wards and see the patients brought there through it; in the surgical wards, and notice the number of accidents resulting from it; in the prisons, in the workhouses, where some of their wretched occupants owe their downfall from superior stations to it; or in the lunatic asylums,

*Chemist and Druggist.

where 12 to 15 per cent. of the inmates have been broken down by it. It is remarkable how little we know of them, when it is considered what an enormous quantity of spirits is consumed. I believe twenty-five millions of gallons at least are made in the country every year. It is still disputed whether it acts as a food or not. A few years ago it was said that it all passed out of the system as alcohol, or as some of its products of decomposition. Such authorities, French chemists, said that it was eliminated by the skin, urine, breath, &c. They used chromate of potash, which is turned green by alcohol, as their test for it. I have read lately of a test in the French papers, where, to detect alcohol in the brain, this was boiled with benzoic chloride, and, if alcohol were present, it was changed into benzoic ether and recognized by its smell.

But the amount of alcohol excreted in this way is so infinitesimal that the remainder must be in the body, and there can be no doubt that it is oxidized; and this supports Liebig's theory that it is a food for the lungs.

If, however, we do not understand its physiological workings, yet we can see the effects of it on the system for all practical and clinical purposes. In the first place, does alcohol appear to be a necessary food? There can be but one answer. There are many nations who do not take it, and some whose religion forbids its use. Is it necessary for us? Well, you know many in this country who do not take any. It is not a necessity, then. It is for this we have to contend, and if I can impress this on you the hour will not be wasted. English people are, however, too often brought up with the idea that it is a necessary article of diet. Patients will take their wine and spirits even when they are doing themselves harm, and if you object, will ask, "What must they do?" You tell them to do without them; to which they will reply that they must take something. I want you to get it thoroughly out of your minds that there is any *must* in it, and start afresh with the idea of its non-necessity.

Let children always live and grow up without alcohol; in after years, when we pass an artificial life, there may be reasons for taking it; but remember, even then it is not an absolute necessity. Start with this principle; let your patient, even an adult, try to do without it, and then, and if circumstances seems to suggest it, let him have his glass of wine. I do not say that a number of persons can do entirely without any in our present mode of living, but let us regard alcohol in its true light, as a luxury, as we do tea, tobacco, &c. If we do this, we are safe. I cannot recommend you to live entirely by rules and natural laws, and give up all the conventional luxuries of life, for then we should dismiss more than half the dishes from our table. I do not want this to come about, and for my own part, I like a glass of wine or a cigar as well as other people. There is in to-day's paper an account of some vegetarians who never eat any meat. I do not advise you to follow their example, but it shows

you that meat is not essential to life. We might, I have no doubt, live on what Dr. Johnson states Scotchmen and horses do—viz., oats.

What are the effects of a small dose of alcohol? It is said to be stimulant. If a man be jaded and tired, it gives a sort of temporary support; a little beyond this point, and he is depressed, the stimulant effect lasting only for a time. There is a dilatation of the vessels and warmth of the surface taking place, at the expense, however, of internal heat. In large doses the temperature goes down.

Do these small amounts really stimulate and help one in his work? I ask a sportsman; he says he gets tired, and then has lunch, after which he feels comfortable and jolly, but never shoots another bird. It is the same with billiard players. A violin player in my house was advised to take a glass of wine for his excessive nervousness, but refused, saying, "I know I shall lose all my nervousness, but I shall also lose my touch, and my notes will be blurred, and I shall be the last to find it out, although it will be very apparent to others."

You see, therefore, it does not stimulate or add edge to our accomplishments; but we might ask, does it add to our strength or enable us to endure longer? To answer this I will refer to a little book in my hand by the late Dr. Parkes, entitled, "On the Issue of a Spirit Ration during the Ashantee Campaign."

This book contains the reports of the medical officers on the effects of spirits doled out to the men. The result as given by Dr. Parkes is to the effect that alcohol is not a perfectly reliable aid, and requires, when used at all, to be employed with a full knowledge of its mode of action. The first effect of alcohol when given in a moderate dose (for example, what is equal to one fluid ounce of absolute alcohol) is reviving; but this effect is transient. As shown in the report, the reviving effect goes off after, at the utmost, two and a half miles of additional march, and sometimes much before this; then the previous langour and sense of exhaustion not only return, but are sometimes more intense, and, if alcohol is again resorted to, its effects now are less satisfactory.

The fact is that alcohol, as usually taken, is not a stimulant at all. It is a depressant and narcotic. People are simply under a delusion when they think it otherwise. We ought to change its name, and we should then get a proper notion of its character. I believe this change would tend more than any other single circumstance to make people cautious in its imbibition. It is taken for the same reason as chloral, and as opium in other countries. If you regard it as a narcotic, you will then better understand all the consequences of its use. A man in a drunken brawl overnight gets his teeth knocked out. The next morning he has no recollection how it occurred, or in what manner he could have met with the accident. Cases such as this are constantly being brought into the police courts, and to some people seem almost incredible.

Alcohol, you see, is an anæsthetic. The man we have just mentioned has felt no pain. In smaller doses, as you all know, it benumbs not only the sense of touch, but that of sight and taste. Every man who has drunk much wine feels that he has lost his taste for the time. He does not know whether he is taking good or bad. "Every man at the beginning doth set forth good wine; and, when men have well drunk, then that which is worse." If it were a stimulant, your taste ought to be more refined. It seems to be an utter absurdity to suppose that human nature can crave after a stimulant. For what are people craving? For what is a hard-worked man longing? Not for a stimulant, but for holiday and repose. It is for repose that every one is seeking. Some miserable people even long for death, "where the weary are at rest." Is not the cry of the lotus-eaters as far reaching as humanity itself, "There is no joy, but calm?" It is contrary to human nature to crave for stimulants. The idea is absurd, and the more one knows human nature and its history the more one wonders how such a name as stimulant could be given to any substance which has had so powerful an influence on the human race as alcohol. It be known that anything so craved after must be of a soothing, benumbing, or dulling nature. People say they feel better after taking alcohol. Of course they do; one does feel better.

If any of you, whilst working up for your college or hall, get down-hearted, and take a glass of wine or spirits, I have no doubt you feel better; but would you go on with your work? or, would you not go to sleep, or take the newspaper and sit over the fire? If a man have a racking pain in his head, a strong glass of brandy and water will often drive it away—a proof of its narcotising effect on the brain. A man worn out with anxiety and pain, does he want a stimulant to increase these feelings? Is he not making use of a misnomer when he takes a stimulant to drown his sorrows in the bowl? Do not the lower orders, as in an Irish wake, know the benumbing influence on grief? Is it likely they would have recourse to drink in order to increase their susceptibilities? If it were a stimulant, it would bring out our faculties; but, instead of this, it paralyses our intellect, and then allows all the bad passions to have free play. This is the meaning of *in vino veritas*, just as a madman loses his will and control by his higher faculties becoming paralysed.

An immense evil has been perpetuated by giving alcohol a wrong name. It is called a restorative and stimulant; but this it is only to a very slight extent and under special circumstances. Its general effect, and that for which it is almost universally used, is for its benumbing action. I want you to think of it as a depressant, an anæsthetic and narcotic rather than as a stimulant, and you will then get an insight into its injurious effects on the human body.

As a medicine, of course, it is a good one. It is excellent as a sedative. After trying opium and chloral without success, alcohol

will often give a good result in the severest neuralgia. It lowers the temperature in febrile conditions, sometimes two or three degrees. This is especially the case in typhoid fever and pneumonia. A quick pulse and high temperature call for it. There was an old man in this state last year in the ward, and I believe his life was saved by the large quantities of brandy that he took. It seems to prevent tissue-change, and large quantities seems to make a person fat. There was one case of it in this hospital some time ago, of a woman who had suddenly taken to drinking spirits, and became inordinately fat. It is curious that, with all my reluctance to order alcohol unless I clearly see its necessity, I never find any one but myself order spirits of wine as a food in order to promote the growth of fat; but its effects in this respect are very striking. Little children wasting away, such as those who are not suckled, may have cod-liver oil and steel wine given them, and yet still waste; but, if put on alcohol, will often get rapidly fat and well. I have seen several such cases.

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## BISULPHITE OF LIME AND ITS USE IN BREWING.

At a meeting of the Manchester Chemists' and Druggists' Association a paper on this subject was read by Mr. A. N. Palmer, and is reported in the *Pharm. Jour. and Trans.*:

After some preliminary remarks the writer said that although the name Bisulphide of Lime was one that could by no means be brought into agreement with current chemical theory and nomenclature, it was, at the same time. a name that expressed well enough the fact that in the substance so called, lime was contained in presence of excess of free sulphurous acid. It was prepared on the large scale, by passing sulphurous acid gas into water having lime suspended in it until the lime was dissolved or the clear liquid had reached the required specific gravity. It was, in fact, a solution of sulphite of calcium in free dilute sulphurous acid. This was its composition when freshly prepared, but no sooner was it made than it began to absorb oxygen from the air, so that it was impossible in practice to find a sample which did not contain sulphate of calcium as well as sulphite. Bisulphite of lime as met with in commerce varied, in respect of its important constituents, within not very wide limits. In the following table are given the percentages of the sulphurous acid gas ($SO_2$) and (in five of the cases) of the lime (CaO) that the writer had examined at various times. "A" was obtained from a wholesale druggist. B, C, D, and E were obtained from four different makers of bisulphite, and F, G, and H are distinct samples supplied by a fifth maker.

| | Sp. gravity. | Lime. | Sulphurous Acid Gas. |
|---|---|---|---|
| A | 1·056 | — | 4·45 |
| B | 1·070 | 2·38 | 5·38 |
| C | 1·060 | 1·96 | 4·73 |
| D | — | 2·241 | 5·779 |
| E | 1·070 | 2·39 | 5·82 |
| F | 1·060 | 1·78 | 4·76 |
| G | 1·048 | — | 3·90 |
| H | — | — | 5·46 |

Only of samples D and E were complete analyses made, the results of which analyses were then given.

