

(No Model.)

J. J. BYERS.

VENTILATED WATERPROOF AND OTHER GARMENTS.

No. 346,087.

Patented July 27, 1886.

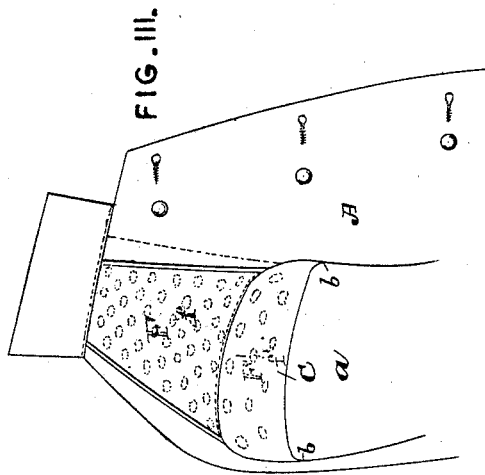


FIG. V.

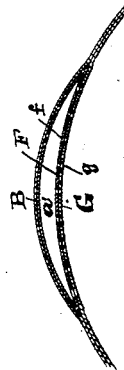


FIG. IV.

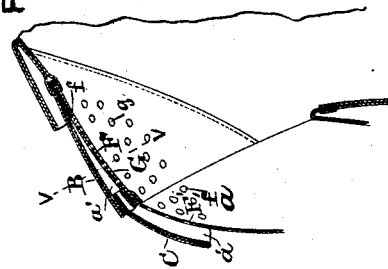


FIG. I.

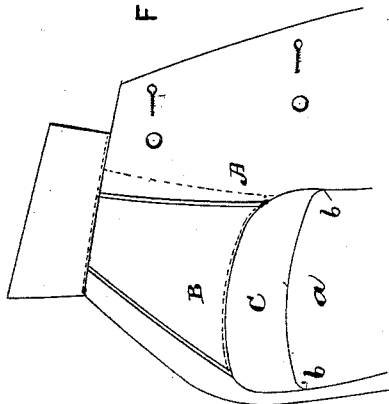
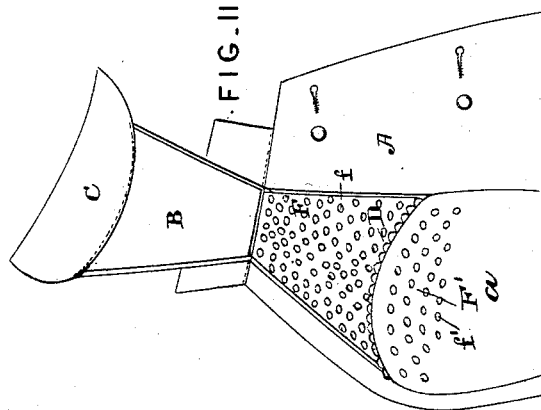


FIG. II.



Attest:

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# UNITED STATES PATENT OFFICE.

JOSEPH J. BYERS, OF BROOKLYN, NEW YORK.

## VENTILATED WATER-PROOF AND OTHER GARMENTS.

SPECIFICATION forming part of Letters Patent No. 346,087, dated July 27, 1886.

Application filed April 16, 1886. Serial No. 199,065. (No model.)

### *To all whom it may concern:*

Be it known that I, JOSEPH J. BYERS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Water-Proof and other Garments, of which the following is a specification.

The object of this invention is to provide for the effective ventilation of water-proof and other garments; and to this end the invention consists in the employment of perforations in the shoulders and upper portions of the sleeves of the garment covered by epaulets or caps so applied as to fit loosely over the said perforations without closing the same or interfering with the free passage of air.

In the accompanying drawings, Figure I is a side view of a portion of a garment to which my improvement is applied. Fig. II is a side view of the same with the epaulet and cap turned up so as to expose the perforations in the shoulder and sleeve. Fig. III is a side view showing the epaulet in position and indicating in dotted lines the location of the perforations underneath the same. Fig. IV is a vertical section through the collar, shoulder, and sleeve of the garment. Fig. V is a horizontal section on the line V V, Fig. IV.

