

Photographic Notes

WATERTIGHT COATING FOR WOODEN DISHES.

Brown resin.....8 ozs.
Beeswax.....2 ozs

Melt together in a tin pan, and, when quite fluid, coat the dish, which should be quite dry and warm.

BLACK VARNISH.

Benzole.....10 ozs.
Turpentine.....1 oz.
Masticated rubber heated to fusing.....100 grs.

Dissolve the rubber in the benzole and turpentine, and then add 4 ounces of asphaltum broken into small pieces.—*Photogram*.

WAXING SOLUTION

Before squeegeeing prints on to glass to obtain a brilliant surface it is usual to give the glass a rub with a solution of wax. A superior preparation is:

Spermaceti5j.
Benzine.....3x.
Dissolve.

1-oz. bottles, with directions, sell at 6d. The addition of a drop or two of citronella oil is not a disadvantage.—*Chemist and Druggist*.

TINTED MATT VARNISH FOR MASKING.

No. 1 ordinary matt varnish.
No. 2 stock color solution.
Malachite green.....10 grains
Alcohol.....1 oz.
1 {No. 1 varnish.....5 oz.
 {No. 2 color solution.....30 minims
2 {No. 1 varnish.....5 oz.
 {No. 2 color solution.....60 minims

The varnish solution retains the color for some time, but fades after prolonged keeping. It is, therefore, advisable not to prepare more than is required for a month or two's use. The varnish on the negative retains its color well.—*Photogram*.

Inexpensive Photographic Tray.

An inexpensive photographic tray or battery cell, which is practically water, acid, alkali proof, may be made out of a pasteboard box by covering it with a coating made by melting together equal parts of paraffin and gutta-percha chips. The gutta-percha should be melted first over a slow fire, the paraffin is then added, and the whole composition thoroughly mixed and brought to a fluid condition. It is then poured into the box or box cover, which should be dry and warm. The composition should be allowed to run along the edges, so that the entire inside of the box is waterproofed; the excess is poured off, and the box is then allowed to cool. The outside should then be water-

proofed in the same manner. In case any spot fails to receive the composition, some of it may be made into sticks and applied to the bare places with the aid of a hot iron, which may also be used to smooth up any unevenness of the surface. Some photographers like ridges in the tray to keep the plate off the bottom and to facilitate in lifting it out. These ridges can be easily built up with the aid of a hot iron. These pasteboard trays are light, and are not liable to be broken by a fall. Old dry-plate boxes may be utilized for this purpose. Wooden trays may be waterproofed in the same manner, and can be used for batteries if desired.—*Scientific American*.

Colors in Photography.

It has often been observed that a bright scarlet uniform will, in a good photographic dark-room with ruby-glass windows, appear perfectly white. On this subject Herr H. W. Vogel made some interesting communications to the Physical Society of Berlin at a recent meeting. Experimenting with oil lamps provided with pure red, green, and blue color screens, he found that, when white light was rigidly excluded, all sense of color disappeared to the observers, and nothing but shades of black and white could be distinguished on objects in the room. He further found that a scale of colors illuminated by red light showed the red pigments as white or gray, which abruptly turned into yellow, and not red, on adding blue light. Hence a color was perceived which was not contained in either of the sources. Red and yellow patches appeared of the same color, so that they could hardly be distinguished. But the difference was at once brought out by adding green instead of blue light. How very much the kind of sensation experienced depends upon the intensity of illumination is easily seen in the case of the region of the spectrum near the G. line of Fraunhofer. This region appears violet when its luminosity is feeble, blue when it is stronger, and may even appear bluish-white with strong sunlight, so that the assertion often made that with normal eyes a definite color-sensation corresponds to a definite wavelength cannot be upheld. Herr Vogel comes to the conclusion that our opinion as to the color of a pigment is guided by our perception of the absence of certain constituents. Thus a red substance is only recognized as such when light of other colors is admitted, and we perceive its inability to reflect these.—*Nature*. (*Pharmaceutical Journal and Transactions*.)

COPPER NOT INJURIOUS TO PLANTS.—A. Tschurch recently has repeated his previous assertion that insoluble copper compounds in the soil in no manner are injurious to vegetation. His experiments also include aquatic plants.

Wintergreen Oil.

The artificial methyl-salicylate is constantly gaining ground, although its opponents in America are doing all that lies in their power to bring it into discredit. As an instance of this, we may mention that an attempt was recently made to create a panic among the manufacturers of chewing gum, who use a considerable quantity of the oil, by spreading about a report that the use of the artificial product caused inflammation of the eyes. It was stated that the "chemicals" contained in the synthetical oil were the source of the mischief. Any one who has the least idea what so-called natural and artificial wintergreen oils are will at once agree with us that such statements are the outcome of crass ignorance.

According to the new U.S.P., both the genuine wintergreen oil—which is hardly to be met with any longer in commerce—and the oil prepared from sweet birch, consist almost entirely of methyl salicylate, presupposing always that both are pure, and not, as is frequently the case, adulterated. Now, can there be any doubt that methyl-salicylate is the only active constituent of both oils? If, then, in view of the fact that the two natural oils are scarcely to be met with in commerce in a state of reliable purity, a pure methyl-salicylate, prepared from pure salicylate acid as used daily in medicine—that is to say, a product of definite chemical composition, $\text{CH}_3\text{C}_7\text{H}_7\text{O}_2$ —is recommended, the question arises: How is it possible that any one with the least inkling of chemistry can talk of "noxious chemicals" which are said to be present in wintergreen oil. It is impossible to argue against such foolish assertions as are palmed off upon the American consumer.—*Schimmel's Report*.

The Metric System in England.

The metric system is again in the air. Two parties are bringing it before our attention—the one attempting to bring about its legal use in export trading, the other its introduction into the British Pharmacopoeia. The whole question of the adoption of metric weights and measures in this country is one in which most people, even of the educated classes, take a very lazy interest. We see no signs of anything approaching a general desire among these for the everyday use of the gramme, metre, etc. Indeed, we must confess that for general trading in Great Britain no practical benefit would be derived from the use of the metric system. . . . There is a factor in the question which would tell against the champions of the metric system, and which has been often left out of consideration. The metric system sounds wonderfully logical and simple, but any teacher of pharmacy could tell of the amazing difficulty found in getting students to understand it thoroughly. The difficulty is chiefly seen in students working calculations in cubic