*Bisulphite of Lime "D."*

| | | |
|---|---|---|
| Sulphate of Calcium | ·337 | per cent. |
| Sulphite of Calcium* | 4·408 | " " |
| Sulphurous Acid† | 3·877 | " " |
| Water | 91·278 | " " |
| | 100·000 | |

*Bisulphite of Lime "E"*

| | | |
|---|---|---|
| Sulphate of Calcium | ·25 | per cent. |
| Sulphite of Calcium‡ | 4·90 | " " |
| Sulphurous Acid§ | 4·11 | " " |
| Water | 90·74 | " " |
| | 100·00 | |

Bisulphide of calcium was preferred by brewers to a solution of sulphurous acid capable of yielding an equal percentage of sulphurous acid gas, because in the first place the former was more stable than the latter, and because, secondly, its sulphurous odour was much less pronounced. The employment of sulphite of calcium rather than that of sulphite of potassium or of sodium was due to its being transformed by oxidation in the beer to sulphate of calcium, —a substance whose presence in their brewing-water brewers always desired; while the use of bisulphite or of a sulution of calcium sulphite in sulphurous acid was explained by the comparative insolubility of that sulphite in the brewer's worts.

The writer then described in some detail the uses to which among brewers bisulphite of lime is put, and the methods of its ap-

* Containing 2·774 per cent. $SO_2$
† " 3·025 " " "
‡ " 2.61 " " "
§ " 3.21 " " "

plication. Beer, both in the process of its production and in the finished state was, liable to certain changes injurious to its character and quality, which, it was believed, could be absolutely prevented by the employment of bisulphite of lime. This was the case both when those changes were directly referable to the albuminoid substances of the beer, and when they were more properly expressed as the oxidation of the alcohol of the latter into acetic acid. The bisulphite of lime had, of course, an affinity for oxygen superior to that which alcohol or any other substance present in the beer had, so that whatever oxygen was absorbed went to that and not to these. By the use of bisulphite, moreover, in his "working squares," the brewer could bring the fermentation process completely under his control. By the addition of this agent to a fermenting fluid, either the rate of fermentation could be diminished or the process stopped altogether.

It was also stated that when the primary fermentation with yeast was completed and the beer racked off into casks, many brewers were accustomed to add a further quantity of bisulphite of lime. The difference between beer which had been treated in this way and the same beer unbisulphited was said after a few days to be very apparent. When the former was sparkling, sweet and full-bodied, the latter might be quite flat, sour and thin. In beer in which the primary fermentation was completed, in fact, not all the substances in the original wort were fermented that were capable of fermentation. The beer contained these residual substances as well as a good many yeast cells. Fermentation thus went on more or less slowly in the casks, the beer diminishing in gravity and body, through the conversion of the extract-giving and toothsome sugar into thin and unsubstantial alcohol. Now the addition of bisulphite retarded this change and spread it over a longer time. Besides this, it prevented any such absorption of oxygen as would issue in the acetification of the alcohol of the beer. When properly applied and in due proportion, the sulphurous smell of the bisulphite was not perceived in the beer to which it was added. Indeed in the very act of working its effect it became transformed by absorption of oxygen into odorless products of change. The products—sulphate of calcium and free sulphuric acid—remained in the beer. As to the former of them, the formation of this substance in the wort during the process was positively advantageous if there were any grounds for the belief, widespread among brewers, that water containing a good deal of calcium sulphate was better for brewing than water similar in other respects, but lacking this ingredient. On the other hand, the fact, that, the use of bisulphite of lime, during and after the actual brewing process, meant the presence in the finished product of about 1¼ grain of free sulphuric acid to the pint seemed generally ignored.

The writer in conclusion, referred to the use of bisulphite of

lime for keeping such of the brewers' utensils as were not in constant use sweet and free from fustiness, as well as for recovering casks that had become partially "diseased."

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## THE CHINESE KNOWLEDGE OF COD-LIVER OIL AND IODINE.*

BY J. DUDGEON, M. D., ETC., PEKIN.

In the Chinese Materia Medica no fewer than thirty-one different kinds of fish with scales, and thirty-seven without scales, are mentioned. Among so many, it would be strange if certain therapeutic virtues belonging to some had not been discovered. The cod is not known to Chinese waters, as far as I am aware, and no oil is extracted from the livers of fishes. The Chinese, however, have found out that the use of fish and fish oil—particularly shad—is of service, and especially in consumptive cases. Phthisis is believed to be infectious. They account for it on the hypothesis that at the moment of death a worm is expelled, which enters into the bodies of those in attendance, through the breath. To stamp it out, therefore, the patient, while yet alive, is sometimes put into a coffin, and buried or thrown into a river. This notion among the people is another way, most probably, of asserting the hereditary nature of any malady. The distinguished author (Lishechen) of the Puntsao or Chinese Herbal, who wrote over two centuries ago, mentions a case of this sort, as reported in another work, where several persons were so affected. The young lady in this instance was found floating in her coffin, in one of the great rivers by a fisherman, and being taken on board and fed on shad, she recovered, and afterwards became his wife. Here we have the germ of our present cod-liver oil treatment. This fish is said to possess insecticidal and anthelmintic properties, and this is the Chinese *rationale* of its use in phthisis. For a similar reason it is also prescribed in fistula in ano, hæmorrhoids, etc. Oil of this fish is said to be a most certain cure in pityriasis versicolor, the cure being affected instantaneously with one application.

This same Herbal mentions various species of seaweed as possessing strong and well-known therapeutic properties, and of special value in the dispersion of hard tumours—goitre, for example. They have long been acquainted with the general virtues of the various species of *Laminaria*, and these varieties are mentioned as occurring along the coast of the Eastern Sea, the coast of Corea, and the Malayan Archipelago. The great Herbal speaks of seven chief

*From the Medical Times and Gazette.

species. The people in the maritime provinces of China eat seaweed plentifully, both medicinally and as a vegetable food, besides using it as a manure; in this custom resembling the inhabitants of our own Hebrides. It is prescribed alone, chiefly in the form of tincture, its saltish taste having been first washed away, or it is mixed up with other medicines in various prescriptions. Chinese books speak in the most positive manner of the discutient properties of seaweed. Of one sort, it is said that tumours as hard as stones can be softened and removed by it. The uses to which the various kinds of seaweed are put correspond with our own uses before the discovery of iodine. It is prescribed also as a diuretic, and its efficacy in demonology is highly extolled. (The Chinese in medicine, as in everything else, unite sober fact with childish fable, science with sorcery.) It is especially recommended in enlarged testicle and in all sorts of hard, cold, chronic tumours that never suppurate. It is said to cause penile erection. In glandular swellings it is ordered to be sucked or chewed. From the Chinese practice, the following questions suggest themselves:—Considering the high price of iodine and its preparations, and the disagreeableness and occasional indigestibility of cod-liver oil, which has been supposed to owe a part, at least, of its virtue to the presence of preparations of iodine and cognate principles, would it be advisable and advantageous to introduce a tincture and a powder of laminaria into our public dispensaries, poor houses, etc.? Is the Chinese contra-indication of fatty-things well founded? After a course of iodine or its preparations are other diseases more easily induced?

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## EXAMINATION OF SOME COMMERCIAL SAMPLES OF CITRATE OF IRON AND QUININE.*

BY B. H. PAUL.

The results obtained in the examination of some samples of citrate of iron and quinine which I have recently received from different sources are such as to show the necessity of exercising particular caution in regard to the scale preparations, and the desirability of obtaining a specific guarantee that they are not **only** what they ought to be, but also what they profess to be.

The particular preparation now referred to should contain 16 per cent. of quinine, and the test to which the Pharmacopœia directs that it should be submitted is one by no means severe, but rather likely to make any sample appear fully as good as it can claim to be. It is true that the precipitate obtained on adding ammonia to the

*From the Pharmaceutical Jour. & Trans.

solution of the citrate does not contain all of the quinine, and that some of the quinine is retained in solution in the ammoniacal filtrate, but the proportion of the alkaloid thus failing to be weighed is very small in all cases, and with reasonable precaution in operating it does not seriously affect the value of the result obtained, even when the precipitate is well washed and thoroughly dried.

There is, however, another circumstance connected with the Pharmacopœia test which operates so much in favour of the sample examined by that method, that it goes far to counterbalance any deficiency in the weight of the quinine precipitate resulting from the retention of some small proportion of the alkaloid in solution. I refer to the state of dryness, or rather of hydration, in which the quinine precipitate is directed to be weighed. Quinine thus precipitated and dried by exposure to the air, in a moderately warm place, would probably consist of the trihydrate of the alkaloid, which contains upwards of 14 per cent. of water, and the weight of the precipitate would therefore indicate a proportionately greater amount of quinine than is really present in the preparation tested.

It may be in some cases that the amount of water retained by the quinine precipitate is not so large, and that the somewhat uncertain conversion of trihydrate into monohydrate may take place while the precipitate is being washed and exposed to the air; but even in that case it would still retain upwards of 5 per cent. of water, an amount which exceeds that of the quinine held in solution in the filtrate.

Consequently, the precipitate obtained according to the directions of the Pharmacopœia from fifty grains of citrate of iron and quinine ought not to weigh less than eight grains, if the preparation has been made in such a way as to be entitled to rank as a Pharmacopœia preparation.

It is a common thing to hear the statement that although in making citrate of iron and quinine the proper proportion of alkaloid is used, it is impossible to obtain from the finished product the same quantity of quinine. I am disposed to think that this opinion rests solely upon misconception, either in regard to the proportion of citrate scales obtained from a given quantity of quinine being greater than it should be, or some analogous circumstance. Judging from various experiments that I have made with the object of ascertaining whether quinine experiences any alteration when the citrate is prepared, I am decidedly inclined to think that it does not change, but that any discrepancy between the amount of alkaloid in the finished preparation and the proportion used in making it must be due to some unobserved augmentation in the quantity of the product.

Having thus pointed out that the results to be obtained by the application of the Phaamacopœia test to samples of citrate of iron and quinine are likely to be rather in favour of the quality of the

article than otherwise, I will now give the results furnished by three samples lately tested.

Sample No. 1 was contained in a one-ounce bottle, bearing the label of a wholesale druggist in London, with the name and address of the firm, and describing the preparation as "Citrate of Iron and and Quinine, British Pharmacopœia." The bottle was sealed with a seal, on which were the words, "Citrate of Iron and Quinia." On testing the sample, according to the directions of the Pharmacopœia, it gave a precipitate amounting to 9·3 per cent. instead of 16 per cent., or little more than one half as much as it should be. On testing this sample by another method, and carefully extracting the alkaloid by means of ether the total amount of dry alkaloid was 8·96 per cent. A further examination of this alkaloid showed that it was not entirely quinine, but that nearly one fourth of it consisted of chinchonine. The actual proportions were as follows :—

| | |
|---|---|
| Quinine | 6·80 |
| Other alkaloids | 2·16 |
| | 8·96 |

Sample No. 2 was also in a one-ounce bottle; it bore a label describing it as "Citrate of Iron and Quinia, British Pharmacopœia," and the seal on the cork bore the words "Citrate of Iron and Quinia."

