

(No Model.)

E. C. F. GÜNTHER.
LEATHER SUBSTITUTE.

No. 258,057.

Patented May 16, 1882.

Fig. 1.

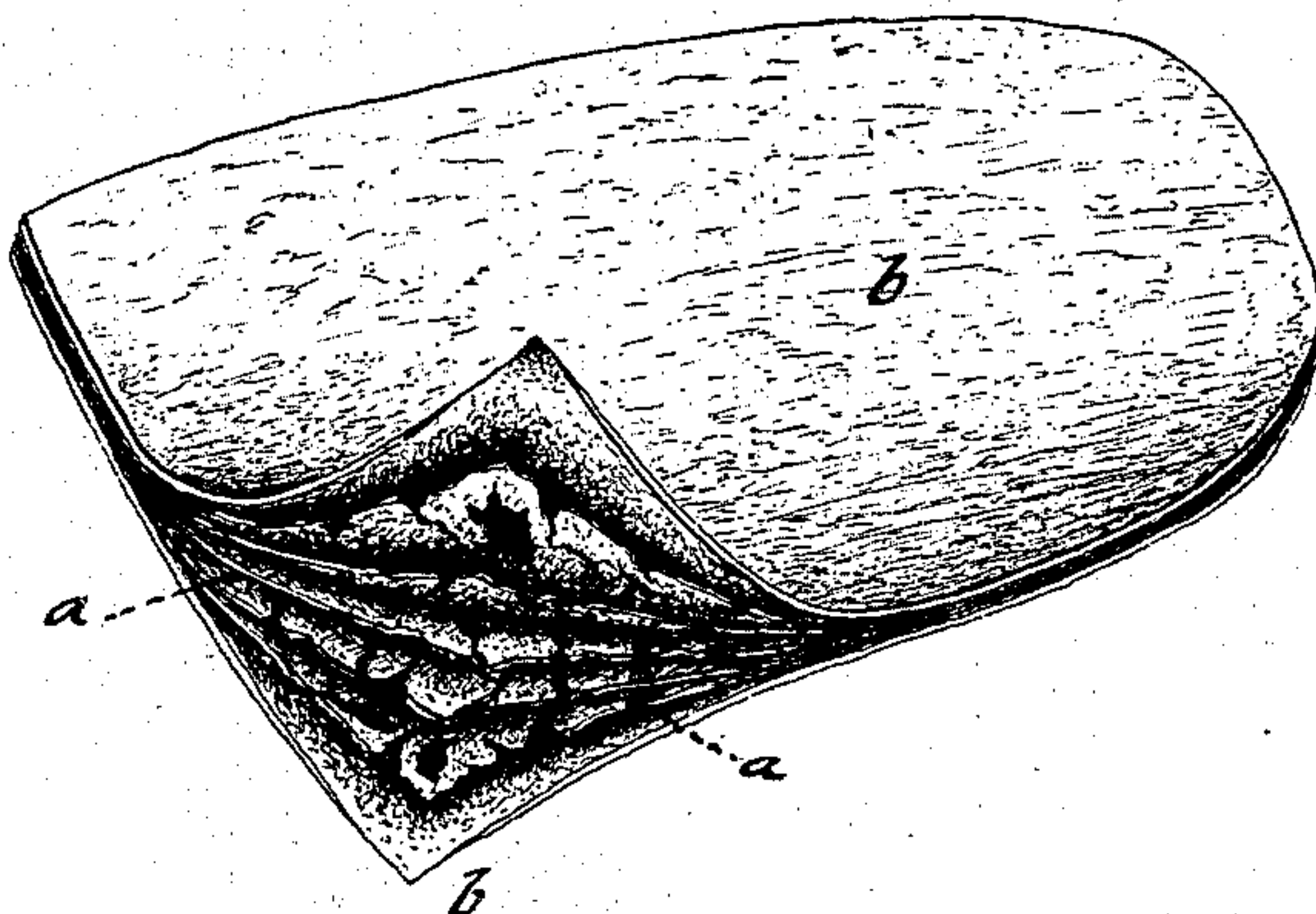
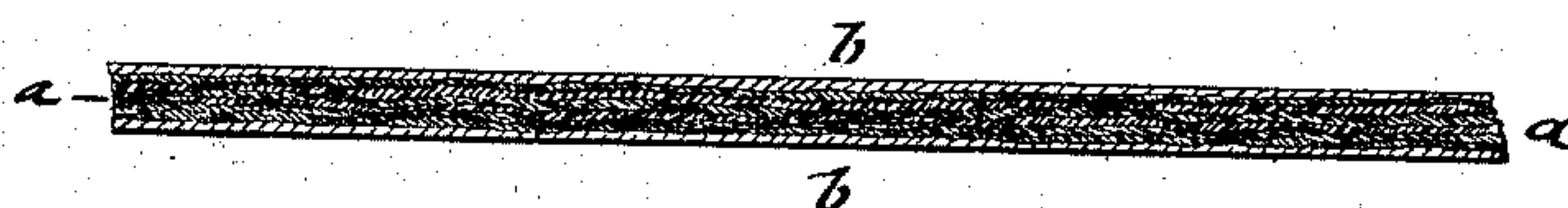


Fig. 2.



