

F. WITTRAM.
DRESS-SHIELD.

No. 172,941.

Patented Feb. 1, 1876.

Fig. 1.

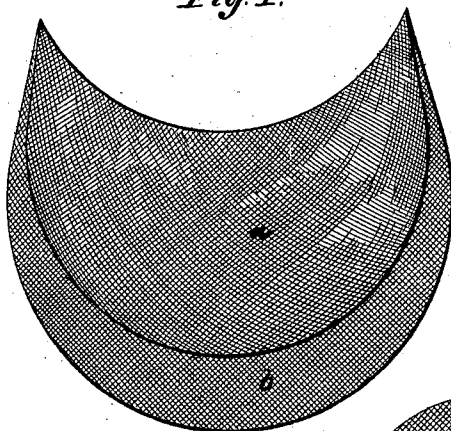


Fig. 3.

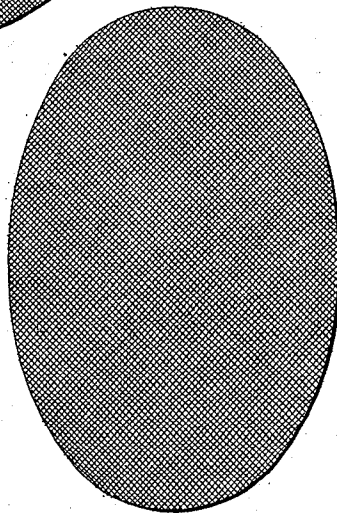


Fig. 4.

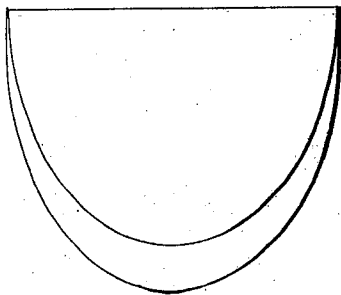
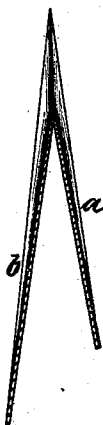


Fig. 2.



Witnesses:

Clark F. Whittemore
H. C. Davenport

Inventor:

Frederick Wittram.

UNITED STATES PATENT OFFICE.

FREDERICK WITTRAM, OF NEW YORK, N. Y.

IMPROVEMENT IN DRESS-SHIELDS.

Specification forming part of Letters Patent No. 172,941, dated February 1, 1876; application filed November 23, 1875.

To all whom it may concern:

Be it known that I, FREDERICK WITTRAM, of the city and county of New York, State of New York, have invented and made a new and useful Improvement in Dress-Shields, and the following is declared to be a correct description thereof.

Dress shields or protectors adapted to be inserted within the dress and beneath the arms to prevent perspiration from passing into the fabric of the dress, or other garment, and thereby injuring the same, have heretofore been made of india-rubber, oil-silk, and other repellents of water.

These shields have been usually made of two or more pieces of rubber cloth cut into crescent-shaped pieces sewed together, or having their concave edges united by overlapping and cementing one to the other.

The first of these constructions affords, in the threads composing the seam uniting the parts, a sure means of early destruction, since the threads, by capillary attraction, soon carry the moisture between the overlapped parts, causing it to penetrate the fabric forming the article, the result being that it soon rots and becomes useless.

The second construction necessitates a heavy cemented seam in the center of the shield, which seam comes in contact with the person, and is cumbersome and annoying to the wearer. It has been essayed to make a dress-shield from an oval piece of linen, muslin, or such fabric, simply folded together without any seam, the mode being to press the fabric into shape with a heated iron; but such device fails to retain a proper shape, and is practically valueless.

It is the object of my invention to overcome the objections inherent in all of the above-described constructions; and to that end it consists in a seamless dress-shield or protector, formed from a web of rubber cloth cut on the bias and stretched and folded upon itself, thus providing an article with a concave fold, which, while pliable and soft, will retain its shape and fit the arm-pit without buckling.

In the manufacture of my improved article I take cloth coated on one side with gum, (rubber,) and cut from it pieces of elliptical form, Fig. 3, care being taken that the warp and woof run at considerable angles to the longitudinal and transverse centers of the pieces. These pieces are then soaked in water until the threads composing the cloth are rendered soft and pliable. In this state they are doubled or folded into the form shown in Figs. 4 and 2, and the fold thus formed, stretched, or crimped into the concave shape shown in Fig. 1, the operation being analogous to the blocking of and crimping of boots, the elasticity or stretch necessary to form the concave seam being afforded by the angular position of the threads of the fabric, with respect to the fold, and the result being that the said threads, instead of being stretched in the direction of their length, simply change their relative positions from crossing each other at right angles to those which vary more or less therefrom.

The operation of crimping or stretching may be accomplished by hand, or by mechanism, a suitable shaping mold and stretching devices being alone requisite for the purpose.

I usually crimp one piece of the cloth with the gummed surface on the outside, and another piece with the gummed surface on the inside, and then place the two together, so that their gummed surfaces will adhere. One piece may be of plain cloth, caused to adhere to the gummed side of a companion piece.

The pieces of cloth may be crimped before they are united, as before explained, or cloth having rubber in it, or upon one or both surfaces, or two pieces united by rubber, may be crimped into proper form, and several such pieces may be crimped at one time.

What I claim is—

A dress-shield, formed of a seamless bias piece of rubber cloth, substantially as herein described and shown.

FREDERICK WITTRAM.

Witnesses:

CLARK F. WHITTEMORE,
G. W. DAVENPORT.