By the Pharmacopœia test this sample gave a precipitate amounting to 11·7 per cent.

When tested with ether, the dry alkaloid extracted in this way amounted to 9·7 per cent., and on further examination of this alkaloid it proved to contain, as in the previous instance, other alkaloids besides quinine; the actual figures being as follow :

| | |
|---|---|
| Quinine | 7.08 |
| Other Alkaloids | 2·62 |
| | 9.70 |

Sample No. 3 was received in a paper packet, and had already become somewhat damp. When tested by the Pharmacopœia method it gave a precipitate which in drying gave indications that it was not quinine. This precipitate amounted to 8·87 per cent. The alkaloids extracted from this sample by treatment with ether and drying thoroughly amounted to 6·95 per cent. and this consisted chiefly of amorphous alkaloid : the actual figures being as follows :

| | |
|---|---|
| Quinine | 1·69 |
| Other alkaloids | 5·36 |
| | 6·96 |

The fact that in two cases the preparations here referred to professed to be in accord with the requirements of the British Phar-

macopœia renders these facts especially noteworthy. There is here evidently no room for the excuse sometimes made with justice that manufacturers of scale preparations are required to make them of inferior quality, since there is no conceiveable justification for labelling such articles "British Pharmacopœia."

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## NON-ALCOHOLIC FLUID EXTRACTS PREPARED BY INSUCCATION.*

BY HENRY BIROTH.

Of the large number of fluid extracts the pharmacist of the present day is compelled to keep on hand, by far the largest proportion are purchased from the manufacturer, and but a few are prepared in the shop.

By a little reflection we will undoubtedly find the principal causes to be :

1. The inconvenience, as it necessitates the pulverization of the crude material to a definite degree of fineness. It is often very difficult, if not impossible, to obtain ground or powdered drugs of unquestionable purity, so that it naturally devolves upon the pharmacist to prepare his own material.

2. The expense of preparing fluid extracts on a small scale, considering the loss of alcohol.

3. The preparation requires a certain amount of care and attention which cannot be devoted in all pharmacies, where help is limited.

A great many of the fluid extracts, if viewed from a medical standpoint, will be found to be open to one serious objection, viz. : The large amount of alcohol they contain, which prohibits their use more extensively in the treatment of diseases of women and children. This we find especially to be the case in the fluid extracts of rheum, senna, rhamnus, frangula, rubus, glycyrrhiza, ergota, krameria, etc., which is very much to be regretted.

At the last meeting of the American Pharmaceutical Association, a number of queries were proposed in regard to new formulas, and the improvement of the officinal formulas of this valuable class of preparations, so peculiar to our National Pharmacopœia. I may, therefore, be permitted to offer to my worthy colleagues the results of some experiments which, having been directed to those drugs whose active principles are more or less soluble in water, are somewhat in deviation from the officinal course, the use of glycerine having been substituted entirely for that of alcohol. I have gained the most satisfactory results, and claim for my method the following

*From the Pharmacist.

advantages: First. The drug can be used in its crude state, sometimes requiring only cutting or crushing. Second. It is more economical, as there is no loss sustained by waste of menstruum. Third. It requires but the simplest apparatus, found in every pharmacy, thus proving a boon to even the smallest shop. I have entitled my method "Insuccation," and have called the fluid extracts "non-alcoholic." The following is the formula:

FLUID EXTRACT OF DANDELION.

Take of dandelion root, cut or crushed..... 16 troy ounces.
Glycerin..... 8 fluid "
Boiling water..... 8 pints.

Mix the glycerin with four pints of boiling water; pour upon the dandelion root, and allow to insuccate for twenty-four hours; then strain, allow to settle and decant. Upon the residue pour four pints more of boiling water, and proceed as before. Mix both decanted liquors, and evaporate, by means of a water-bath, to one pint, and filter.

The insuccation can be done either in a stone jar, or more practically in a tin percolater. It is essential that the drugs should not be in powder, not even ground, as then the gummy, starchy pectic substances are much more easily dissolved, and form the greatest obstruction in filtering.

Gentian, rhatany and ergot are extracted with cold water; licorice with cold water to which ammonia water is added, one ounce for each pound of the crude drug; buckthorn bark, rhubarb, seneka and senna are treated first with boiling water and next with cold water and ammonia.

The solvent power of glycerin is well known. In the first insuccation it acts as an assistant of the water in loosening the ligneous fibre, and dissolving the active principles. Its power, though not as great as alcohol, should not be under-estimated. The second insuccation includes the entire extraction of the glycerin, as it is necessary that no glycerin be wasted. In the course of the evaporation we again notice the solvent action of glycerin—the more concentrated the liquors are becoming, the clearer they are getting. Should the extracted liquors contain albumen, this will be observed to coagulate during the evaporation, and has to be strained off. Remarkable is the filtrum with glycerin compounds; nothing adheres to the side of the filter, the sediment is drawn to the bottom.

The use of ammonia in the preparation of these fluid extracts is of no small importance. The menstruum is made softer by it, resinous matter is dissolved to a certain degree by it, the ligneous fibre is more readily loosened, and active principles enter into soluble alkaline combinations. All excess of ammonia, if any, is driven off during the evaporation. Care should be taken to add ammonia only to cold liquors, as it has the property of converting starchy matter into a more soluble form when the liquors are hot.

The non-alcoholic fluid extract, when finished, contains 50 per cent. of glycerin, which acts as a solvent and preservative. It is an elegant preparation, of decidedly better taste than its alcoholic sister, not alone from the glycerin it contains, but more so from being destitute of that acrid matter which is extracted by any alcoholic menstruum.

Decoctions and syrups prepared from these non-alcoholic fluid extracts are very clear, cause no deposit like those from alcoholic fluid extracts, and also free from the above mentioned acrid taste.

Worthy of special mention among these fluid extracts is that of glycyrrhiza, which possesses a very sweet and pleasant taste, and is the best vehicle for disguising the extreme bitterness of quinine. The latter, however, should not be dissolved by acids, as the bitterness is then recalled. The officinal fluid extract does not possess this property, on account of its alcohol, which dissolves a part of the quinine. A syrup made in the proportion of one part of fluid extract to three parts of simple syrup supplies a desideratum which has been long looked for.

The officinal syrup of ipecac, if made from the non-alcoholic fluid extract, is perfectly transparent, and remains clear, so far as noticed.

Although the use of glycerin may be considered objectionable to some of my colleagues, and although the committee of the A. P. A. on formulas for elixirs, in its report, September, 1873, remarked that "it has of late become fashionable to use glycerin as an antiseptic and solvent for various pharmaceutical compounds, and it does not recommend to its use for internal administration, for various reasons," I would say that glycerin in these non-alcoholic fluid extracts is not fashionable, but absolutely necessary, as the committee justly remarks, "for its antiseptic and solvent properties."

Chicago, March, 1877.

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## GLYCERINUM TRAGACANTHÆ.*

BY J. C. THRESH.

Numerous suggestions have at various times been made for improving the pill masses of the Pharmacopœia, or rather such of them as acquire by keeping a consistence unsuitable for rolling into pills. This object it is generally sought to obtain by use of some more suitable excipient, which, without being hygroscopic shall still retain the mass in a plastic and readily diffusable condition. A mucilage of Tragacanth and Glycerine would appear most likely to fulfil these conditions, and has been recommended for the

*From the Pharm. Jour. and Trans.

purpose of several pharmacists, but I am not aware that any one has undertaken a series of experiments for practically determining this point. As the subject appeared worthy of consideration I caused to be made, in September last, a series of the pill masses made according to the official formulæ, and two other series of the same masses made up with Glycerine of Tragacanth.

The Glycerine of Tragracanth used for the two latter series varied in composition, the forms for which I will designate as No. 1 and No. 2.

No. 1—(Proctor's).

| | |
|---|---|
| Pulv. Tragacanthæ | 3iij |
| Glycerini | 3ix |
| Aquæ | 3iv |

Mix the gum and glycerine till smooth before adding the water.

No. 2.

| | |
|---|---|
| Tragacanth Pulv | 3iii |
| Glycerini | 3vj |
| Aquæ | 3vj |

Mix as above.

The excipients thus prepared form an opaque and not very tenacious mass, but by keeping a few days they become almost transparent and very tenacious. If when the mucilage is being prepared, the whole be placed on the water-bath the same change takes place in a few minutes.

From each of the pill masses a small portion was taken and rolled into pills, and the whole placed in the shop store. Six months elapsed since the pills were made, the whole have been submitted to examination, with the subjoined results. The references in this table are to the conditions of the masses, as being of suitable or unsuitable consistency for rolling into pills.

| Name. | B. P. | No. 1 | No. 2. |
|---|---|---|---|
| Pil. Aloes Bbd. | Good | Good | Good |
| " " et Ferri | Hard & brittle | Hard & brittle | Hard & brittle |
| " " et Myrrh | Ditto. | Ditto. (1) | Ditto. |
| " Coloc. Co. | Like Stone | Good | Good |
| " Cambog. Co. | Not rollable | Too tough | Good |
| " Ipecac. Co. | Very good | Good (2) | Good (2) |
| " Hyd. Subchl. | Good | Hard (3) | Hard (3) |
| " Rhei. Co. | Too Hard | Good | Good |
| " Scillæ Co. | Brittle | Very good | Very good |
| " Saponis Co. | Hard (4) | Good | Good |

(1).—This mass could be rolled out, though with great difficulty.

(2).—These masses were not, even when first made, as plastic as the B. P.

(3).—These were very hard, but when worked in the mortar formed a very good mass.

(4).—A very good mass when mixed with a little water.

With regard to the two forms of Tragacanth Mucilage, I see no reason for giving the preference to either, since the results obtained are the same, both with regard to consistency of mass when first formed, and after being kept for a length of time.

The following notes taken at the time when the masses were first prepared, may be of service in this inquiry, and as the masses formed by aid of Tragacanth and Glycerine No. 2, differed only from those made with No. 1, in being a little softer, I shall cease to mention them separately.