The invention is applicable to coats and cloaks of all descriptions; but for the purpose of illustration is here shown as applied to a water-proof coat.

In the shoulder A and the upper portion, *a*, of the sleeve are portions F F' of perforated material, the perforations *f f'* therein being covered, respectively, by an epaulet, B, and a cap, C, which may be formed in one piece, or in two pieces stitched together, and are sewed to the garment along the upper end of the epaulet B, and the two sides of the same, and also along the upper curved edge of the cap C, where it extends in front and rear of the epaulet B, so as to leave the lower edge of the cap C detached from the sleeve *a*, and to provide a clear and uninterrupted space or passage, *a'*, between the perforated material F F' and the epaulet B and cap C, communicating freely with the outer air under the lower edge of the cap. The cap C rests upon a bridge of rubber or other material, D, corrugated, if desired, to permit the free passage of the air. By this means the air is allowed to pass freely

through the perforations in the shoulders and sleeves of the garments, and thus ventilate the garment, while the epaulet and cap protect the perforated shoulders and sleeves from the weather without interfering with ventilation.

Other suitable means for allowing the air to pass freely may be used; but I prefer in practice to use a lining piece or stay, G, of any proper material, having perforations *g*, corresponding to the perforations *f*, so attached to the body of the garment at the shoulder and so constructed that the epaulet and cap will be about one-eighth or one-fourth of an inch or more larger between the points *b b* than the shoulder at said points, thus holding the epaulet loosely open above the perforated material F. The stay G is so arranged as to prevent any stretching or alteration, and thus prevents the closing of the space between the epaulet and the perforated material F when on the wearer.

A serious defect and imperfection has existed in means heretofore devised or attempted for ventilating water-proof garments, partly by ill-judged location of openings provided for the purpose, partly by lack of such construction as would keep the passages open at all times, while providing efficient protection from the weather. With my improved construction the passages are never closed while the garment is on the person, and, moreover, each movement of the body, and especially of the arms of the wearer, causes an ejection of air from beneath the epaulet and cap, the place of which is supplied by hot air rising within the garment around the body, so as to maintain a constant and free circulation, especially while the wearer is in motion, at which time unventilated water-proof garments become oppressive, and are highly detrimental to health by confining perspiration and exhalations from the skin.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. A garment having a shoulder, A, sleeve *a*, portion F, formed with perforations *f* between the sleeve and collar, an epaulet, of greater width than the perforated portion embraced thereby, secured outside the marginal edges of the latter, forming the inner portion of an air-passage, *a'*, and a cap secured to the

outer end of the epaulet of greater width than the portion of the sleeve embraced thereby, extending down over the latter, secured to the sleeve at each side, and forming the outer  
5 portion of the air-passage *a'*, substantially as described.

2. A garment having a shoulder, A, formed with perforated portion *Ff*, sleeve *a*, having perforated portion *F'f'*, epaulet B, embracing  
10 the perforated shoulder portion, and a cap, C, secured to the outer end of the epaulet, embracing the perforated sleeve portion and secured to the sleeve, the epaulet with its cap being of greater width than the perforated  
15 portions secured to the latter, and forming the air-passage *a'*, extending beneath the cap through the epaulet to the collar, substantially as described.

3. A garment having a perforated shoulder, an epaulet and cap covering said perforated  
20 shoulder and secured thereto on each side of the perforations, forming an air-passage, *a'*, and a stay-piece imparting fullness to the epaulet and maintaining the air-passage between this and the perforated shoulder, sub-  
25 stantially as set forth.

4. A garment having a perforated shoulder, an epaulet and cap covering the said perforated shoulder, and a bridge, D, on the shoulder, forming a seat for the epaulet, substan-  
30 tially as set forth.

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Witnesses:

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