

UNITED STATES PATENT OFFICE.

JOHN C. PENNINGTON, OF PATERSON, NEW JERSEY.

PREPARING PAPER AND OTHER FABRICS AND MATERIALS FOR WRAPPING SILVER AND OTHER METALS
TO PREVENT THEM FROM TARNISHING.

SPECIFICATION forming part of Letters Patent No. 223,814, dated January 27, 1880.

Application filed October 31, 1879.

To all whom it may concern :

Be it known that I, JOHN C. PENNINGTON, a citizen of the United States, city of Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Preparing Paper and other Fabrics and Materials for Wrapping Silver and other Metals to Prevent them from Tarnishing; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

To carry out this invention, I make a solution of oxide of zinc or oxide of lead in caustic soda, caustic potash, or caustic ammonia, and impregnate the paper, cloth, or other fabric and material with it by any convenient means, when it may be dried, and is then fit for use. For example, I take, say, sixty pounds of solid caustic soda and dissolve it in enough boiling water to make a solution of 20° Baumé. I then add forty pounds of oxide of zinc and boil the mixture for two hours, preferably under a pressure of sixty pounds per inch. When the solution is clear it may be diluted to 10° Baumé, and the paper or other fabric or materials impregnated with it.

The object of this invention is to impregnate paper or other fabric or materials with substances which will combine with and neutralize any sulphureted hydrogen, sulphurous acid, or other acid gases or vapors that may be present in the atmosphere, so as to prevent them from tarnishing silver or other metals that may be wrapped up in the paper or other fabric.

I am aware that a patent has been granted to Samuel C. Eaton, No. 213,100, dated March 11, 1879, in which is described a process for impregnating paper and other fabrics with a solution of chloride of ammonium, chloride of

potassium, chloride of zinc, and hypochlorite of lime, or bleaching-powder; but hypochlorite of lime, or bleaching-powder, would tarnish silver or other metal very quickly. Chloride of potassium and ammonium are neutral salts, and cannot neutralize sulphureted hydrogen or other acids, and chloride of zinc is objectionable because, if it should combine with sulphureted-hydrogen or other acid gas, it would set free hydrochloric acid, which would tarnish the silver wrapped in such paper.

The process above described is free from this objection. The whole of the zinc or lead present is available to combine with and neutralize the sulphureted hydrogen in the atmosphere without setting free any acid, and the soda is also free to neutralize any acid gases or vapors that may be present, and to prevent them from acting on the silver or other metal that may be wrapped in paper or other fabric so prepared.

Having thus described my invention, I claim as new and desire to secure by Letters Patent of the United States—

1. The method above described for preparing paper or other fabric to render the same suitable for protecting metals against tarnishing, which consists in impregnating the fabric with a solution of oxide of zinc or lead in caustic soda, caustic potassa, or caustic ammonia.

2. As a new article of manufacture, paper or other fabric impregnated with the chemicals above described, for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN C. PENNINGTON.

Witnesses:

JOHN R. BEANE,

WILLIAM PENNINGTON.