Pil. Aloes Bbd. (B. P.) A very good mass which rolled well.

Pil. Aloes Bbd. (G. T.) Required only half quantity of G. T., instead of Conserve ; rolled well.

Pil. Aloes et Ferri (B. P.) Crumbly mass ; rolled out with difficulty.

Pil. Aloes et Ferri (G.T.) 6½ drs. of pill powder made a good mass with 1½ drs. of Tragacanth paste ; rolled readily.

Pil Aloes et Myrrhæ (B. P,) A fairly good mass.

Pil Aloes et Myrrhæ (G. T.) 3½ drs. of powder took 45 grs of Tragacanth ; the mass rolled well.

Pil Cambogiæ Co. (B. P.) A good workable mass.

Pil. Cambogiæ Co. (G. T.) 5 drams powder required 1 dram glycerine, making a very good mass.

Pil. Coloc. Co. (B. P.) Tough mass, requiring to be rolled rapidly.

Pil. Coloc. Co. (G. T.) 22 parts of powder took 3⅜ Tragacanth and Glycerine ; formed a good plastic mass.

Pil. Hyd. Subchlor. (B.P). Greasy paint-like mass, rolling fairly well.

Pil. Hyd. Subchlor. (G.T.) 4 drams powder required 1¼ of the mucilage, making a good mass.

Pil. Ipecac. Co. (B.P.) (5 parts powder, 1 treacle.) A very good mass.

Pil. Ipecac. Co. (G.T.) Not so good a mass as the B.P., not being sufficiently adhesive.

Pil. Rhei. Co. (B.P.) Very good mass ; rolling well.

Pil. Rhei. Co. (G.T.) 8½ drams powder took 2½ of excipient, forming a very nice mass.

Pil. Saponis Co. (B.P.) Rolling tolerably well.

Pil. Saponis Co. (G.T.) Opium 1, Sapo 3½, Glycerine of Tragacanth ½, (1 in 5) ; a very good mass.

Pil. Scillæ Co. (B. P.) Tough, easily worked mass.

Pil. Scillæ Co. (G.T.) Not so good as the official form.

It will be observed that the relative proportion of Tragacanth mucilage required to make up the various powders into a mass depends upon the nature of the powders, but the average proportion of this excipient appears to be 1 to 4. One part equals about 2 of conserv, or 1½ of treacle.

A further and most important consideration is the diffusibility of the pills made by the aid of this medium, since an excipient may answer perfectly so far as regards the forming of substances into plastic masses, capable of forming pills which will retain their form, etc., yet if these pills, either have or acquire a condition rendering them difficult of disintegration, this would be an insuperable objection to the use of that excipient. Therefore to ascertain the action of fluids upon the pills made with Glycerine of Tragacanth, and to compare it with the action of the same fluid upon the official pills, a number of the various pills were placed in test tubes, ½ oz. water being added to each. The whole were then placed in a warm place, and occasionally shaken. In most cases the pills made with Tragacanth swelled to about double their original size, and but slightly coloured the water. They also retained their form after a a number of hours, even when well shaken, but at once fell to pieces if squeezed with a rod. Some of the official pills, as the Pil. Rhei. Co., readily yielded to the action of water, others as Pil. Coloc. Co., have resisted this action for over thirty-six hours.

These tests are not satisfactory, since the action of the water does not represent the solvent action of the stomach's contents; but when a pill yields to water, there can be no doubt as to its exercising its proper action when taken into the system, whereas in the opposite case, there is necessarily a doubt which can only be cleared away by physiological experiments. I hope, however, by further investigations, to arrive at some more satisfactory results as to the diffusibility and action of pills made with the Tragacanth and Glycerine medium.

Granting, then, for the present, that pills made with the excipient are as active as those made with syrup, treacle or conserve, these experiments appear to justify the following conclusions:—

1st. That Glycerine and Tragacanth is totally useless for keeping the Pil. Aloes et Myrrhæ and Pil. Aloes et Ferri in a plastic condition, but that it makes with the latter a better pill mass (than conserve or roses) for immediate use.

2nd. That for Pil. Ipecac. Co. it is not so good an excipient as treacle. That its advantage in Pil. Hyd. Subchlor. is doubtful. When this pill is first made it is more cleanly, and rolls better, if made with tragacanth than when made with castor oil; and pills of the former kind, when placed in boxes with magnesia, do not acquire the unsightly appeatance which the ordinary pills do. In Pil. Sapo. Co. the advantages are also doubtful.

3rd. In Pil. Aloes Bbd. and others of a similar character, the conserve is to be preferred.

4th. In Pil. Coloc. Co., Pil. Cambog. Co., the Glycerine answers admirably, and might with advantage be ordered by the Pharmacopœia for that purpose. In Pil. Rhei. Co. and Pil. Scillæ Co,, it also appears to possess advantages over the official excipients.

but I would not take upon myself, without further trials, to recommend its being substituted for them.

On the whole, however, Glycerine and Tragacanth does not answer the expectations, and scarcely bears out the assertions of some who have recommended it. It is undoubtedly a very convenient substance to have upon the dispensing counter, as there are very few combinations which resist its persuasive powers, but it is equally undoubted that there are very few combinations for which an experienced dispenser cannot find a more suitable excipient.

Buxton, March 16, 1876.

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## TASTELESS PREPARATIONS OF IRON AND QUININE.

The Apotheker Rozsnyay, of Arad, Hungary, whose tasteless preparations of quinine have already proved of considerable value, has lately brought out two new preparations of quinine and iron in which the taste of the ingredients is equally well disguised. One is in the form of a powder, which can be kept on the tongue for several minutes without the taste of either the quinine or the iron being in the slightest degree perceptible. The other is made up in the shape of pastils or bon-bons, of round, convex figure, 1·5 cent. in diameter and 7 mm. thick, with a sugary taste. An analysis by Dr. Hager shows each pastil to contain 0·03 gramme hydrate of quinine (combined with tannic acid) and 0·059 gramme oxide of iron (in the hydrated form). Numerous cases are cited in which these pastils have been administered to children and young females, with the promptest and most beneficial results. For children of four to five years, one pastil every two or four hours was given.—*Pharm. Central., in Chemist and Druggist.*

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## PURIFICATION OF CARBON BISULPHIDE.

Mr. Friedburg prefers the following process to those which have been published hitherto. The carbon bisulphide is distilled over some vegetable fat--palm oil, for example. The liquid obtained is deprived of the greater portion of the original impurites, and this fact has been known for a long time; it is, however, charged with a little fatty substance drawn over in distillation. To free it from this the partially purified bisulphide is poured into fuming nitric acid, which dissolves the fatty matter and completely destroys it, the two being digested together with occasional agitation for 24 hours. The sulphide is decanted, washed with cold water, and again distilled, the washing and distillation being repeated if the first operation does not yield a product which is not coloured rose by iodine.

## PRESERVATION OF EGGS.*

The sure and simple method of keeping eggs sound by smearing the shells with linseed oil has long been practised The oil forms a sort of film over the shell, thereby preventing the two immediate causes of decomposition—evaporation from and penetration of air into the egg. A recent experiment in point deserves notice. A dozen new-laid eggs were rubbed over with linseed oil applied with the tip of the finger; another dozen were coated in like manner with poppy oil; two more eggs were left in their natural state. The whole 22 were then laid close together, in three rows, on dry sand upon a shelf, where they were left undisturbed. At the end of three months they were weighed, and again at the end of six months, when they were opened. The two eggs left in their natural state at the end of three months had lost 11 per cent. of their weight, and at the end of six months 18 per cent., and were found to be half empty and the contents rotten. The eggs coated with poppy oil in three months lost 3 per cent., and in six months, 4½ per cent. of their weight. The eggs were still full, and devoid of unpleasant smell. The eggs rubbed over with linseed oil in three months lost 2 per cent., and in six months 3 per cent. only of their weight, and when opened were found to be full, with the smell of fresh eggs.

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## A NEW INDUSTRY.

The fact that the cities and villages of this country are making use of the rivers as the means of disposing of night-soil, sewage and refuse of manufactures, should call for some effort to turn this fertalizing material back upon our depleted farms and gardens. We believe there is a great industry before those of our people who are disposed to take up this business; the process is one of the simplest, and that great profits would result. The only ingredients needed are burned earth, peat or muck, mixed to the extent of one part of earth or peat to two hundred of the most offensive refuse. This peat or earth is burned by piling it upon a quantity of wood or coal, or any combustible material, and burning it in the manner of burning a coalpit. The whole substance is then mixed and barrelled ready for use. The proportions named will deodorize any water-closet, and when mixed with earth, make one of the most satisfactory fertilizers. It is a serious evil to this nation that we should be exporting and washing away the fertility of the soil at the rate of one-twentieth part annually. We shall have to begin to accumulate and return fertilizers to the farms or stop reaping.

*Pharm. Centralhalle fur Deutschland, January 4, 1877, in Chemist and Druggist.

## MORE EXPLOSIVE COMPOUNDS.*

Two more instances of unexpected decomposition, accompanied with some degree of violence, have lately been brought to our notice. The first happened with iodide of strychnia; a bottle in which some of the salt had been long kept, was held near the fire, to warm the glass and loosen the stopper. An explosion suddenly occurred, scattering the glass and badly wounding the hand. The other accident was related by Mr. B. F. McIntyre, at a meeting of the Alumni Association of the New York College of Pharmacy. On distilling essential oil of bitter almonds over nitrate of silver, to free it from prussic acid, toward the end of the operation the material in the retort violently exploded, breaking all the glass apparatus in the proximity, but doing no further damage. Neither explosion can be very easily explained; in fact, few explosions can, except in a general way. In regard to the iodide of strychnia, it is supposed that the substitution compound had formed, on decomposition, some iodide of nitrogen, in a somewhat similar manner to the production of that substance when iodine is treated with an excess of ammonia. As to the reaction which occurred between oil of bitter almonds and argentic nitrate, it may be said not to be altogether extraordinary, as the silver salt is known to readily form explosive compounds with a number of organic substances. The only wonder is that no mention has been made of it before this time, for the ratification of the essential oil over nitrate of silver is not an unfrequent operation, while it seldom happens that one has occasion to heat old iodide of strychnia.

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## EXAMINATION OF SALICYLIC ACID.

