

(No Model.)

E. A. TRACY.  
SPLINT AND SPLINT FABRIC.

No. 522,947.

Patented July 10, 1894.

FIG. 1.

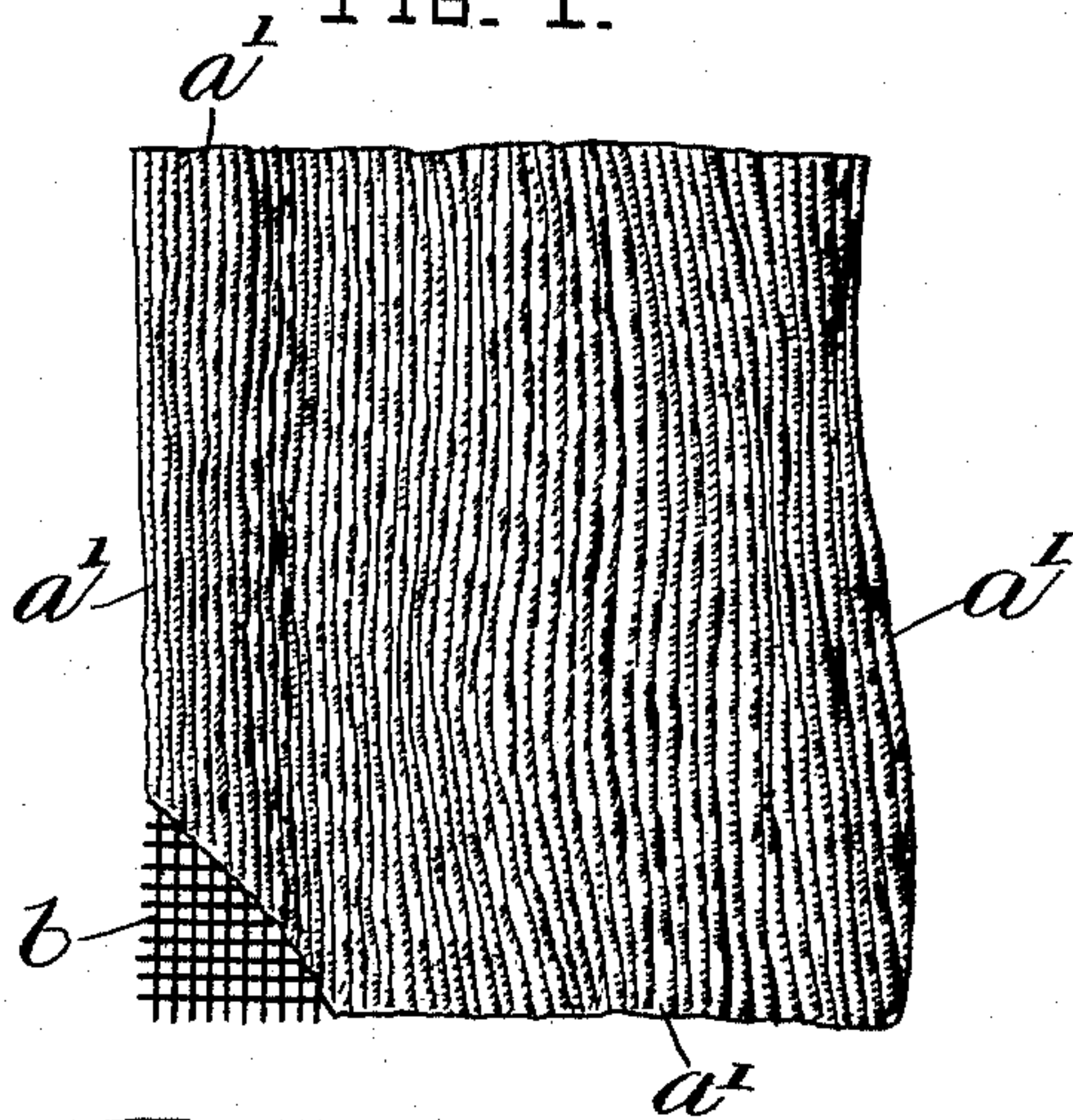


FIG. 2.

