

UNITED STATES PATENT OFFICE.

WILLIAM LEWIS, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN PRESERVATION OF COTTON DUCK, &c.

Specification forming part of Letters Patent No. **180,722**, dated August 8, 1876; application filed May 11, 1876.

To all whom it may concern:

Be it known that I, WILLIAM LEWIS, of Newark, Essex county, in the State of New Jersey, have invented certain new and useful Improvements in the Art of Preserving cotton duck, and other similar textile fabrics, in a manner to render such materials more durable, and at the same time at a less expense than by any other known process; and I do hereby declare that the following specification is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same.

My invention consists in treating cotton duck, and similar fabrics, by the application of a novel preservative composition, which is transmitted to the fibers of the material through the medium of benzine or its equivalent, by which means the fabric may be completely permeated, leaving the proper component parts of the compound throughout and within the material after the benzine has evaporated.

The object of my improvements is to lessen the present cost in the preparation of duck or materials of a fibrous nature, commonly used in the manufacture of sails, hose, awnings, and similar articles, at the same time making them stronger, less liable to mildew, rot, &c., which is accomplished by my composition and the means of transmitting the same into the fibers of the materials under treatment, by which means I am enabled to maintain a greater uniformity of permeation of the preservative matter into the fabric than before attained by any other known means, which insures a greater durability and strength to the materials so treated than before known.

I prepare my preservative composition by taking one part of lime, slake and mix with it about four times its weight of water; then mix with it three parts of wood-tar, (by weight;) heat the whole to a boiling-point, (of water,) stirring the same until the whole is thoroughly mixed into a homogenous mass, with no visible presence of lime therein. Thus is formed a composition which, upon cooling, is freed from the presence of water. I then place the said compound into a suitable vessel or bath prepared for the purpose,

and add thereto benzine, benzine-naphtha, or the like, in suitable quantity to act upon said composition, which may be assisted by the process of grinding, pounding, or otherwise. The infinitesimal parts of the composition thus separated are then readily disseminated with the benzine, which serves as the vehicle to convey the parts into the fibers of the materials.

The material, while undergoing treatment, is immersed in the bath and carried through the same by hand or by the aid of feed-rolls, aprons, or other suitable mechanism. It is desirable, however, that the contents of the bath should be in continual agitation while the fabric is passing through, that the ingredients, lime and tar, may be uniformly diffused through and with the fluid or benzine, that the same may be more readily conveyed to every part of the fabric immersed. In removing the fabric from the bath to the atmosphere, the benzine will readily evaporate, leaving the lime and tar in the proper places as a preservative.

I would remark that the component parts hereinbefore referred to as used in the preparation of my compound may be varied somewhat without departing from the spirit of my invention.

I also find, in practice, that I may employ coal-tar, resin-oil, creosote, peat-tar, or oil of tar, when the most available; yet I prefer wood-tar as being the most effective for the aforesaid purposes.

Having thus set forth my invention, I do not claim, broadly, all compounds for coating or for penetrating fabrics, rope, &c. Neither do I claim the use of tar or other pitchy substances alone for such purposes; but, having thus set forth my improvement—

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

A preservative composition for textile fabrics, consisting of lime and coal or wood-tar or resin-oil, with or without benzine or other suitable solvent, substantially as described.

WILLIAM LEWIS.

Witnesses:

BENJAMIN R. CHILD,
CHRISTIAN I. FISKE.

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