

UNITED STATES PATENT OFFICE.

CARL BASWITZ, OF BERLIN, GERMANY.

METHOD OF REMOVING COPPER FROM TEXTILE PARCHMENTS.

SPECIFICATION forming part of Letters Patent No. 506,966, dated October 17, 1893.

Application filed July 10, 1890. Serial No. 358,317. (No specimens.)

To all whom it may concern:

Be it known that I, CARL BASWITZ, of Berlin, in the Kingdom of Prussia and German Empire, have invented new and useful Improvements in Processes of Treating Textile Fabrics for the Purpose of Rendering the Same Waterproof and Fireproof, of which the following is a specification.

This invention relates to improvements in the preparation of textile fabrics by means of ammoniacal oxid of copper.

The use of an ammoniacal oxid of copper as a means of dissolving vegetable fibers has to this day been of slight value for finishing and dressing purposes as the fabric, which has been treated with such oxid, shows no substantial change in its original textile qualities after the evaporation of the ammonia and the removal of the hydrate of copper oxid. But if vegetable parchment is dissolved in ammoniacal solution of copper and the textile impregnated with the solution, as soon as the ammonia has evaporated, there remains thereon a layer, which is firmly connected with the fiber and the fabric possesses all the characteristic qualities of the parchment. The waste or refuse from parchment manufacturing is suitable for this purpose, *i. e.*, vegetable parchment produced by the reaction of sulphuric acid on paper.

To prepare the solution enough hydrate of copper is dissolved in ammonia of the specific weight of 0.91 to give thirty grams of copper in each liter of the solution, and then fifteen grams of vegetable parchment must be added. When the solution is applied to the

fabrics, a precipitate is formed by evaporating ammonia, which causes the fabric to become water proof. This precipitate is firmly connected with the fiber and contains a basic combination of copper, which is objectionable, since it makes the cloth heavy and stiff and involves a waste of copper. To remove this combination of copper on the fiber, the textile fabrics are treated with a ten per cent. solution of sulphate of ammonia in acetate of alumina, dissolved in water to a specific weight of 1.04. By this means a precipitate of basic sulphate of alumina is formed, which envelops in the fibers and makes the same unflammable, and at the same time recovers the copper for further use as a soluble acetate.

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

The process of treating textile fabrics, which consists in dipping them in a solution of vegetable parchment in ammoniacal oxid of copper, then evaporating the ammonia, and finally treating them with a mixture of sulphate of ammonia and acetate of alumina for the purpose of removing the copper contained in the textile and at the same time making the fabric unflammable, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

CARL BASWITZ.

Witnesses:

W. H. EDWARDS,
W. HAUPT.