

Rectifying Alcohol by Means of Gelatin.

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

On Tinctura Physostigma.

BY WILLIAM PROCTOR, JR.

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

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

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

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

EXCITING LIQUID FOR GALVANIC BATTERIES.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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