

# UNITED STATES PATENT OFFICE.

ADOLPH GENDER AND WALDEMAR THILMANY, OF CLEVELAND, OHIO.

IMPROVEMENT IN TREATING TEXTILE FABRICS TO PREVENT MILDEW AND DECAY.

Specification forming part of Letters Patent No. **152,903**, dated July 14, 1874; application filed June 5, 1874.

*To all whom it may concern:*

Be it known that we, ADOLPH GENDER and WALDEMAR THILMANY, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and Improved Process of Treating Textile Fabrics to Arrest their Molding and Decay, of which the following is a full and complete description:

The nature of this improvement relates to the charging or impregnating textile fabrics, such as hose-pipes, cordage, ship-sails, &c., with antiseptic salts, consisting of the sulphate of copper and the chloride of barium or muriate of barytes, or their equivalents, in or about the following proportions, and in the manner hereinafter described.

It is well known that ship-sails, textile hose-pipes, cordage, &c., by exposure to the weather, by the action of water on the pipes, moisture by rains, and changes, &c., will tend to mildew and decay. The object of the process is to arrest the premature destruction of such and other textile fabrics, when exposed to such degrading agents. The advantage gained by the preservation of sails, awnings, textile water-pipes, and cordage alone is well understood to be very great.

The process consists in dissolving three pounds of the sulphate of copper in one hundred pounds of water, which may be of the temperature of ordinary cold water. To facilitate the process the water should be heated. In this liquid the fabric is then immersed and remains there until it is thoroughly charged with the solution. It may be necessary in some cases to inclose the compound and articles in a suitable closed tank or vessel of such construction as would allow of pressure being used to force the sulphate-of-copper solution into the fabric. This may not be needed in open and light fabrics. After the goods are taken out of this bath they are subject to pressure by being passed between rolls, or by other mechanical means, to press out the excess of the said solution.

The next step is to immerse the goods in a bath prepared of three parts of the chloride

of barium or muriate barytes and one hundred parts of water, by weight. In this solution the goods should remain until they are completely impregnated; and to facilitate this impregnation of the fabrics pressure may be employed substantially in the same manner and means as that referred to in the first stage of the process in treating the manufactured goods with the sulphate of copper. After the second bath, the fabric is again subjected to pressure to express the excess of the last solution from the goods thus charged. The articles are then allowed to dry, preparatory for use.

By this process of treating the said manufactured articles with the sulphate of copper and next with the chloride of barium, in the manner described, the result of the union of these salts is the sulphate of barytes and chloride of copper, which unites the fabrics and forms an insoluble union, arresting the tendency to mildew and decay.

In some instances it may be preferable to subject the raw material to the described process before being manufactured into goods of various kinds, in which case the treatment or process would be substantially the same as for the manufactured articles before mentioned.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The process of treating textile fabrics, or their raw material, with the sulphate of copper and chloride of barium, substantially in the manner as set forth, and for the purpose of arresting mildew and decay of said fabrics.

2. As a new article of manufacture, textile fabrics having combined therewith sulphate of copper and chloride of barium, so as to form a union of said salts with the fabric, substantially in the manner as and for the purpose set forth.

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Witnesses:

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