

UNITED STATES PATENT OFFICE.

WILLIAM B. S. TAYLOR, OF NEW YORK, N. Y.

IMPROVEMENT IN GAS-PROOF CLOTHS, &c.

Specification forming part of Letters Patent No. 126,851, dated May 14, 1872.

To whom it may concern:

Be it known that I, WILLIAM B. S. TAYLOR, of the city, county, and State of New York, have invented a certain new and Improved Gas-Proof Cloth or Fabric, of which the following is a specification:

My invention consists of cloth, leather, rubber, or other fabric or pliable material in sheet form, treated with a composition of glue and glycerine or the equivalent of the latter, substantially as hereinafter described, to render said material or fabric gas-proof.

The cloth or material thus made can be used to advantage in making gas-bags, gas-holders, air-pillows, air-beds, or air and gas vessels for all purposes, owing to the property possessed by the glue of resisting the action of gases and certain fluids and of preventing their waste.

In Letters Patent granted to me February 21, 1865, I have described the use of glue with glycerine in the manufacture of gas-proof tubing, and this composition has also been used as a lining for barrels to hold petroleum.

My present invention, however, differs from the above, as it relates to the production of a new article, a gas-proof cloth or fabric in the piece, and of such manufactured article as may be improved or cheapened by its use, such as gasometers, gas-bags, and other vessels made from a sheet material.

Such articles may be made of the gas-proof cloth in any of the known ways not impracticable by reason of the peculiar nature of the composition. For example, the article may be cut into the proper shape and the pieces cemented or sewed together at the joints. If sewing is used the holes made by the needle must be well cemented; or the articles may be made of the cloth or other sheet material, and afterward coated or lined with the glue composition.

To make the gas-proof cloth I can make use of any of the known pliable material, such as

a fabric—rubber, rubber-cloth, leather, &c.—of sheet form. For instance, I sometimes use a sheeting of rubber with a coating of the glue composition, or two pieces of rubber with a piece of cloth, which has been saturated with glue compound laid between them, and the whole cemented together; or animal leather with a coating of glue composition; the particular material employed depending upon the use for which the prepared cloth is designed.

In making the compound the glue may be dissolved in water, and a portion—say one-third—of glycerine added, to preserve the glue in a flexible state; or the proportion of glycerine may be increased or diminished, according to the degree of softness or flexibility required. Other substances may be used to render the glue flexible or tough; but I prefer glycerine, both on account of its own peculiar merits and the ease with which it mixes or is applied.

The composition may be applied to the fabric warm with a brush, or it may be spread on by machinery, or for some purposes the article may be dipped in or filled with it, and the surplus allowed to drain off; the water is then dried out of the compound as far as possible.

I prefer that the composition should be protected by some water-proof substance; but it is not always necessary, and common cloth or even paper may be treated with it and used for some purposes.

What I claim, and desire to secure by Letters Patent, is—

Cloth, leather, or other pliable material in sheet form, treated with a composition of glue and glycerine or the equivalent of the latter, substantially as herein described, to render said material or fabric gas-proof.

WM. B. S. TAYLOR.

Witnesses:

T. B. MOSHER,
GEO. W. MABEE.