UNITED STATES PATENT OFFICE.

THOMAS B. ROGERS, OF NEW YORK, N. Y.

IMPROVEMENT IN THE METHOD OF RENDERING FABRICS WATER-PROOF.

Specification forming part of Letters Patent No. **2,327**, dated November 3, 1841.

To all whom it may concern:

Be it known that I, THOMAS B. ROGERS, of the city, county, and State of New York, have discovered a new and useful Mode of Rendering Fabrics Water-Proof, which is described as follows.

My improvement consists in rendering cloth water-proof by saturating it with a material which is insoluble in water, but which admits of the free passage of air through its fibers—a feature in which it differs from fabrics rendered water-proof by means of caoutchouc and similar articles.

The following is a description of the process which I employ:

In a vat of a suitable size I form a solution of sulphate of soda, or Glauber's salt, generally in the proportion of three quarters of a pound of the salts to a gallon of water, and in this I immerse the cloth. When it has become fully saturated I convey it to another vat containing a solution of acetate or sugar of lead and permit it to remain there a sufficient time to enable a chemical reaction to take place between the solution of sulphate of soda with which the cloth was saturated before entering the second vat and the solution of acetate of lead in this vat. The effect of this reaction is to make a soluble acetate of soda and an insoluble sulphate of lead, the former of which is dissolved in the vat, while the latter is precipitated among the fibers of the cloth and forms the principal means by which I render the cloth water-proof. After taking the cloth out of this last vat I immerse it in another containing a solution of sulphuric acid, in the proportion of about sixteen drops to the gallon of water, for the purpose of rendering the lead in the fibers of the cloth a perfect sulphate. The cloth I afterward pass through a solution of camphor in water, but which is not necessary to my invention, for the purpose of removing the unpleasant odor arising from the use of the acetate of lead, after which it is scoured with warm water and soap to remove the excess of acid and any of the materials or ingredients referred to that may remain on its surface.

I have mentioned sulphate of soda as one of the articles used in this process. This I employ only for the purpose of decomposing the sugar of lead, as stated; and as there are several other sulphates which will produce the same effect, I do not intend to limit myself to the use of this, but to employ any of the others should I find it expedient to do so.

What I claim as my invention therefore, and desire to secure by Letters Patent, is—

The mode of rendering fabrics water-proof by passing them through successive solutions of sulphate of soda or its equivalents, acetate of lead, and sulphuric acid, as herein set forth.

THOS. B. ROGERS.

Witnesses:

WM. P. ELLIOT,

EDM. MAHER.