

UNITED STATES PATENT OFFICE.

NICHOLAS CHARLES SZERELMEY, OF CLAPHAM COMMON, COUNTY OF SURREY, ENGLAND.

IMPROVEMENT IN THE MANUFACTURE OF LEATHER-CLOTH, IMITATION LEATHER, &c.

Specification forming part of Letters Patent No. **44,910**, dated November 1, 1864.

To all whom it may concern:

Be it known that I, NICHOLAS CHARLES SZERELMEY, of Field House, Crescent Gate, Clapham Common, in the county of Surrey, in the Kingdom of England, have invented certain Improvements in the Manufacture of Leather-Cloth or Imitation Leather, and in rendering certain fabrics water-proof; and I do hereby declare that the following is a full and exact description thereof.

My invention consists in combining the substances hereinafter mentioned and applying them to linen, woolen, and cotton fabrics, as hereinafter described, by which the fabrics are saturated and coated and a substance produced resembling leather and applicable for most purposes to which leather may be applied, which I call "Panonia leather." The same process also renders the said fabrics water-proof.

The imitation leather can be prepared so as to resemble different kinds of leather, among others calf-skin and cow-leather, and these can be blacked and polished with common blacking.

The process does not render the fabric impervious to air, and when used for the uppers of boots and shoes (for which it is very suitable) it does not impede the perspiration.

My mode of proceeding is as follows: I use three compositions, which I have hereinafter designated as "No. 1," "No. 2," and "No. 3," respectively.

No. 1 is composed of infusion of oak-bark such as is usually used for tanning leather, two hundred and twenty-four gallons; alum, thirty pounds; gelatine, forty pounds; stearic acid, thirty pounds; resin-oil, ten gallons; zopissa, ten pounds; linseed-oil, forty gallons. These ingredients are combined and mixed in the following way: I boil the alum in the infusion of oak-bark, and add the gelatine and boil again. I then dissolve the stearic acid in the resin-oil, and add the zopissa, (dissolved in the linseed-oil, as hereinafter described,) and mix all the ingredients together. For the purpose of dissolving the zopissa in the linseed I first heat the oil in a suitable vessel until it ignites spontaneously. After burning for a short time the flame is extinguished by a close-fitting cover to the vessel in which it is heated. The ves-

sel is then removed from the fire and allowed to cool for about a quarter of an hour. It is then returned to the fire and heated until it burns again for a short time. The flame is then extinguished, as before. I then add the zopissa to it, and heat the whole until the zopissa is completely dissolved.

No. 2 is composed of linseed-oil, two hundred and forty gallons; zopissa, twenty pounds; rosin, two hundred pounds; rosin lamp-black, one hundred pounds. And I combine and mix these ingredients as follows: I first dissolve the zopissa in the linseed-oil in the way described for composition No. 1. I then add the rosin, and heat till it is dissolved. When the mixture is cooled I add the lamp-black.

No. 3 is composed of zopissa, twenty pounds; linseed-oil, two hundred and forty gallons; solution of tin, six pounds. In this composition the zopissa is dissolved in the linseed-oil in the way described for composition No. 1, and when the mixture has partially cooled I add the solution of tin. The addition of about forty pounds of Prussian blue brightens and improves the color.

I first saturate the fabric with composition No. 1 and dry it in the air. When dry I saturate and coat it three or more times with composition No. 2, drying it in the air between each saturation and coating.

For an imitation of enameled leather, after the fabric has been saturated and coated with compositions No. 1 and No. 2, as above described, I coat it once or twice with composition No. 3, drying it in a stove in the ordinary way used in making leather-cloth.

For an imitation of Morocco leather, after the fabric has been saturated and coated with compositions No. 1 and No. 2, as above described, I coat it with zopissa dissolved in linseed-oil, as above described, in the proportions of about twenty pounds of zopissa to two hundred and forty gallons of linseed-oil, to which the requisite coloring-matter, previously ground, has been added; but these proportions must be slightly varied, according to the coloring-matter used. The required grain is produced by a roller, press, or any other known way.

All the linseed-oil used in the processes above described must, before being used, be

purified by the process described in the specification filed in pursuance of Letters Patent, under the great seal of the United Kingdom of Great Britain and Ireland, for "an improved method of and apparatus for purifying oils and varnishes," granted to me and dated the 17th day of December, 1862, and numbered 3,092.

The substance which I have herein called "zopissa" is a mineral found in Arabia and in the neighborhood of the Dead Sea, and is known in Arabia and Egypt by the names "zopissa" and "zorogh."

I claim as my invention—

1. The use of the substance called "zopissa" in the manufacture of leather-cloth or imitation leather, and in rendering linen, woolen, and cotton fabrics water-proof.

2. The compositions above described and the mode of making leather-cloth or imitation leather above described.

N. C. SZERELMEY.

Witnesses:

WM. GRIBBLE,

C. HARWOOD CLARK.