Prof. H. Koble recommends the following method to ascertain the purity of a sample of salicylic acid: Dissolve a small quantity, about 0.5 gm., in about 10 parts of strong alcohol, pour the clear solution into a watch-glass, and allow it to evaporate slowly at the common temperature. The residuary acid forms around the margin of the watch-glass a ring of handsome aggregates of effloresced crystals. These are purely white, if the acid was entirely pure and recrystalized; but they are yellowish or yellow, if the acid was merely precipitated. If the ring is brownish or brown, the acid, although it may have appeared to be pure and white, is to be rejected as impure.—*Journ. prakt. Chem.*, 14, 143.

Dr. H. Hagar gives a still better criterion of the purity of this acid. Having obtained some of the absolutely pure dialysed acid, manufactured by E. Schering of Berlin, he found that it did not

*Druggists' Circular.

impart any color to concentrated pure sulphuric acid. All other varieties of acid, although some of them stood Koble's test, imparted a more or less yellowish, yellow, or brownish tint to the acid. The most decisive test of salicylic acid for purity is, therefore, to add to a small quantity of it some colorless concentrated sulphuric acid, and to shake. The acid should remain colorless, or at most only assume a trace of color.—*New Remedies.*

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## HONEY.*

A great revolution has taken place, and is now in progress, in bee culture. From the insignificant and uncertain pursuit of a few years ago, it has risen to its present position as an honourable, healthful and lucrative employment. It is not so long since the price asked for honey was a fancy one, and when only the rich and extravagant used much of it for the table.

The extraordinary yield of honey during the past season has more than ever demonstrated the necessity for increasing the channels through which this most delicious nectar may find its way to the public. The efforts of the dealers have already resulted in taking it from the list of luxuries and bringing it into general demand for families of moderate means, and it has taken its place beside such articles as butter, cheese and cream. Bee men do not like to acknowledge the fact that honey at five cents a pound returns more on the investment and labour required than most other farm products, but it is, nevertheless, true. They seem very much afraid that merchants who are now turning their attention to its sale will cut down the prices and spoil the market. The law of supply and demand governs the market price of commodities, whether wheat or honey; and, in selling, the question is not what either can be afforded for, but what it will bring. The demand for honey, as a luxury, has heretofore absorbed all that was produced, and made it so dear that comparatively few could afford it. Now, with the modern appliances discovered to direct these busy workers for man's benefit, bee-keeping is destined to develop a source of untold wealth to the country, and bees will be kept in sufficient number to gather the millions of tons of sweets formerly wasted. Exaggerated and incredible as this expression may seem at the first glance, with the record of 200,000 lbs. of surplus honey gathered in one season by bees kept within an area of 10 miles as a basis for an estimate, the statement s no longer a mere hyperbole of speech.

*American Grocer.

## ENAMELS FOR CULINARY VESSELS.*

For enamelling cast and wrought iron vessels,the following is the method and materials most generally employed : one hundred pounds calcined and ground flints, and fifty pounds borax, calcined and finely ground, are intimately mixed, fused and gradually cooled. Of this forty pounds are mixed with five pounds of potter's clay, and ground in water to a pasty mass. The vessel, first thoroughly cleansed by means of very dilute sulphuric acid and scouring with sand, is lined with a coating of this about one-sixth of an inch thick, and left for it to harden in a warm room. A new coating is next added, prepared from one hundred and twenty-five pounds of white glass, free from lead ; twenty-five pounds of borax; twenty pounds soda in crystals, which have been pulverized and fused together; ground, cooled in water, and dried. To forty-five pounds of this, one pound of soda is added, the whole mixed in hot water, dried and finely powdered. A portion of this is sifted over the other coating while it is still moist, and the vessel is then dried in an oven at the temperature of boiling water (212° Fah.). The vessel is then heated in a stove or muffler till the glaze appears. It is then taken out and more glaze powder is dusted on the glazed surface already in fusion. This enamal resists perfectly the action of dilute mineral and vegetable acids and alkalies, and does not crack or scale off from the metal. In Germany and France the following process has lately come into use—more especially for enamelling copper culinary vessels. Twelve parts (by weight) white fluor spar; twelve parts gypsum, and one part borax, are finely powdered, ground together and fused perfectly in a crucible ; when cold, this mass is again carefully ground to powder, made into a uniform paste with water, laid upon the clean metallic surfaces, dried and fused. This also gives a beautiful alabaster surface for ornamental purposes.

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## MASTIC CHEWING.

We adverted, some weeks ago, to the American "chewing gum." In the Orient they use gum mastic, and a correspondent of the *Chemist and Druggist* says he has been assured by some of the first dentists in Constantinople that mastic chewers suffer comparatively little from toothache, and that their principal patients are among those who have not adopted the habit. Even the little children chew mastic, and a mother or sister will give her own special piece to a noisy young ten year old to keep him or her quiet. It is very odd to a freshly-arrived European, on paying a morning visit to some Greek or Armenian beauty, to see her take a large "quid" of what appears to be dentist's modeling wax out of her handsome mouth and deposit it by her side on the divan, so that her flow of language may not be interfered with.—*Phil. Med. & Surg. Reporter.*

*Jour. of App. Chem.

# Editorial.

## THE APPROACHING MEETING OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.

As most of our readers are aware the American Pharmaceutical Association decided at its last meeting to accept the invitation which had been extended through the delegates of the Ontario College, and, accordingly, we may expect our American friends to be with us about the fourth of September next, at which date, at 3 o'clock in the afternoon, the Association will hold its first session, and will probably continue its sittings during the remainder of the week.

American pharmacists generally make this one of the pleasure trips of the season, and, in order that it may be the more enjoyable, are usually accompanied by their wives or daughters, so that we may expect a goodly gathering in our city, and we think, on the part of Canadian pharmacists, we can assure a cordial and hearty welcome.

For ourselves, as well as our confreres, we anticipate a pleasant as well as a profitable time. The deliberations of the Association are always exceedingly interesting, and the papers which are read are frequently very valuable. In order to insure the success of this part of the proceedings a number of queries are propounded at the meeting previously held. These are accepted by those members who think they can do justice to the subjects involved and form the basis of the papers which are read. This year some forty queries will have to be answered, and, in addition we may expect a number of volunteer essays.

There can be no doubt but the coming meeting will exercise a very beneficial effect in arousing an interest in pharmaceutical matters which, in this country, is now not over active ; and also in promoting a friendly and social feeling, thus tending to bind more closely not only the two associations but the individual members of each.

We hope to see a large attendance of the members of our own college and believe that arrangements are now in progress so that all can be accomodated, at reasonable rates, at one of our largest

hotels. Negotiations with the various railways are also contemplated and will no doubt be satisfactorily carried out.

The entertainment and amusement of our guests will involve a considerable outlay, and we have been requested to state that the President of our college will shortly issue to each member a circular on this subject, and it is hoped that a liberal response will be elicited.

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## PROSECUTION FOR COUNTER PRESCRIBING IN ENGLAND.

The doctors and druggists of England are now fairly at swords' point. Each party has, for some time, been making preparations for the encounter, and we may soon expect to see the question of counter-prescribing clearly defined and settled. The opposing parties are the Medical Defence Association, an organization composed of some of the more belligerent members of the medical profession, and the Chemists' Defence Association, which, we believe, has emanated from the Chemists' Trade Association, a body formed recently, but now numbering over two thousand members. The doctors hold their position by virtue of certain statutes, old and recent, while the druggists principally rely on the custom which, they maintain, has become established by long usage and which has allowed them to sell medicine for the trifling ailments of their customers.

A trial case has recently been brought before the Nottingham County Court. Mr. Shepperley, a druggist of considerable experience, was charged with practising as an apothecary, and three instances were brought forward in substantiation. In the first case a bottle of sarsaparilla was sold, for tenpence, to a customer who complained of a trifling eruption ; in another, a lady was supplied with a solution of gallic acid which she apparently prescribed for herself, and in the third case an informer, rejoicing in the name of Thomas Jolly Death, received a mixture for "sore throat, cold and tightness of chest," which the druggist prescribed and prepared for him, and for which one shilling was paid. It appears that "Death had been watching the shop for some time," and, when he made his final swoop, managed to collect evidence sufficiently decisive to convince

the court that an offence had been committed, for which a fine of twenty pounds was imposed, but leave was granted to take the case to a higher court.

The defence did not make out a very strong case, probably from the apparent probability of appeal. It was, however, contended that at the time the statute (George III.) was passed, druggists were in the habit of prescribing for their customers, and evidence of this fact was adduced. It was also claimed that, under another statute, druggists were allowed to dispense medicine, and the defendant had kept within the law. The magistrate declined entering into the question of a definition of the term "dispense" and preferred leaving it to a superior court to decide the matter.

# Editorial Summary.

ORIGIN OF THE NAME FOX-GLOVE.—In a very readable paper on the names of British medicinal plants, contributed by Mr. W. G. Piper to the *Chemist & Druggist*, the derivation of the word fox-glove is traced from a source different from that generally accepted. The shape of the flowers of the fox-glove and the locality in which the plant is found, apparently point to the meaning of the word being "the glove of or for a fox." Mr. Piper gives a different interpretation to the term, and though to our mind he does not thoroughly do away with the idea that the word is derived as commonly believed, yet the derivation he gives, is, after all, possibly correct, and is certainly very ingenious. He thinks that the name is one of a large class, the offspring of ignorance, which, while they seem to bear their meaning on their faces, really hide it behind a thick tissue of mistakes. It is suggested that the word was originally folks' glew, meaning fairy bells or fairy music, and several synonyms of the plant favor this idea. In some parts of Ireland the fox-glove is called fairy bells, and in Norway it is known by a term which means the same thing. Faries were formerly called "the folks" or "the good folks;" glew, in Anglo-Saxon, meant a tintinnabulum, or curved stick with a number of bells hanging from it, one below another. Hence then the term folks-glew, which, when the Saxon language became strange to English ears, was still retained, but became fox-glove, a name to which some meaning could be attached. The German name is "finger hut," which suggested to the botanist Leonard Fuchs the Latin name "digitalis," for it does not appear that the Romans or

Greeks were acquained with the plant. Fuchs—who by the way has had his name perpetuated to us in the word "fuchsia"—tells in his *Historia Stirpium*, published in 1542, of his having coined this name and of its relation to finger-hut, and there is no reason to doubt the statement.

