

# UNITED STATES PATENT OFFICE.

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## WATER-PROOF COMPOSITION FOR FELT SHOES, SLIPPERS, &c.

SPECIFICATION forming part of Letters Patent No. 346,150, dated July 27, 1886.

Application filed March 26, 1886. Serial No. 196,658. (No specimens.)

*To all whom it may concern:*

Be it known that we, JAKOB FELDMANN, CHARLES H. FELDMANN, and DANIEL DUNBAR, citizens of the United States, residing at the city of Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Water-Proof Compositions; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of our invention is to produce a water-proof material which may be used as a covering or coating for various articles; and it consists in mixing together certain ingredients in the manner and proportions substantially as follows: Common rubber, twelve and one-half pounds; Para rubber, two and one-half pounds; common magnesia, three pounds; wheat-flour, one pound; pure sulphur, twelve and one-half ounces; oxide of zinc, three and one-third pounds; alum, one-half pound; lamp-black, two pounds.

The manner in which we prefer to mix the above materials is to cut up in small pieces both kinds of caoutchouc or rubber and dissolve them together in benzine or any suitable solvent fluid, or by heat, until they become soft enough to run like thick molasses, and then pulverize the dry ingredients into a fine powder, which is kneaded or ground into the plastic caoutchouc until the whole is thoroughly mixed. In addition to this, in order to still further complete the mixture, we boil the mass together until all the parts have become well assimilated. While in this plastic condition the composition is ready to be applied to various kinds of foot-wear and other articles, and more especially to felt shoes, slippers, and boots. After a felt boot or shoe is pressed into shape the water-proof material, while in a plastic condition, is applied to the surface by means of a brush, or by hand, or

in any suitable manner. Then the boot is placed in a mold and pressed by means of steam or air entering from without into the inside of the article. This will also cause the water-proof composition to penetrate the material and make it adhere to the surface of the boot.

Our composition may also be applied by placing a last inside the boot and using rollers, mold hand machinery, or any suitable pressure upon the outside.

The advantages of our invention are those of strength, cheapness, durability, impermeability to water, and adhesiveness to woolen goods, leather, &c., whereby it may be readily and efficiently applied as a water-proof covering.

It is obvious that the proportions of the ingredients of our composition might be varied without departing from the principle of our invention. Therefore we do not limit ourselves to the precise proportions herein given, but feel entitled to such variations as come within its scope.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A water-proof composition composed of caoutchouc, magnesia, wheat-flour, sulphur, oxide of zinc, alum, and lamp-black, substantially as described.

2. A water-proof composition composed of common rubber, Para rubber, magnesia, wheat-flour, pure sulphur, oxide of zinc, alum, and lamp-black, mixed together in the manner and for the purpose described.

In testimony whereof we affix our signatures in presence of two witnesses.

JAKOB FELDMANN.

CHARLES H. FELDMANN.

DANIEL DUNBAR.

Witnesses:

HARRY LANE,

GEORGE F. CROMER.