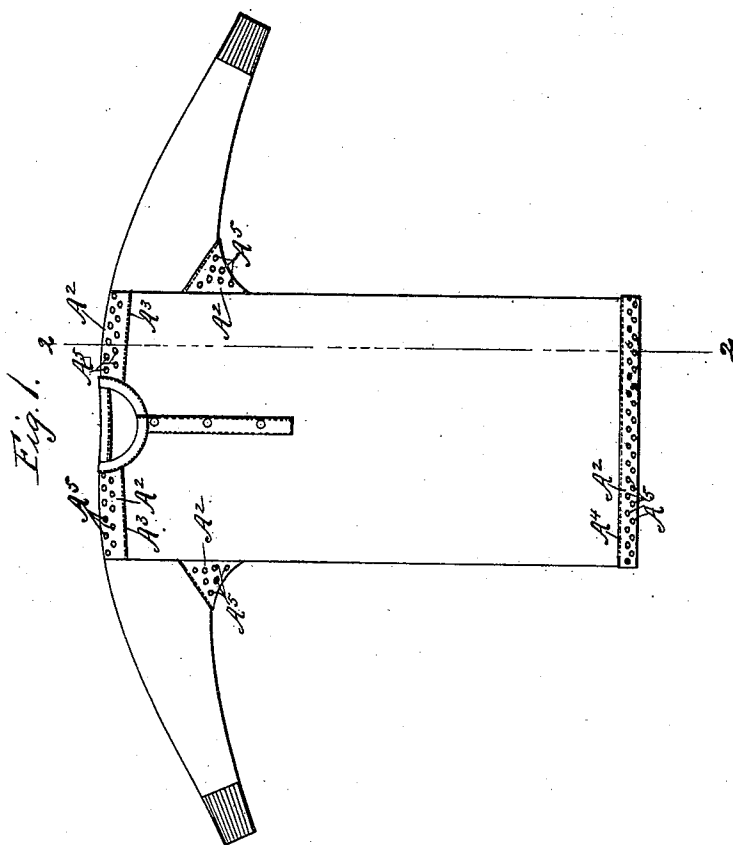
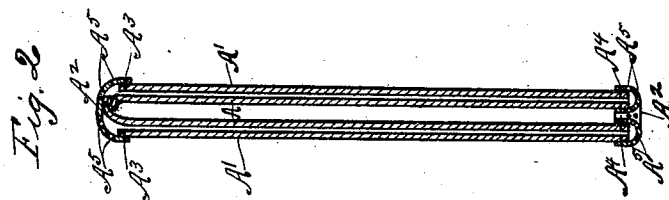


(No Model.)

C. A. BROWN.
UNDER GARMENT.

No. 465,452.

Patented Dec. 22, 1891.



Witnesses:
Frank C. Curtis
A. Dauph

Inventor:
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by Geo. Annorke
Atty.

UNITED STATES PATENT OFFICE.

CHARLES A. BROWN, OF TROY, NEW YORK.

UNDER-GARMENT.

SPECIFICATION forming part of Letters Patent No. 465,452, dated December 22, 1891.

Application filed November 5, 1890. Serial No. 370,381. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. BROWN, a citizen of the United States, residing at Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Garments, of which the following is a specification.

My invention relates to such improvements; and it consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings and the letters of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts in the several figures therein.

Figure 1 of the drawings is a view in front elevation of an undershirt made of twofold fabric and having a piece of meshy fabric inserted in the outer fold or ply at the top and at the bottom of the shirt. Fig. 2 is a vertical section taken on the broken line 2 2 in Fig. 1.

Single-fold garments have been perforated and made of loose-textured material or open-work fabric to afford a desired means of escape for the exhalations of the body; but such a garment also permits the natural heat of the body to escape, and, when subjected to the influence of air-drafts, to escape so quickly as to become injurious to health.

I have ascertained that by making the garment of a twofold fabric like that shown in W. A. Harder's United States Patent No. 429,310, dated June 3, 1890, and inserting at desirable and convenient points in the outer fold or ply a loose-textured or open-work fabric, whether woven, knitted, or otherwise formed, the desired ventilation will be provided for without any inconvenience or danger to the wearer of the garment. The natural movements of the body cause a sufficient circulation of air between the double folds to carry off the body exhalations, while the inner fold amply protects the body from appreciable air-drafts.

Referring to the drawings, the shirt shown in Figs. 1 and 2 is made of two plies A and A', of fabric superimposed one upon the other and finished in the usual well-known manner, except that a portion of the outer ply is cut away over the shoulders and the meshy fab-

ric A² inserted, as shown, the edges of the inserted piece being secured to the edges of the ply by lines of stitching A³, and the inner and outer plies are connected at the lower end of the shirt by a similar piece of meshy fabric by lines of stitching A⁴. The meshy fabric may be any loose-textured fabric, whether knitted or woven, or any open-work fabric or other flexible material. The meshes in the fabric are represented at A⁵. Any gases or other exhalations escaping from the pores of the body through the inner ply of fabric would be readily carried off through the meshes A⁵ over the shoulders or at the bottom or under the arms. The natural movements of the body would tend to assist the operation by separating the folds of the garment, thereby drawing fresh air through the meshes and expelling it again, together with the exhalations.

The meshes may be formed in the outer fold of the different garments or in a separate piece, to be inserted in such fold at the desired point or points, and the remaining portions of the fabric may be closely woven or knitted, as desired.

I am aware that coats have been provided with a rubber interlining perforated to ventilate the space between it and the inner coat-ply, and I do not broadly claim such a form of construction. Such perforations were made by cutting out portions of the rubber and of the fabric which was pasted to the rubber—an operation which would be impracticable in a woven or knitted fabric.

My improved under-garments are made throughout of two-ply fabric, with one ply superimposed upon the other, and when the two inner-ply and the two outer-ply edges of the different parts of the garment are connected by a single line of stitching or other form of common union to form the shoulder and other seams, they form a large mass of solid fabric at the edges of the inter air-spaces, which become saturated with the body exhalations therein that cannot be entirely removed by the usual laundering process unless means be provided for the easy escape of such exhalations. By inserting a separate piece of ventilating fabric A² in the outer ply, as shown in Fig. 2, the unions are much reduced in size and the inter air-space is not cut off there-

by, the inserted piece serving to connect the outer plies and bridge the union connecting the inner plies, as shown, thus avoiding a four-ply union.

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

As an improved article of manufacture, an under-garment made of two plies of fabric superimposed one upon another and having the
10 inner-ply edges of parts of the garment connected by a union independently of the outer-

ply edges and the outer-ply edges of such parts of the garment connected at desired points by an inserted piece of ventilating fabric bridging the inner-ply union, substantially as described. 15

In testimony whereof I have hereunto set my hand this 3d day of November, 1890.

CHAS. A. BROWN.

Witnesses:

GEO. A. MOSHER,

W. H. HOLLISTER, Jr.