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ACETIC CANTHARIDAL VESICANT.—A writer in the *Pharmacist* finds the following process—modelled after one proposed in England by Mr. Deane—to yield a cheap and reliable preparation. Cantharides, freshly powdered, eight troy ounces, acetic ether, q. s. Moisten the cantharides with five fluid ounces of the ether, and pack it lightly in a cylindrical percolator. Then cover with a paper disc, and pour on four fluid ounces of the menstruum. When the liquid begins to drop from the percolator, close the lower orifice with a cork, and having closely covered the percolator, set it aside for twenty-four hours. Then remove the cork, add more menstruum, and percolate for sixteen fluid ounces. If necessary, filter; and bottle in ounce bottles, labeled with the following directions: Paint the part to be blistered with the vesicant, using a small brush or bit of linen. Several coatings may be necessary, unless the epidermis is very tender, as is the case with children or delicate females. The action is hastened by covering the part with oiled silk or rubber cloth. In from fifteen minutes to one hour the blister will rise. It will often rise in ten minutes by using a little ether in wiping off the hardened film.

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ANALYSIS OF COMMERCIAL SULPHATE OF QUININE.—Dr. B. A. Paul (*Phar. Jour. & Trans.*) publishes the results of an examination of nine samples of quinine sulphate for cinchonidine. The sulphate of the latter alkaloid was in all cases present, in some cases in considerable amount. No. 1 showed 15·05 per cent. water and 9·19 per cent. of crystallized cinchonidine sulphate; No. 2, 15·51 water, 8·64 cinchonidine; No. 3, 14·9 water, 4·86 cinchonidine; No. 4, 15·04 water, 6.81 cinchonidine; No. 5, 14·2 water, 1.14 cinchonidine; No. 6, 15·15 water, 3·64 cinchonidine; No. 7, 13·67 water, 5.64 cinchonidine; No. 8, 8·1 water, 5·24 cinchonidine; No. 9, 10·37 water, 6·26 cinchonidine. In all these cases the amount of cinchonidine is slightly understated as some of the alkaloid escapes separation by ether. In several instances, as Nos. 7, 8 and 9, the amount of water present was below the normal amount—14·45 per cent.—which is accounted for by the salt being somewhat effloresced.

SHOEMAKERS' OR BURNISHING INK.—From a number of recipes furnished by correspondents, the editor of the *Druggists' Circular* selects the two following formulæ as representing the two varieties of this ink:

I. Extract of logwood .....1 to 2 ounces.
Tincture of iron.....1 to 2 "
Sweet oil .....1 to 2 drachms.
Alcohol .....1 pint.

In one formula, the alcohol is replaced by the same quantity of diluted alcohol, and in another, one ounce of powdered nutgalls is added to the same ingredients in the above proportion.

II. Extract of logwood ..... 4 ounces.
Bichromate of potassa .....12 grains.
Yellow prussiate of potassa .....12 "
Rain water ..... 1 gallon.

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USE OF AMBER GLASS FOR PRESERVING CHEMICALS.—In an article on "Colored Glassware" in the March number of the *Am. Jour. Pharm.* Mr. Hans M. Wilder says:—"Mr. Rother (*Pharmacist*) furnishes a good illustration of the usefulness of amber-colored bottles in protecting the contents against the action of the chemical rays. Of a batch of tincture of kino, a portion was put in a brown bottle, and was found to be still in a good condition while the contents of the shelf bottle were entirely gelatinized. Since most preparations are sensitive to light (especially tinctures, essential oils, some of the powdered drugs and a few chemicals), amber-colored bottles should, by right, constitute the bulk of shelf-furniture. Sir John Herschel's observation, that the vegetable colors are destroyed by rays of the complementary color, will form no objection, since the complementary color of yellow is purple, and few articles possess that color."

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PREPARATION OF HYDROBROMIC ACID FOR MEDICINAL USE.—In an article on hydrobromic acid, (*British Medical Journal*), Dr. J. M. Fothergill gives the following formula for its preparation. Dissolve 10 ounces and 388 grains of bromide of potassium in four imperial pints of water, and add 13 ounces and 87 grains of tartaric acid. Bitartrate of potash is precipitated, and the hydrobromic acid is contained in the supernatant solution, which appears as a clear and colorless fluid possessing an acid taste. It may be used instead of bromide of potassium, and is not open to many of the inconveniencies and objections to which the use of this salt is liable. The dose of the

solution is from one-half to one fluid drachm. A new cough mixture of which this acid is a constituent, is made by mixing 30 drops of the acid, 20 drops of sp. chloroform, one drachm syr. squill, and water to one ounce.

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ANOTHER SOURCE OF CHRYSOPHANIC ACID.—Dr. W. Lauder Lindsay (*Phar. Jour. & Trans.*) directs attention to the common yellow wall lichen, *Physica parietina*, as a now neglected source of chrysophanic or parietinic acid, the new remedy in skin diseases alluded to in a late number of this JOURNAL as being the active medicinal agent in goa powder. Dr. Lindsay thinks the proverb "Far away fowls have fair feathers" is as true of fashions in medicine as of fashions of other kinds. Products appear to be valued because they are foreign, and the more foreign and rarer the better, while our own plentiful and cheap plants are neglected and despised. This appears to be true in regard to chrysophanic acid, for which far away sources are proposed while those at home are neglected.

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## DRUGGISTS' ASSISTANTS' ASSOCIATION.

The regular monthly meeting of this Association was held on Thursday, April 5th. The chair was taken by Mr. Rowland, who at the previous meeting was appointed to act as president in the place of Mr. Cousens, who had removed to Montreal. It may be mentioned, incidentially, that the inauguration of the new president was the occasion of an oyster supper to which were invited all the members present.

The minutes of last meeting were read and confirmed, and an interesting discussion took place on the manner of mixing emetic tartar with unguent. picis co. for plasters.

The Secretary read two communications from Mr. Joseph Williams, of London, relative to the formatiou of branch associations, and it was moved by Mr. Holgate, and seconded by Mr. Daniels, that the matter be laid over until next meeting.—Carried. A motion to postpone the meetings until the last week in July was also carried. Part of an interesting paper "On Pills" was read by Mr. Rowland, who stated that he intended to continue the subject at a future meeting. He said that those substances were only eligible to be formed into pills which operated in small doses or which were designed to remain insoluble, or nearly so, until they reached the larger intestines, as in the case of aloes, in pills for habitual costiveness. In speaking of the formation of pill masses he recommended as an excipient for resinous substances a mixture

of one part of glycerine with two of rectified spirit. An example was given of a pill containing jalapin, leptandrin, pulv. capsici, ext. nucis vomic., ext. coloc. co., and pulv. pil. coloc. co. This would be easily managed by the excipient referred to, and the pills might be silvered by putting about a dozen and a half into a two ounce pot, adding three drops of mucilage on the inside of the cover, shaking for a few minutes, transferring to the silver book, turning out into a clean pot and again shaking. Pills to be silvered should be previously rolled in magnesia.

In making pill masses especial care should be taken that the powders should be well rubbed together before any extract is added, and, should the extract be soft and there be any danger of the pill being too large, the extract should be reduced by the application of a gentle heat. Licorice powder should only be resorted to when the bulk of the pill is likely to be small. The writer referred to Salmon's Pharmacopœia, published in 1713, in which the soft pill masses were ordered to be reduced by simple exposure to the air.

For the incorporation of essential oils, as ol. sabinæ gtt. vi. and ol. rutæ, gtt. iv., to be formed with 8 pills, he recommended prepared chalk and powdered acacia. Oils could be more readily taken in gelatin capsules. The writer was not much in favor of ready-made sugar-coated pills, as there was no knowing the care with which they might have been prepared, and they were liable to deterioration, which, by reason of the coating, was not apparent. Several establishments in London, England, as Bell's, and Savory and Moore's, were named, and it was stated that all pills dispensed by these houses were weighed by the first assistant in the dispensing departments. In dispensing prescriptions, having the stamp of the above establishments, it was always best to follow this plan, and to thoroughly clean all the mass out of the mortar, otherwise the confidence of the customer might be forfeited.

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# Varieties.

Cod Liver Oil Jelly.—First introduced by the late Mr. Agnew, of Liverpool, is now manufactured by Mr. H. J. Pratt, pharmaceutical chemist of York, who has much improved it, and who presents a light-coloured, aromatic, flavoured jelly, by no means unpleasant and readily taken by young children. It is highly recommended by Dr. Thorowgood, of London, and other eminent authorities. Mr. Pratt publishes the following formula:—Ol. Morrhuæ, 72·000; Sacch. alb., 16·880; Acid citric, 0.600; Gelatine, 2·760; Aqua, 7·560; Ol. essent, 0·200.—*Chemist & Druggist.*

Antihydropin.—Dr. Bogamolow some time ago discovered in cockroaches (*Blatta Orientalis*, Orthoptera) a crystalline substance, which he named antihydropin, from the favourable effects obtained by him with it

in the treatment of dropsy. Roaches are highly esteemed as a popular diuretic by the common people in Russia; this fact induced Dr. B. to employ them in various forms, such as decoction, tincture and powder, and in the form of the supposed alkaloid. Under its use the amount of urine increases, albumen and casts diminish in quantity; œdema of hands, feet, and face subsides, the weight of the body increases, and the pores of the skin begin to act more freely. The remedy is said not to interfere with digestion, nor to irritate the kidneys.—*Petersb. Med. Woch.* in *Ph. Z. f. Russl. New Remedies.*

FOR CHILBLAINS.—Melt together in a suitable vessel, three ounces beeswax, three ounces Venice turpentine, eight ounces lard, and one pint sweet oil. Stir these well together, and raise the temperature till the mixture simmers; then allow it to cool. This should be applied to the feet on a piece of cloth when going to bed.

NEURALGIC PILL.—Quiniœ sulphatis, gr. i.; Ferri et potasse tart. gr. ij.; Morphiæ sulph., gr. 1-24 ad 1-12. M. Take every hour until an expected paroxysm has been missed. Recommended by Mr. Gregory and Dr. Brudenell-Carter, in periodic neuralgia.—*New Remedies.*

NEW METHOD OF PREPARING SODA FROM COMMON SALT.—H. Gruneberg and J. Vorster propose the following method: salt and alumina are mixed with water to a pulp, and the mass is dried, broken in small pieces, and treated with steam heated to dryness. Hydrochloric acid then escapes, and sodium aluminate remains behind; the latter is freed from admixtures by lixiviation and either decomposed by means of carbonic acid, or with caustic lime.

