

# UNITED STATES PATENT OFFICE.

R. EDWARD BALL, OF JAMAICA, NEW YORK.

IMPROVEMENT IN PROCESSES FOR MAKING ARTIFICIAL LEATHER, &c.

Specification forming part of Letters Patent No. **210655**, dated December 10, 1878; application filed February 28, 1878.

*To all whom it may concern:*

Be it known that I, R. EDWARD BALL, of Jamaica, in the county of Queens and State of New York, have invented a certain new and useful Method for Surfacing Paper, &c., in imitation of leather and other articles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it.

My invention has relation to a method of preparing paper in imitation of leather; and consists, essentially, in first saturating the paper with glycerine, then coating with glycerine and glue mixed, and then subjecting to the action of an astringent, as hereinafter described.

To produce said article of manufacture, I take any strong bibulous paper and saturate it with glycerine. I then, by any suitable means, (as by pressing or laying a dry sheet of bibulous paper on the surface of that treated,) remove from the saturated sheet all unabsorbed glycerine. I then apply to one or both surfaces of such saturated sheet a mixture of melted glue and glycerine, in the proportion of about nine pounds of glue to five pounds of glycerine. When the mixture so applied has set and hardened the paper is placed in a strong solution of alum, or gallo-tannic acid, or other suitable astringent.

I prefer to place the paper, with the glue and glycerine mixture applied and set as stated, first, in a solution of alum for about five minutes, and afterward in the solution of gallo-tannic acid for an hour or more.

After taking the paper out of the solution

it is heated to the temperature of 212° Fahrenheit, and may be molded or impressed to imitate the surface of leather or other article. If such molding or impressing is not desired, it will be unnecessary to heat as just suggested. The surface may be then colored.

If desired, the coloring-matter may be mixed with the glue and glycerine before application to the paper; or when the layer of such mixture is thin the paper itself may be colored.

I wish it to be understood that the preliminary saturation of the paper is an essential step in the process or method constituting my invention. The object of this is to impart to the body of the paper the peculiar soft and pliable quality found in leather, and which is not obtainable by simply and at once applying to the paper the composition of glue and glycerine, which constitutes the imitation-leather surface. The glycerine applied first also serves the purpose of a medium to easily receive and hold the after-coating, which cannot otherwise be neatly applied.

I claim as my invention—

The method of treating paper or fabric to produce an imitation surface consisting in first saturating with glycerine, then coating with a mixture of glue and glycerine, and then subjecting to the action of an astringent, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of February, 1878.

R. EDWARD BALL.

Witnesses:

URIAH I. PEARSALL,  
GEORGE POTTINGER.