WITNESSES:

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EMIL C. F. GÜNTHER, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND
AUGUSTE SCHWENCKE, OF SAME PLACE.

LEATHER SUBSTITUTE.

SPECIFICATION forming part of Letters Patent No. 258,057, dated May 16, 1882.

Application filed November 18, 1881. (No model.)

To all whom it may concern:

Be it known that I, EMIL C. F. GÜNTHER, of the city, county, and State of New York, have invented certain new and useful Improvements in Leather Substitutes, of which the following is a specification.

This invention has reference to the manufacture of an improved leather substitute from split leather and leather-shavings, the substitute being applicable to a number of articles—such as shoe soles, heels, handles for revolvers, and the like—as it may be pressed by molds into any desired shape, and is not affected by atmospheric influences.

The invention consists of a leather substitute composed of covering layers of split leather and an intermediate layer of split leather or leather-shavings united to the covering layers by a water-proof cement. For the latter I prefer to employ a cement prepared from curds by heat and the addition of soda, ammonia, coloring-matter, and acetic acid, as will appear more fully hereinafter.

In the accompanying drawings, Figure 1 represents a perspective view of a piece of sole-leather made according to my improved process, and Fig. 2 is a vertical transverse section of the same.

Similar letters of reference indicate corresponding parts.

In carrying out my invention leather-shavings *a*, such as are obtained as waste in the manufacture of leather belting and other leather trades, are soaked in a liquid cement, which, when dry, is perfectly water-proof, so as to resist moisture and other atmospheric influences. The cement is produced by dissolving curds in cold water and slowly raising the temperature to 150° Fahrenheit. At this temperature are added to one hundred pounds of dry curds five and one-half pounds of soda, after which the mass is exposed for two hours, under continual stirring, to a temperature of 150° to 160° Fahrenheit. The mass is then allowed to cool slowly, so as to be able to remove the cream or fatty portions from the surface of the same. It is then heated again to from 80° to 90° Fahrenheit, and two ounces of ammonia and a suitable color, according to the color of the leather,

added thereto. Five gallons of acetic acid 50 which have been diluted with twenty gallons of warm water are then added to the mass. The precipitate which is obtained is then heated up again, under continual stirring and the addition of two pounds of borax, to a temperature up to 150° Fahrenheit. This mass is then allowed to cool, it having the consistency of paste, which, when dry, is perfectly water-proof. The leather-shavings are thrown into the mass and thoroughly impregnated thereby, or the dry shavings may be coated at both sides with the mass. When the leather-shavings have been thus treated by the cement obtained from the curds they are placed, in a layer having twice the thickness of the layer 65 to be produced in the finished article, between two covering layers, *b*, of split leather. They are then pressed into molds into the proper shape, according as they are required for shoe soles, heels, revolver-handles, or any other article. In place of leather-shavings, split leather may be used for the intermediate layer, or a layer or layers of split leather may be interposed between layers of leather-shavings. The leather substitute remains in the press 75 for about an hour, after which it is removed and allowed to dry slowly in the open air for about a week before it is used. The leather formed thereby can hardly be distinguished from common sole-leather, can be manufactured at a considerably lower price, is very durable in use, and not affected by moisture or other atmospheric influences.

I reserve the right to file a separate application for Letters Patent on the water-proof cement produced from curds, as herein described.

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

1. As a new article of manufacture, a leather substitute consisting of covering layers of split leather and an intermediate layer of leather-shavings, united with the covering layers by a water-proof cement, substantially as and for the purpose set forth. 95

2. As a new article of manufacture, a leather substitute made of covering layers of split leather and an intermediate layer or layers of

split leather or leather shavings, united to the covering layers by a water-proof cement, substantially as set forth.

3. The method herein set forth of making
5 a leather substitute from split leather and leather shavings by impregnating the leather shavings or split leather, or both, with a suitable water-proof cement, uniting it with covering layers of split leather by pressure, and

finally allowing the article to dry slowly, substantially as specified.

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

EMIL C. F. GÜNTHER.

Witnesses:

PAUL GOEPEL,

CARL KARP.