Instead of alumina, ferric oxide or any other metallic oxide may be used. If caustic potash is to be prepared, the common salt is replaced by potassium chloride.—*J. Chem. Soc.* from *Ding. Pol. J.*

A NEW RESIN.—A process has been discovered and patented by Prof. Walter P. Jenney to utilize coal tar, and convert it into a resin resembling shellac somewhat in properties and appearance, and possessing many new and valuable properties, which indicate that it will soon take its place among the resins and varnishes in the market. This new resin is dark garnet-red in colour; when bleached it is a fine golden amber; is tasteless odorless, fuses at a higher temperature than shellac, and is insoluble in dilute acids, but dissolves in concentrated sulphuric acid; it is unattacked and insoluble in alkalies, even fusing caustic soda has no action on it. It is soluble in oils, coal tar, naphtha, in benzole, chloroform, ether, bisulphide of carbon, and in petroleum naphtha, but not in alcohol or water.

When made into a varnish with suitable solvents, it leaves on drying a brilliant and permanent film, which shows a remarkable property, and not the slightest tendency to crack off; a thin coat of it renders cloth or paper water-proof as rubber; in fact, it dissolves rubber either pure or vulcanised. For japanning tin or iron ware, it is even superior to shellac or linseed oil alone, the surface being hard and wonderfully pliable. On tin ware it produces with linseed oil a beautiful golden enamel, which a few hours baking in an oven makes fine and adhesive.—*Manufacturers' Review.*

RAINBOW TINTS ON BRASS AND OTHER METALS.—Dissolve three parts hyposulphite of soda in 30 of water, and mix in one of sugar of lead. This mixture is precipitated on being heated to 70° or 80° Beaume, depositing sulphite of lead. In the presence of any metal this deposit is made upon it. According to the thickness of the deposited layer various iridescent colours appear on the suface of the metal. To produce this coloration uniformly the object should be heated equally throughout.—*Ironmonger.*

| Drugs, Medicines, &c. | $ c. | $ c. |
|---|---|---|
| Acid, Acetic, fort | 0 13 @ | 0 14 |
| Benzoic, pure | 0 22 | 0 2, |
| Citric | 0 85 | 0 95 |
| Muria 1c | 0 03½ | 0 05 |
| Nitric | 0 10 | 0 13 |
| Oxali | 0 15 | 0 17 |
| Sulphuric | 0 03 | 0 05 |
| Tartaric, pulv. | 0 44 | 0 47 |
| Ammon, carb. casks | 0 18 | 0 20 |
| " jars | 0 16 | 0 20 |
| Liquor, 880 | 0 20 | 0 22 |
| Muriate | 0 14 | 0 15 |
| Nitrate | 0 45 | 0 60 |
| Æther, Acetic | 0 45 | 0 50 |
| Nitrous | 0 2, | 0 38 |
| Sulphuric | 0 45 | 0 50 |
| Antim. Crude, pulv. | 0 15 | 0 17 |
| Tart " | 0 50 | 0 55 |
| Alcohol, 95 per ct. Cash | 2 13 | 0 00 |
| Arrowroot, Jamaica | 0 18 | 0 22 |
| Bermuda | 0 50 | 0 65 |
| Alum | 0 02½ | 0 03 |
| Balsam, Canada | 0 33 | 0 38 |
| Copaiba | 0 05 | 0 7J |
| Peru | 2 10 | 2 20 |
| Tolu | 4 00 | 4 25 |
| Bark, Bayberry, pulv. | 0 18 | 0 20 |
| Canella | 0 17 | 0 20 |
| Peruvian, yel. pulv. | 0 35 | 0 50 |
| " red " | 1 60 | 1 70 |
| Slippery Elm, g. b. | 0 18 | 0 20 |
| " flour, packets | 0 28 | 0 32 |
| Sassafras | 0 12 | 0 15 |
| Berries, Cubebs, ground | 0 20 | 0 25 |
| Juniper | 0 06 | 0 10 |
| Beans, Tonquin | 1 00 | 1 20 |
| Vanilla | 18 00 | 24 00 |
| Bismuth, Alb | 2 25 | 2 50 |
| Carb. | 2 40 | 2 65 |
| Camphor, Crudè | 0 33 | 0 3, |
| Refined | 0 38 | 0 40 |
| Cantharides | 1 50 | 1 60 |
| Powdered | 1 60 | 1 70 |
| Charcoal, Animal | 0 04 | 0 06 |
| Wood, powdered | 0 10 | 0 15 |
| Chiretta | 0 23 | 0 30 |
| Chloroform | 0 90 | 1 55 |
| Cochineal, S. G. | 0 90 | 0 85 |
| Black | 95 | 1 00 |
| Colocynth, pulv. | 0 60 | 0 65 |
| Collodion | 0 70 | 0 80 |
| Elaterium oz | 3 20 | 4 00 |
| Ergot | 1 00 | 1 10 |
| Extract Belladonna | 1 65 | 1 80 |
| Colocynth, Co | 1 25 | 1 75 |
| Gentian | 0 50 | 0 60 |
| Hemlock, Ang | 0 00 | 0 95 |
| Henbane, " | 2 50 | 2 60 |
| Jalap | 4 50 | 5 00 |
| Mandrake | 1 75 | 2 00 |
| Nux Vomic oz | 0 40 | 0 50 |
| Opium oz | 1 25 | |
| Rhubarb | 5 00 | 5 50 |
| Sarsap. Hon. Co | 1 00 | 1 20 |
| " Jam. Co | 3 50 | 4 00 |
| Taraxacum, Ang | 0 70 | 0 80 |
| Flowers, Arnica | 0 22 | 0 25 |
| Chamomile | 0 30 | 0 35 |
| Gum, Aloes, Barb. extra | 0 70 | 0 80 |
| " " good | 0 40 | 0 50 |
| " Cape | 0 16 | 0 20 |
| " " powdered | 0 20 | 0 30 |
| Socot | 0 50 | 0 75 |
| " " pulv | 1 00 | 0 00 |
| Arabic, White | 0 31 | 0 58 |
| " powdered | 0 60 | 0 75 |
| " sorts | 0 19 | 0 24 |
| " " powdered | 0 42 | 0 50 |
| " com. Gedda | 0 13 | 0 16 |
| Assafœtida | 0 15 | 0 20 |
| British or Dextrine | 0 13 | 0 15 |
| Benzoin | 0 35 | 0 75 |
| Catechu | 0 12 | 0 15 |
| " powdered | 0 25 | 0 30 |
| Euphorb, pulv | 0 40 | 0 45 |
| Gamboge | 1 00 | 1 20 |
| Guaiacum | 0 35 | 1 00 |
| Myrrh | 0 50 | 0 80 |

| Drugs, Medicines, &c.—*Contd* | $ c. | $ c. |
|---|---|---|
| Sang Dracon | 0 60 | |
| Scammony, powdered | 5 50 | 6 00 |
| " Virg. " | 14 50 | — |
| Shellac, Orange | 0 30 | 0 35 |
| Gum, Shellac, liver | 0 27 | 0 32 |
| Storax | 0 40 | 0 45 |
| Tragacanth, flake | 1 10 | 1 75 |
| " common | 0 53 | 0 65 |
| Galls | 0 22 | 0 30 |
| Gelatine, Cox's 6d. | 1 15 | 1 20 |
| Glycerine, common | 0 25 | 0 28 |
| Vienna | 0 30 | 0 32 |
| Prices | 0 60 | 0 75 |
| Honey, Canada, best | 0 16 | 0 17 |
| Lower Canada | 0 10 | 0 12 |
| Iron, Carb. Precip. | 0 16 | 0 20 |
| " Sacchar. | 0 40 | 0 55 |
| Citrate Ammon. | 1 10 | 1 20 |
| " & Quinine, oz. | 0 50 | 1 30 |
| " & Strychine | 0 17 | 0 20 |
| Sulphate, pure | 0 05 | 0 07 |
| Iodine, good | 4 00 | 4 25 |
| Resubiimed | 4 75 | 5 00 |
| Jalapin | 1 25 | 1 50 |
| Kreosote | 2 50 | 2 60 |
| Leaves, Buchu | 0 22 | 0 32 |
| Foxglove | 0 25 | 0 30 |
| Henbane | 0 35 | 0 40 |
| Senna, Alex | 0 27 | 0 60 |
| " E. I. | 0 14 | 0 20 |
| " Tinnevilly | 0 20 | 0 30 |
| Uva Ursi | 0 15 | 0 17 |
| Lime, Carbolate brl | 5 50 | — |
| Chloride | 0 05 | 0 06 |
| Sulphate | 0 08 | 0 12½ |
| Lead, Acetate | 0 13 | 0 14 |
| Leptandrin oz. | 0 60 | — |
| Liq. Bismuth | 0 45 | 0 55 |
| Lye, Concentrated | 1 30 | 1 50 |
| Liquorice, Solazzi | 0 50 | 0 55 |
| Cassano | 0 23 | 0 40 |
| Other brands | 0 14 | 0 25 |
| Liquorice, Refined | 0 35 | 0 45 |
| Magnesia, Carb. 1 oz. | 0 20 | 0 25 |
| " 4 oz. | 0 19 | 0 20 |
| Calcined | 0 60 | 0 65 |
| Citrate gran. | 0 60 | 0 75 |
| Mercury | 0 75 | 0 80 |
| Bichlor | 0 68 | 0 70 |
| Chloride | 1 00 | 1 05 |
| C. Chalk | 0 68 | 0 55 |
| Nit. Oxyd | 1 15 | 1 20 |
| Morphia Acet | 3 15 | 3 25 |
| Mur. | 3 15 | 3 25 |
| Sulph. | 3 30 | 3 40 |
| Musk, pure grain oz | 25 00 | ..... |
| Canton | 0 60 | 0 70 |
| Oil, Almonds, sweet | 0 55 | 0 60 |
| " bitter | 8 00 | 8 50 |
| Aniseed | 2 75 | 3 00 |
| Bergamot, super | 5 75 | 6 00 |
| Caraway | 3 20 | 3 50 |
| Cassia | 1 40 | 1 60 |
| Castor, E. I | 0 13½ | 0 15 |
| Crystal | 0 22 | 0 25 |
| Italian | 0 24 | 0 26 |
| Citronella | 1 00 | 1 10 |
| Cloves, Ang | 3 20 | 3 50 |
| Cod Liver, Imp. Gal | 2 00 | 2 10 |
| Croton | 1 40 | 1 50 |
| Juniper Wood | 0 80 | 1 00 |
| Berries | 2 75 | 3 00 |
| Lavand, Ang. oz. | 0 00 | 1 00 |
| Exotic | 1 25 | 1 50 |
| Lemon, super | 3 25 | 3 50 |
| ord | 0 00 | 0 00 |
| Orange | 2 40 | 2 60 |
| Origanum | 0 65 | 0 75 |
| Peppermint Ang | 14 00 | 15 00 |
| " Amer. | 4 00 | 5 00 |
| Rose, Virgin | 8 25 | 8 50 |
| " good | 6 00 | 6 25 |
| Sassafras | 0 80 | 0 90 |
| Wintergreen | 4 00 | 4 25 |
| Wormwood, pure | 5 00 | 6 00 |
| Ointment, blue | 0 60 | 0 70 |
| Opium, Turkey | 8 50 | 8 75 |
| pulv. | 11 00 | 11 25 |

