

# UNITED STATES PATENT OFFICE.

WILLIAM MACRONE, OF GLASGOW, COUNTY OF LANARK, SCOTLAND.

## VARNISH.

SPECIFICATION forming part of Letters Patent No. 344,119, dated June 22, 1886.

Application filed November 2, 1885. Serial No. 181,597. (Specimens.)

*To all whom it may concern:*

Be it known that I, WILLIAM MACRONE, a subject of the Queen of Great Britain and Ireland, residing at Glasgow, in the county of Lanark, Scotland, letter-press printer, have invented a new and useful Improved Varnish or Size, of which the following is a specification.

My invention relates to a new or improved varnish or size suitable, first, for sizing wall and other papers, fabrics, and substances, either on one or on both sides, preparatory to decorating the same with dry colors, and for developing glaze upon the surface without calendering or surface-varnishing, whereby the said papers, fabrics, or substances are rendered washable without injury to the material or colors and impervious to moisture, infection, and dust; second, as a substitute for or for mixing with varnishes at present in use in the manufacture of letter-press and lithographic printing inks, and for mixing with oil-paints to secure said inks and paints against "skinning" while in bulk, also to increase the permanency and heighten the brilliancy of colored inks and paints; third, for waterproofing paper, felt, and other fabrics.

The said varnish or size is composed of the following ingredients, and substantially in or about the proportions hereinafter mentioned—that is to say: odorless seed-oil, (preferring those oils with quick-drying properties,) seventy-two parts, by weight; resin, thirty-two parts, by weight; paraffine-wax, sixteen parts, by weight; beeswax, four parts, by weight; copal-varnish, one part, by weight.

In manufacturing this size or varnish, the oil is heated until ebullition ceases; then the resin, wax, and copal-varnish, in the proportions before stated, are added. After perfect incorporation the viscid substance is poured out to cool. When this substance assumes the consistence of a creamy curd, the varnish or size is ready for use, and is employed cold, except in the case of paper, &c., to be waterproofed throughout, when it is applied at a temperature of 212° Fahrenheit.

For waterproofing the finer kinds of paper, &c., the varnish or size is used as above manufactured; but for the coarser kinds of paper,

&c., I employ thirty-two parts, by weight, of bitumen or asphalt, in addition to the ingredients above specified.

For treating fabrics other than paper the proportions of the ingredients would vary slightly. For instance, in treating closely-woven cloth, the proportions of the size would be about the same as those employed for treating paper; but as the several degrees of softness or slackness of the material vary, so a corresponding firmness of size would be required, in which case less oil and more of the resin and wax would be used.

Any suitable machinery may be employed for applying this improved size or varnish; but that recommended when the sizing and glazing operations are to be effected is shown by me in the drawings accompanying a specification lodged by me at the same time as this one. The same remarks hold good as regards apparatus for applying the size for waterproofing purposes; but in this case I prefer to employ the apparatus shown by me in the drawings accompanying another specification lodged at same time as this one. Coloring-matter or asphalt or bitumen may be added.

I do not claim a varnish or size containing oil, turpentine, wax, and resin, as these have been employed. By my mode of preparation and by the addition of varnish, a compound possessing the properties set forth is produced which is very different from the varnish or size heretofore made.

I claim as my invention—

The improved varnish or size herein described, consisting of odorless seed-oil that has been heated till ebullition ceases, resin, paraffine-wax, beeswax, and copal-varnish, substantially in or about the proportions specified, and for the purposes set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WILLIAM MACRONE.

Witnesses:

JOHN MUIR,

JAMES MACRAE,

Both of 176 West George Street, Glasgow, Solicitors.