

UNITED STATES PATENT OFFICE.

WILLIAM B. SPRAGUE, OF AUGUSTA, GEORGIA, ASSIGNOR TO THE CHAMPION CREAM SIZING COMPANY, OF SAME PLACE.

COMPOSITION FOR SIZING COTTON AND WOOLEN YARNS.

SPECIFICATION forming part of Letters Patent No. 535,512, dated March 12, 1895.

Application filed October 1, 1894. Serial No. 524,600. (Specimens.)

To all whom it may concern:

Be it known that I WILLIAM B. SPRAGUE, a citizen of the United States, residing at Augusta, in the county of Richmond and State of Georgia, have invented a new and useful Composition for Sizing Cotton and Woolen Yarns, of which the following is a specification.

My composition consists of the following ingredients, combined in the proportions stated, viz: pure water, fifty gallons; alum, five pounds; sulphate of copper, four ounces; tallow, thirty-one pounds; spirits of turpentine, two gallons; starch, forty pounds; white lead, five pounds; gelatin, ten pounds; silicic-acid, four ounces, and soap-powder, one pound.

My composition is prepared in a steam-jacketed kettle, in which the water is first heated, to a boiling point. The alum, sulphate of copper, tallow, starch, white-lead, gelatine, and soap-powder, are dissolved in the turpentine and silicic-acid, in a separate vessel, and then poured into the boiling-water, and the entire mass heated and agitated until all the ingredients have thoroughly combined, after which the composition is drawn off into barrels and when cool is ready for use.

In this composition the white-lead is used for giving body, the tallow, gelatine and soap-powder for body and smoothness, the starch and alum for body and whiteness, the silicic-acid for clearness and brilliancy, the turpentine for penetration and the sulphate of copper for whiteness and for preventing foaming during and after the mixing of the ingredients.

This compound will lay the fiber in the yarn, making it round, smooth and strong, thus preventing chafing in the harness. It also holds the starch so that none will beat off in the weaving—gives the cloth a fine smooth face and finish—brightens colors in colored work, and saves rollers, jackets and slashers. The compound is applied with what is generally known as a hot air slasher, and also a trough slasher machine by passing the yarn through the compound, while heated, and then drying the said yarn by running same through machines constructed for said purpose and known to the trade, by various names, such as "hot-air boxes," "hot-air cylinders," "dry-rooms," &c.

I do not desire to confine myself to the precise proportions of ingredients, above stated, for same may be somewhat varied without materially affecting the character or utility of the composition.

What I claim as new, and desire to secure by United States Letters Patent, is—

The herein described composition of matter to be used for sizing cotton and woolen yarns, consisting of water, alum, sulphate of copper, tallow, spirits of turpentine, starch, white-lead, gelatine, silicic-acid and soap-powder, substantially as set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

WILLIAM B. SPRAGUE.

Witnesses:

JAS. BROTHERTON,
GEO. H. GERCKE.