

# UNITED STATES PATENT OFFICE.

CHARLES LICHTENSTADT, OF CHICAGO, ILLINOIS.

## COMPOUND FOR RENDERING FABRICS WATER-REPELLENT.

SPECIFICATION forming part of Letters Patent No. 662,695, dated November 27, 1900.

Application filed September 29, 1898. Serial No. 692,203. (No specimens.)

*To all whom it may concern:*

Be it known that I, CHARLES LICHTENSTADT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and Improved Compound for Rendering Fabrics Water-Repellent, of which the following is a specification.

My invention relates to rendering fabrics, such as are commonly used for making clothing, water-repellent, so that they will shed water instead of absorbing it and be practically impervious to water under ordinary conditions.

More particularly, the object of my invention is to provide a suitable water-repellent substance which may be applied to finished fabrics either in the piece or in the garment without injuring them.

Stated specifically, my invention consists of a composition consisting of paraffin, a suitable softening water-repellent substance, such as petrolatum, and alcanna-root. For the various substances which enter into the composition of the substance with which the fabric is treated equivalent substances may be substituted.

I will now proceed to describe the method of making the composition and the mode of its application to the fabric.

The ingredients of the composition in its best form are paraffin, petrolatum, oil of mirbanum, and alcanna-root in the proportion of three-quarters of a pound of paraffin to one-quarter of a pound of petrolatum, two drops of oil of mirbanum, and one-half of a tablespoonful of alcanna-root. The paraffin is first heated, preferably in a granite kettle, until it has all melted, after which the petrolatum is added and the mixture boiled until a crackling noise is heard. The oil of mirbanum is then added and the mixture is treated with the alcanna-root, which is placed in a bleached linen or cotton bag and is dipped into the hot mixture. The alcanna-root is allowed to soak for a few seconds and is then withdrawn, the process of dipping being continued until the fluid appears of a ruby-pink tint, after which it is stirred thoroughly and may then be cast in molds of any desired shape. When cool, it will become solid. The object of adding

the petrolatum is to make the mass more elastic and to soften the paraffin, so that it will work more thoroughly into the fabric. The petrolatum being in itself water-repellent does not detract from the water-repellent property of the composition. The oil of mirbanum is for the purpose of imparting to the mass an agreeable odor, and the alcanna-root is used to prevent the composition from imparting an unevenness of color to the fabric under treatment.

The oil of mirbanum may be omitted, as it is not essential to the composition claimed.

To apply the composition to the fabric, a brick of the composition is rubbed upon the face or top system of the goods in a line with the nap, so as to rub the composition into the fibers and interstices of the goods. The fabric is then passed through a set of heated calender-rolls, by which the composition is melted and under the influence of the heat and pressure is driven into the fibers of the weave. The goods so treated are rendered practically impervious to water applied to the side of the goods treated and are thoroughly water-repellent.

Instead of applying the composition as above described a brick as long as the goods are wide may be applied to one of the heated cylinders of the calender, so that the periphery of the cylinder is covered with the compound, the fabric then being run through the calender and the composition applied in that way, or, if desired, the composition may be melted and fed upon the surface of one of the calender-cylinders while the fabric is run through the machine.

In applying the composition to ready-made garments a brick of the compound is rubbed over the right side or face of the goods, after which the fabric is ironed with an ordinary heated laundry-iron or "goose."

In applying my improved compound, as will appear from the foregoing description, the fabric to be rendered water-repellent is not wet, the process being practically a dry one. Consequently there is no danger of shrinkage, which is one of the most objectionable features of processes heretofore used. Furthermore, the most delicate fabrics are not injured in any respect whatever. In fact, in

many instances the treatment prescribed improves the luster of the goods. The compound is equally well adapted for the treatment of woolen, worsted, silk, cotton, and  
5 other fabrics.

That which I claim as my invention, and desire to secure by Letters Patent, is—

A substance for use in rendering fabrics

water-repellent, consisting of paraffin, a suitable softening water-repellent substance, and 10 alcanna, substantially as described.

CHARLES LICHTENSTADT.

Witnesses:

JOHN L. JACKSON,  
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