

UNITED STATES PATENT OFFICE.

AUGUST BIERMANN, OF CREFELD, GERMANY, ASSIGNOR TO THE WEIDMANN
SILK DYEING COMPANY, OF PATERSON, NEW JERSEY.

PROCESS OF WEIGHTING SILKS.

SPECIFICATION forming part of Letters Patent No. 583,725, dated June 1, 1897.

Application filed March 30, 1896. Serial No. 585,453. (No specimens.) Patented in Germany March 11, 1896, No. 5,532.

To all whom it may concern:

Be it known that I, AUGUST BIERMANN, a citizen of the German Empire, and a resident of Crefeld, Germany, have invented certain new and useful Improvements in Processes of Loading Silks, (for which Letters Patent of the Empire of Germany were granted to me and to my assignee, Fuller, March 11, 1896, No. 5,532,) of which the following is a specification.

My invention relates to manufacture of silk; and it consists of a process of treating silks and similar fibrous fabrics chemically for the purpose of increasing their weight, luster, and softness.

I have found that by using salts of aluminium, especially sulfates of aluminium, in combination with a stannic-chlorid bath the desired results of such treatment of the silks will be greatly increased, the fabrics so treated will be heavier, softer, and more lustrous, and the consistency of the fiber will not be affected thereby. If such increase in weight and luster of the goods is not required, the process may be greatly accelerated by the combination of salts of aluminium with the heretofore-used stannic-chlorid process, as the process thus augmented will produce the same results in less than one-half of the time.

In treating silks and similar fibrous fabrics for the above-stated purpose I proceed as follows: The material is first treated in a stannic-chlorid bath of 25° to 30° Baumé and then, after being wrung and washed to remove the superfluous chlorid of tin accumulated thereon, transferred to a warm bath composed of some soluble phosphate (for instance, of sodium phosphate) and then again washed. The material is then treated in a warm bath of alu-

minium sulfate and finally passed through a warm bath containing a solution (3° to 5° Baumé) of some silicate, preferably sodium silicate, and then washed and dried.

The time required for these several operations will vary according to what grade of weight, softness, and luster of the goods is desired. Such grade as can be produced by the best heretofore-known stannic-chlorid process will require only about one-half of the time, and higher results will be obtained according to how long the material will be subjected to the actions of the bath in the several stages of the treatment.

I claim as my invention and desire to secure by Letters Patent—

The process of treating silks and similar fibrous fabrics for the purpose of increasing their weight, softness and luster consisting of the following steps: first, treating the material in a stannic-chlorid bath of 25° to 30° Baumé, then removing the superfluous chlorid of tin accumulated thereon; second, subjecting it to the action of a soluble phosphate such as sodium phosphate dissolved in a warm bath and again washing it; third, treating the material in a warm bath of aluminium sulfate; fourth, passing it through a warm bath containing a solution (3° to 5° Baumé) of a silicate such as sodium silicate and then washing and drying the same.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

AUGUST BIERMANN.

Witnesses:

JAMES FROULKA,
W. HAUPT.