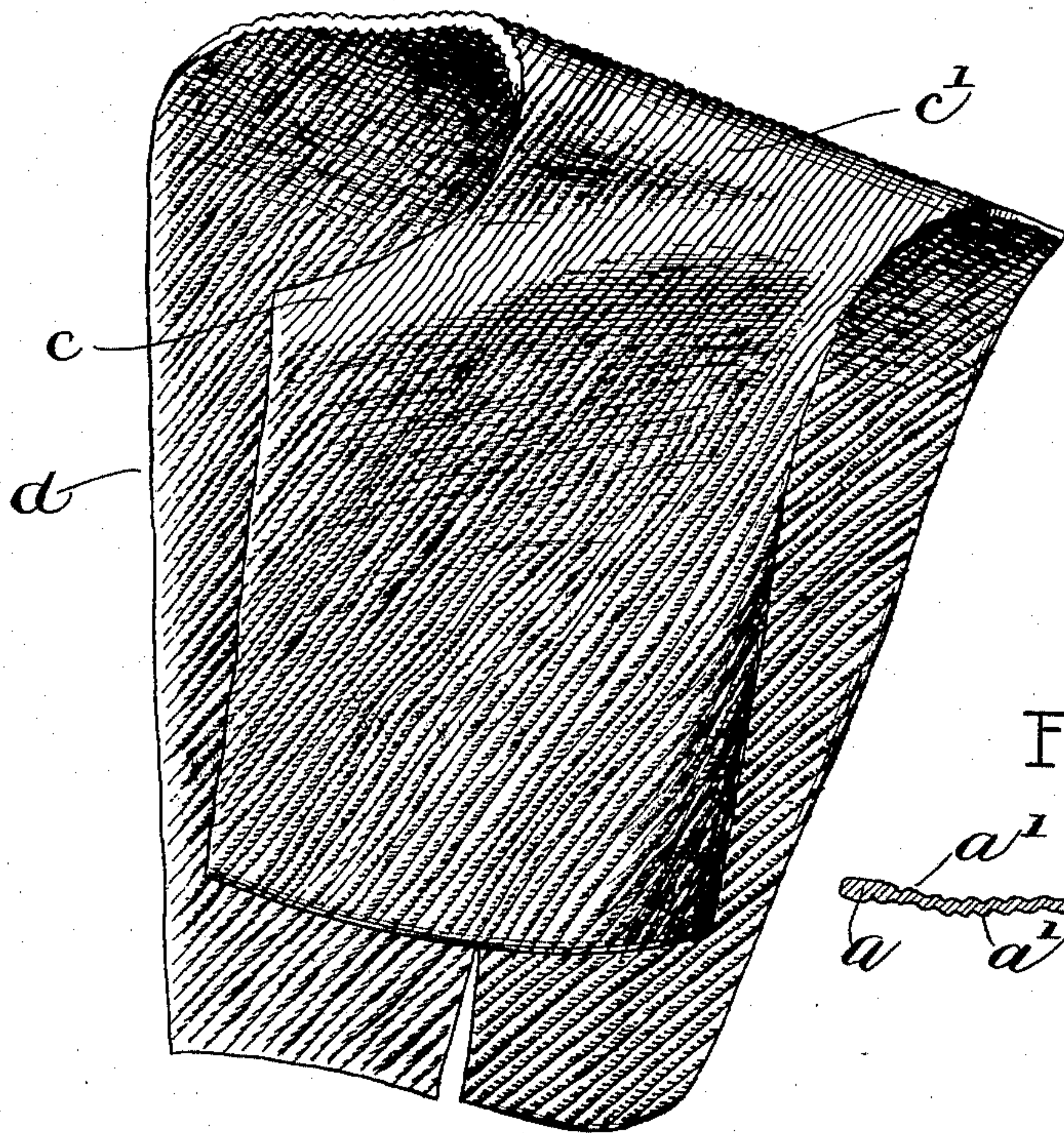
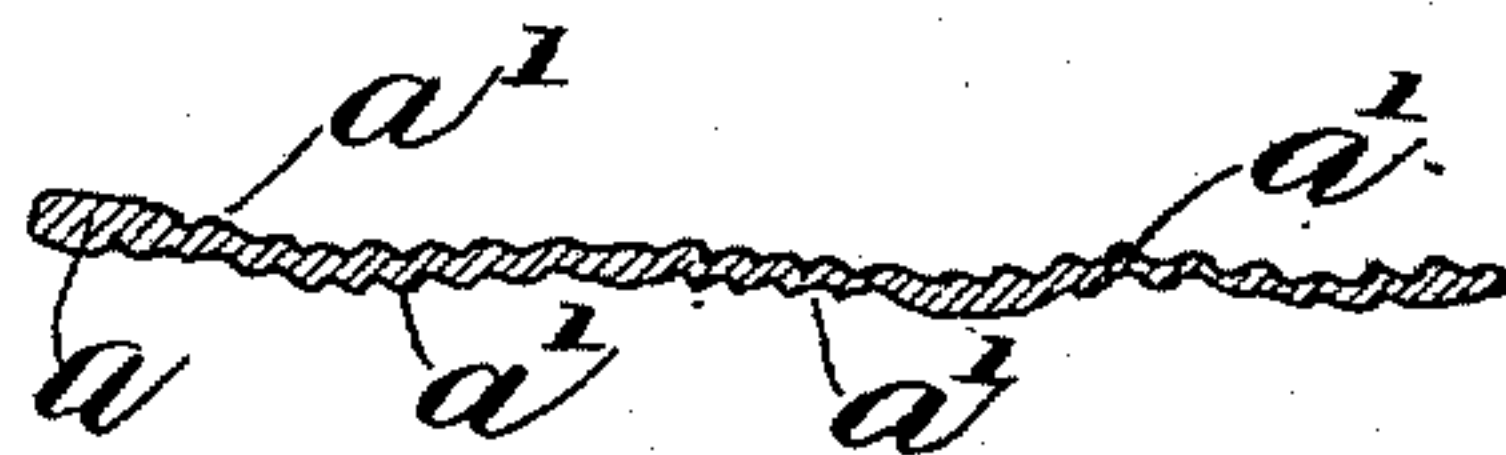


FIG. 3.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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AMERICAN WOOD PULP COMPANY, OF MAINE.

