

UNITED STATES PATENT OFFICE.

CHARLES A. EVANS, OF REVERE, MASSACHUSETTS.

IMPROVEMENT IN ARTIFICIAL SHEEP-SKINS.

Specification forming part of Letters Patent No. **202,427**, dated April 16, 1878; application filed October 15, 1877.

To all whom it may concern:

Be it known that I, CHARLES A. EVANS, of Revere, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Imitation Sheep-Skin, of which the following is a specification:

This invention consists in the following described improvement in imitation sheep-skin, constituting a new article of manufacture; and has for its object to supply the trade with a cheaper and better article for the uses to which sheep-skins are put, and particularly where they are used as inside linings for boots and shoes.

The process I employ in the manufacture of the article and the ingredients used in the composition employed are stated below.

Having selected a base of closely-woven cotton cloth or other fabric, of ordinary width and of any desired length, I spread upon it in successive layers a composition of caoutchouc or india-rubber, shellac, gasoline or naphtha, zinc-white, clay, or plaster-of-paris, of sufficient thickness and body not to spread or run too easily.

Each layer is thoroughly dried in before the next coating is applied; and I find in practice that better results are obtained by making the coats thin and applying them oftener—say as many as six or seven successive applications of the composition—for the reasons that a thin coating is more evenly spread on the fabric than a thick one, and dries quicker and more uniformly, so that I can apply as many as six or seven thin coatings to the fabric, and let each one be thoroughly dried before the next following is spread, in the time that it would take for spreading one thick coating and in drying the same; and the result of the thin-layer process is far superior to the thick-coating method, as the first layer is thoroughly incorporated or knit into the fabric before the others are applied, and each successive layer is thoroughly and firmly attached to each preceding layer.

After the last coating is wholly dry I apply a surfacing of any one of the aniline colors, somewhat stiffened by the addition of French chalk or magnesia, which, after being thoroughly mixed, is spread upon the base, as prepared, in much the same way the first-named

composition is applied, excepting that I put on but one coating of the preparation.

After this last-named coloring-coat is dry, the fabric is passed through a pebbling-machine, to provide it with a surface-finish that shall more closely resemble the pebbled sheep-skins used for the linings of boots and shoes.

The product of this series of manipulations possesses a softness of texture or finish that renders its detection from sheep-skin by the touch alone almost impossible, while its strength and wearing qualities are superior to the best sheep-skin used, and its cost is materially less.

In preparing the composition first applied I cut the caoutchouc or india-rubber with gasoline or naphtha; then add to that mixture a proper quantity of shellac, zinc-white, clay, and plaster-of-paris, about in the proportion of one part shellac, two parts zinc-white, one part clay, one part plaster-of-paris. These ingredients are thoroughly incorporated with each other before use. Of course, the proportion of the parts may be changed, if desirable. Enough French chalk or magnesia is employed to somewhat thicken the aniline.

In the manufacture of this article I take about three hundred yards of the fibrous base and wind it on a feed-roll, from which it is fed under a reservoir containing a quantity of the first-named preparation, which is dripped therefrom on the fabric immediately in front of a spreading-knife, for equally distributing the coating on the cloth. From the spreading-knife the cloth, having one coating, is carried over a drying-roll under another reservoir, from which is sprinkled the composition, which is spread by a second spreading-knife over the first coating. The cloth, now having two coats of the filling composition, is drawn over another drying-roll, from which it passes back to a roll immediately under the feed-roll, to be again drawn through the machine to receive additional coatings.

Although other filling having an alumina base may be employed in place of the zinc-white, clay, and plaster-of-paris, yet the best results are secured by their use.

The composition may be colored by any suitable pigment without departing from the spirit of my invention.

I am aware that the art of making artificial leather and leatherette is well known, and that rubber and enameled cloth have long been manufactured; and I do not claim, broadly speaking, artificial leather, nor the process of manufacturing it, or either rubber or enameled cloth, as the same do not constitute my invention.

I claim and desire to secure by Letters Patent—

The improved product described, constitut-

ing an imitation sheep-skin, composed of close-textured fabric coated with one or more layers of caoutchouc solution and mineral matter, as described, surface-colored by aniline and magnesia compound, and pebbled, substantially as hereinbefore set forth.

CHAS. A. EVANS.

In presence of—

GEO. K. LITTLEFIELD.

F. F. RAYMOND, 2d.