Varnish for Water Color Drawings.—Canada balsam 1 pint; oil of turpentine 2 warts, mixed. Size the drawing before applying the varnish.

CEMENTS.

Shell-lac Cement, or Liquid Glue.—Fine orange shell-lac, bruised, 4 oz.; highly rectified spirit, 3 oz. Digest in a warm place, frequently shaking, till the shell-lac is dissolved. Rectified wood naphtha may be substituted for spirit of wine, where the smell is not objectionable. This is a most useful cement for joining almost any material.

Shell-lac Cement, without Spirit.—Boil 1 oz. of borax in 16 oz. water; add 2 oz. powdered shell-lac. and boil in a covered vessel till the lac is dissolved. This is cheaper than the above, and for many purposes answers very well. Both are useful in fixing paper labels to tin, and to glass when exposed to damp.

Keller's Armenian Cement, for Glass, China, &c.—Soak 2 dr. of cut isinglass in two oz. of water for 24 hours; boil to 1 oz.; add 1 oz. spirit of wine and strain through linen. Mix this, while hot, with a solution of 1 dr. of mastic in 1 oz. of rectified spirit, and triturate with ½ dr. powdered gum ammoniac, till perfectly homogenous.

Dr. Ure's Diamond Cement,—Isinglass, 1 oz; distilled water, 6 oz; boil to 3 oz., and add 1½ oz. of rectified spirit, Boil for a minute or two, strain, and add, while hot, first, ½ oz. of a milky emulsion of ammoniac, and then 5 dr. of tincture of mastic.

Hoenle's Cement for Glass and Earthenware.—Shell-lac, 2 parts; Venice turpentine, 1 part. Fuse together, and form into sticks.

Cheese Cement, for Earthenware, &c.—Mix together white of egg, beaten to a froth, quick-lime, and grated cheese. Beat them to a paste, which forms an excellent cement.

Curd Cement.—Add ½ pint of vinegar to ½ pint of skimmed milk. Mix the curd with the whites of 5 eggs well beaten, and sufficient powdered quicklime to form a paste. It resists water, and a moderate degree of heat.

Cement for joining Spar and Marble Ornaments &c.—Melt together 8 parts of resin, 1 of wax, and stir in 4 parts, or as much as may be required, of Paris Plaster. The pieces to be made hot.

Hensler's Cement.—Grind 3 parts of litharge, 2 of recently burnt lime, and 1 of white bole, with linseed oil varnish. This is a very tenacious cement, but it takes a considerable time to dry.

Singer's Cement for Electrical Machines and Galvanic Troughs.—Melt together 5 lbs. of resin, and 1 lb. of beeswax, and stir in 1 lb. of red ochre (highly dried, and still warm), and 4 oz. of Paris plaster, continuing the heat a little above 212°, and stirring constantly till all frothing ceases. Or (for troughs,) resin, 6 lbs; dried red ochre, 1 lb.; calcined plaster of Paris, ½ lb.; linseed oil, ¼ lb.

Composition for welding Cast Steel.—Take of borax 10 parts, sal-ammoniac, 1 part; grind or pound them roughly together; then fuse them in a metal pot over a clear fire, taking care to continue the heat until all spume has disappeared from the surface. When the liquid appears clear, the composition is ready to be poured out to cool and concrete; afterwards, being ground to a fine powder, it is ready for use. * * * To use this composition. The steel to be welded is first raised to a "bright yellow" heat, it is then dipped among the welding powder, and again placed in the fire, until it attains the same degree of heat as before; it is then ready to be placed under the hammer.

Cast-Iron Cement.—Take of clean Iron borings, or turnings, 1 cwt.; of sal-ammoniac 8 oz.: and 1 oz. of flour of sulphur. Mix them thoroughly, and add sufficient water. If the cement is not to be immediately used, care should be taken to keep the mixture soaked in water; if left dry, the cement will heat, and be spoiled.

Cement for Steam Pipe Joints, &c., with Faced Flanges.—To 2 parts of white lead mixed, add 1 part of red lead dry; grind, or otherwise mix them, to a consistence of thin putty; apply interposed layers, with one or two thicknesses of canvass or gauze wire, as the necessity of the case may require.

Glues.—1. A very strong glue is formed by throwing a small quantity of powdered chalk into melted common glue.

2. To make a glue which will resist the action of water—boil one pound of glue in two quarts of skimmed milk.

Botany Bay Cement.—Take one part of Botany Bay gum, and melt and mix it with 1 part of brickdust.

Cap Cement.—As Singer's; but 1 pound of dried Venetian red may be substituted for the red ochre and Paris plaster.

Bottle Cement.—Resin 15 parts; tallow 4 (or wax 3) parts; highly dried red ochre 5 parts. The common kinds of sealing wax are also used.

Turner's Cement,—Beeswax 1 oz.; resin ½ oz; pitch ½ oz. Melt, and stir in fine brickdust.

Coppersmith's Cement.—Powdered quick-lime, mixed with Bullock's blood, and applied immediately.

PHOTOGRAPHIC SOCIETY OF SCOTLAND.*

The question of printing is one so all important to photographers that too much can hardly be said about it; and I therefore propose addressing to your society a short sketch of my experience on the subject, hoping that, even if it should not contain any important new modification of the processes already known, it may at least assist in unravelling the tissue of confusion in which the beginner finds himself entangled when in search of a process to adopt.

I propose to treat specially of printing on albuminized paper, and that in a purely practical point of view, dividing my subject into several heads, and treating each as curtly as may be consistent with a clear description.

It is hardly necessary to describe at length the operation of albuminizing paper, as few photographers now do this for themselves, the very finest quality of albuminized paper being easily obtained at a rate far below that at which an amateur could make it; besides which the process has been given very fully in almost every manual of photography. It is a great mistake to add acetic acid to the albu-

* On Photographic Printing, by F. Maxwell Lyte, F. C. S.