| DRUGS, MEDICINES, &c.—*Cont'd* | $ c. | $ c |
|---|---|---|
| Orange Peel, opt. | 0 35 | 0 36 |
| " good | 0 15 | 0 20 |
| Pill, Blue, Mass | 0 50 | 0 60 |
| Potash, Bi-chrom | 0 14 | 0 16 |
| Bi-tart | 0 30 | 0 32 |
| Carbonate | 0 13 | 0 15 |
| Chlorate | 0 27 | 0 30 |
| Nitrate | 7 00 | 8 00 |
| Potassium, Bromide | 85 | 0 90 |
| Cyanide | 0 55 | 0 60 |
| Iodide | 4 25 | 4 50 |
| Sulphuret | 0 25 | 0 35 |
| Pepsin, Boudault's.....oz | 1 25 | — |
| Houghton's..... doz. | 8 00 | 9 00 |
| Morson's.....oz. | 0 85 | 1 10 |
| Phosphorus | 1 10 | 1 20 |
| Podophyllin | 0 50 | 0 60 |
| Quinine Pelletier's | — | 2 45 |
| Howard's .....about | 5 00 | — |
| | — | — |
| | — | — |
| Root, Colombo | 0 13 | 0 20 |
| Curcuma, grd | 0 12½ | 0 17 |
| Dandelion | 0 17 | 0 20 |
| Elecampane | 0 16 | 0 17 |
| Gentian | 0 08 | 0 10 |
| " pulv | 0 15 | 0 20 |
| Hellebore, pulv | 0 25 | 0 00 |
| Ipecac, " | 2 20 | 2 30 |
| Jalap, Vera Cruz | 90 | 1 15 |
| " Tampico | 0 70 | 1 00 |
| Liquorice, select | 0 12 | 0 13 |
| " powdered | 0 15 | 0 20 |
| Mandrake " | 0 20 | 0 25 |
| Orris, " | 0 20 | 0 25 |
| Rhubarb, Turkey | 2 10 | 2 25 |
| " E. I | 1 00 | 1 10 |
| " " pulv | 1 10 | 1 20 |
| " " 2nd | 0 60 | 0 70 |
| " French | 0 75 | — |
| Sarsap., Hond | 0 35 | 0 50 |
| " Jam | 0 95 | 1 00 |
| Squills | 0 10 | 0 15½ |
| Senega | 0 90 | 0 95 |
| Spigelia | 0 30 | 0 32 |
| Salts, Epsom | 2 00 | 2 50 |
| Rochelle | 0 30 | 0 32 |
| Soda | 0 01½ | 0 02 |
| Seed, Anise | 0 13 | 0 16 |
| Canary | 0 06½ | 0 07 |
| Cardamon | 1 60 | 1 70 |
| Fenugreek, g'd | 0 08 | 0 09 |
| Hemp | 0 06 | 0 07 |
| Mustard, white | 0 16 | 0 17 |
| Saffron, American | 0 50 | 0 60 |
| Spanish | 10 00 | 11 00 |
| Santonine | 20 00 | 22 00 |
| Sago | 0 08 | 0 09 |
| Silver, Nitrate.....Cash | 14 90 | 16 00 |
| Soap, Castile, mottled | 0 11 | 0 14 |
| Soda, Ash | 0 03¾ | 0 05 |
| Bicarb. Newcastle | 4 00 | 4 25 |
| " Howard's | 0 14 | 0 16 |
| Caustic | 0 03¾ | 0 04 |
| Spirits Ammon., arom | 0 38 | 0 40 |
| Strychnine, Crystals | 1 70 | 1 80 |
| Sulphur, Precip | 0 12 | 0 13 |
| Sublimed | 0 03½ | 0 05 |
| Roll | 0 03 | 0 04½ |
| Vinegar Wine, pure | 0 55 | 0 60 |
| Verdigris | 0 35 | 0 40 |
| Wax, White, pure | 0 70 | 0 80 |
| Zinc. Chloride.....oz | 0 10 | 0 15 |
| Sulphate pure | 0 10 | 0 15 |
| " common | 0 06 | 0 10 |
| DYESTUFFS. | | |
| Annatto | 0 35 @ | 0 60 |
| Aniline, Magenta, cryst | 2 00 | 2 50 |
| " liquid | 2 00 | — |
| Argols, ground | 0 15 | 0 25 |
| Blue Vitriol, pure | 0 07½ | 0 09 |
| Camwood | 0 07 | 0 08 |
| Copperas, Green | 0 01½ | 0 02 |
| Cudbear | 0 16 | 0 25 |
| Fustic, Cuban | 0 03 | 0 04 |
| Indigo, Bengal | 2 40 | 2 50 |
| Madras | 0 90 | 0 95 |
| Extract | 0 26 | 0 30 |

| DYESTUFFS—*Continued.* | | |
|---|---|---|
| Japonica | 0 06½ | 0 07 |
| Lacdye, powdered | 0 33 | 0 38 |
| Logwood | 0 02½ | 0 03 |
| Logwood, Camp | 0 02½ | 0 03 |
| Extract | 0 12 | 0 13 |
| " 1 lb. bxs | 0 15 | — |
| " ½ lb. " | 0 16 | — |
| Madder, best Dutch | 0 09 | 0 10 |
| 2nd quality | 0 08 | 0 09 |
| Quercitron | 0 03 | 0 05 |
| Sumac | 0 06 | 0 08 |
| Tin, Muriate | 0 10½ | 0 12½ |
| Redwood | 0 05 | 0 06 |
| SPICES. | | |
| Allspice | 0 13 @ | 0 14 |
| Cassia | 0 25 | 0 28 |
| Cloves | 0 48 | 0 50 |
| Cayenne | 0 17 | 0 20 |
| Ginger, E. I | 0 14 | 0 15 |
| Jam | 0 25 | 0 30 |
| Mace | 1 10 | 1 10 |
| Mustard, com | 0 20 | 0 25 |
| Nutmegs | 1 00 | 1 05 |
| Pepper, Black | 0 15 | 0 16 |
| White | 0 26 | 0 28 |
| PAINTS, DRY. | | |
| Black, Lamp, com | 0 09 @ | 0 10 |
| " refined | 0 25 | 0 30 |
| Blue, Celestial | 0 08 | 0 12 |
| Prussian | 0 65 | 0 75 |
| Brown, Vandyke | 0 10 | 0 12½ |
| Chalk, White | 0 01 | 0 01½ |
| Green, Brunswick | 0 07 | 0 10 |
| Chrome | 0 16 | 0 25 |
| Paris | 0 26 | 0 28 |
| Magnesia | 0 20 | 0 25 |
| Litharge | 0 07 | 0 09 |
| Pink, Rose | 0 12½ | 0 15 |
| Red Lead | 0 06½ | 0 07½ |
| Venetian | 0 02½ | 0 03 |
| Sienna, B. & G | 0 07 | 0 08 |
| Umber | 0 07 | 0 10 |
| Vermillion, English | 0 85 | 0 90 |
| American | 0 25 | 0 35 |
| Whiting | 0 85 | 1 00 |
| White Lead, dry, gen | 0 08½ | 0 09 |
| " " No. 1 | 0 07 | 0 08 |
| " " No. 2 | 0 05 | 0 07 |
| Yellow Chrome | 0 09 | 0 15 |
| " Ochre | 0 02½ | 0 03½ |
| Zinc White, Star | 0 09 | 0 11 |
| COLORS, IN OIL. | | |
| Blue Paint | 0 12 @ | 0 15 |
| Fire Proof Paint | 0 06 | 0 08 |
| Green, Paris | 0 30 | 0 37½ |
| Red, Venetian | 0 07 | 0 10 |
| Patent Dryers, 1 lb tins | 0 10 | 0 12 |
| Putty | 0 03¾ | 0 04½ |
| Yellow Ochre | 0 08 | 0 12 |
| White Lead, gen. 25 lb. tins | 2 20 | — |
| " No. 1 | 1 65 | — |
| " No, 2 | 1 70 | — |
| " No. 3 | 1 45 | — |
| " com | 1 30 | — |
| White Zinc, Snow | 2 50 | 2 75 |
| NAVAL STORES. | | |
| Black Pitch | 3 00 @ | 3 25 |
| Rosin, Strained | 3 75 | 4 00 |
| Clear, pale | 4 50 | 6 00 |
| Spirits Turpentine Imp. Gall | 0 60 | 0 62 |
| Tar Wood | 4 50 | 4 75 |
| OILS. | | |
| Cod Imp. Gall | 0 84 @ | 0 86 |
| Lard, extra " | 1 25 | 1 27 |
| No. 1 " | 1 14 | 1 16 |
| No. 2 " | 1 02 | 1 05 |
| Linseed, Raw per 7½lbs | 0 63 | 0 70 |
| Boiled " | 0 72 | 0 74 |
| Olive, Common Imp. Gall | 1 26 | 1 30 |
| Salad " | 2 01 | 2 10 |
| " Pints, cases | 4 00 | 4 20 |
| " Quarts | 3 25 | 3 50 |
| Seal Oil, Pale Im'p. Gall | 0 90 | 0 95 |
| Straw " | 0 85 | 0 90 |
| Sesame Salad " | 1 56 | 1 60 |
| Sperm, genuine " | 2 70 | 2 75 |
| Whale refined | 0 00 | 0 00 |