## SPLINT AND SPLINT FABRIC.

SPECIFICATION forming part of Letters Patent No. 522,947, dated July 10, 1894.

Application filed October 30, 1893. Serial No. 489,527. (No specimens.)

*To all whom it may concern:*

Be it known that I, EDWARD A. TRACY, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Moldable Fabric, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of a light and strong fabric, pliable under certain conditions and of such a character that it may be readily stretched and molded to any desired form when moist, the said fabric being well adapted for use in the manufacture of surgical splints.

In accordance therewith, my invention consists in a fabric for splints and analogous structures, composed of an irregularly rugose layer of wood pulp, and a reticulated reinforcing addition embedded therein, adapted to be molded and stretched when moist, substantially as will be described.

Other features of my invention will be hereinafter described and particularly pointed out in the claims.

Figure 1 represents a sufficient portion of a layer of pulp to enable my invention to be understood, one corner being broken away to show the reinforcing addition. Fig. 2 is a perspective view of a splint made from the fabric to be described, and Fig. 3 is a sectional view of a piece of the fabric, the reinforcing addition being omitted.

In carrying out my invention, I take wood pulp made in any usual manner and without sizing, forming the same while moist into a sheet or layer *a*, of desired average thickness, but rugose or wrinkled, as shown in the drawings, the rugae *a'* being irregular in thickness, width and direction, as clearly shown in Fig. 3.

The rugose or wrinkled condition may be given the layer of pulp in various ways, as by pressing the ends of the sheet toward each other, or by permitting the layer to slide over a flat surface, the friction of the under side of the layer upon the surface retarding the leading end of the layer, while the weight thereof presses the material forward, or by irregularly roughening or growing the surface of the roll which is commonly used to form the sheet or layer of pulp.

While forming the sheet or layer I preferably apply thereto a reticulated reinforcing addition *b*, see Fig. 1, which is embedded in the moist pulp and gives great tenacity thereto, rendering it less liable to split or tear, and also assisting it to preserve its molded shape while drying.

The reticulated fabric may be composed of any suitable material.

When dry the rugose fabric is very stiff and strong, the columnar form of the rugae *a'* adding greatly to its stability and strength, and when the fabric is moist it can be readily molded into various shapes, at such time the fabric stretching, the rugae flattening or decreasing in prominence.

As is well known, a layer of moist pulp will tend to crack and tear when molded, for the pulp in itself possesses little stretching capacity or tenacity, but when in the rugose condition or form the rugae provide the necessary increase of material to enable the pulp to be molded as desired. For this reason I have found it particularly useful in making surgical splints and cases for injuries to the body, as the rugose pulp when moist can be most accurately molded to any part of the body without breaking or rupturing.

The pulp will quickly absorb sufficient moisture to make it pliable, and it dries rapidly, and sets or hardens in its molded shape.

In Fig. 2, I have shown a shoulder splint *d*, molded to shape, the portions *c, c'*, on the front showing the rugae as considerably flattened or decreased in size, owing to the stretching of the fabric at such points during the molding to shape, such stretching permitting the molding to the desired contour without breaking or tearing the fabric.

The reticulated reinforcing addition may be inclosed between successive layers of pulp, if desired.

In Fig. 2 the reinforcing addition is not shown, for the sake of clearness, and it is to be understood that while the reinforce adds strength to the fabric, the latter may be used without it, as the rugose fabric of pulp is strong in itself.

I claim—

1. As a new article of manufacture, for splints and analogous structures, a fabric com-

posed of an irregularly rugose layer of wood  
pulp, and a reticulated reinforcing addition  
embedded therein, adapted to be molded and  
stretched when moist, substantially as de-  
5 scribed.

2. A surgical splint formed of a rugose layer  
of wood pulp, cut and adapted to stretch and  
be molded to shape when moist, substantially  
as described.

10 3. A surgical splint formed of a rugose layer  
of wood pulp having a reticulated reinforce-

ing addition embedded therein, cut and  
adapted to stretch and be molded to shape  
when moist, substantially as described.

In testimony whereof I have signed my 15  
name to this specification in the presence of  
two subscribing witnesses.

EDWARD A. TRACY.

Witnesses:

JOHN C. EDWARDS,

FREDERICK L. EMERY.