C. W. MEITER.

INDIA RUBBER GARMENTS.

No. 184,408. Patented Nov. 14, 1876.

Fig. 1.

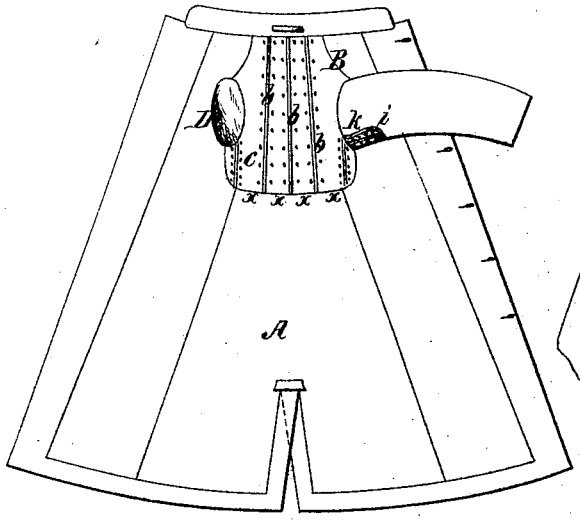


Fig. 2.

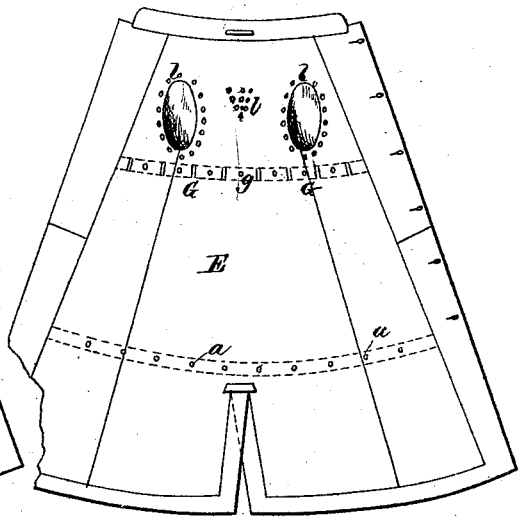


Fig. 3.

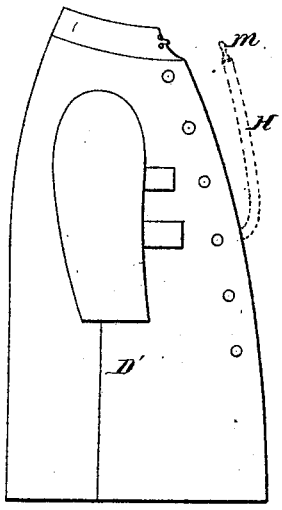


Fig. 4.

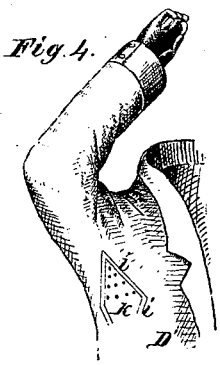


Fig. 5.

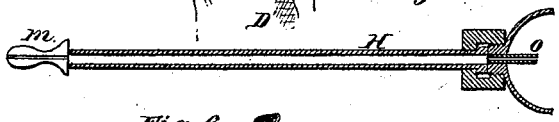
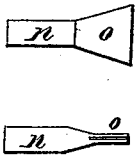


Fig. 6.

Fig. 7.



Witnesses.

Thos. D. Pierce

Benjamin F. Taylor

Inventor.

C. W. Meiter

UNITED STATES PATENT OFFICE.

CHARLES W. MEITER, OF LONDON, ENGLAND.

IMPROVEMENT IN INDIA-RUBBER GARMENTS.

Specification forming part of Letters Patent No. **184,408**, dated November 14, 1876; application filed March 31, 1876.

To all whom it may concern:

Be it known that I, CHARLES WILLIAM MEITER, of London, England, have invented certain new and useful Improvements in Ventilating India-Rubber Garments, and in rendering same applicable for life-saving purposes, part of which is applicable for life-saving apparatuses generally requiring to be inflated, of which the following is a specification:

This invention consists, first, in adapting to water-proof garments a loose lining for air to pass between for ventilation, instead of fixing the lining to the coat, as heretofore practiced; second, adapting tubes or cords between the lining and the coat, for the purpose hereafter stated; third, in adapting an ordinary life-saving belt between the loose lining and the material of which the coat is made; fourth, the method of inflating the said life-saving belt by the use of a valve of peculiar construction, as hereafter described.

In order to ascertain the means by which this invention may be effected reference must be had to the annexed drawing, of which the following is a description.

Figure 1 represents the inner side of an ordinary mackintosh or water-proof coat with my improved loose lining adapted thereto. Fig. 2 represents the inner side of an india-rubber garment manufactured according to my said invention, with a life-saving belt between the lining of the coat and the surface of the material of which the coat is made. Fig. 3 represents a side elevation of the outside of the coat as it would appear when ready for use; Fig. 4, the coat as it would appear when in use. Figs. 5 and 6 are detached parts, hereafter described.

At each of the above-mentioned figures similar letters of reference are employed to denote corresponding parts.

As regards Fig. 1, A marks an ordinary water-proof coat; B, a loose lining adapted thereto in the following manner: The lining B is connected by its outer edge to the back of the coat, at the inner side thereof, except at the part marked *x x*, at which part the lining is left loose for air to pass between, the heated air passing out at the upper part of the coat, near the collar thereof. The lining B is prevented from coming into close contact with the inner surface of the coat by affixing tubes or solid cords, or pieces of vulcanized india-rubber, or other suitable appliance at the back of the lining B, at *b*, the said tubes or cords being affixed to the said lining partially by the eyelets *c*. D marks the arm-holes of the coat.

I would here remark that the tubes represented at *b* are not intended to be used for air to pass through, but simply to keep the lining B from the coat, as above stated, and are preferred, for their flexibility, to solid cords, and tubes used for this purpose may have their ends closed.

I now proceed to describe another mode of manufacturing water-proof garments with loose linings and life-saving belts, as represented in Figs. 1, 2, 3, 4, 5, 6 of the accompanying drawing, as follows: D′ marks a coat, made of any water-proof material; E, a loose lining, of any suitable material or fabric. The holes at *a*, which are eyelets, are for admitting air between the lining and inner surface of the coat. G are short tubes or solid cords, fixed to the lining partially by the eyelets *g*, the said tubes or cords being employed for keeping the lining free from the coat, as before stated with reference to Fig. 1. *k* marks other perforations for the passage of air underneath that part of the sleeve of a coat known and distinguished by tailors as the "sye," or those parts which, when a coat is in use, come under the armpits of the wearer, the intention of this part of my said invention being to allow a free passage of air beneath the armpits by preventing the sleeves at those parts coming in contact with the body of the coat, as represented at Fig. 6, which may be effected by affixing to the sleeve and body a piece or pieces of flexible tubing or solid cords, of india-rubber or other suitable material, marked *i* at Figs. 1 and 4. In addition to the perforations *k* at the outside of the coat, I also make holes or perforations in the sleeve-linings, as represented at Fig. 1. At Fig. 2 *l* marks eyelet-holes for the passage of air between the lining E and the coat around the arm-holes, and at that part of the coat which comes between the shoulders of the wearer. The life-belt above referred to is placed between and fixed to the lining of the coat, at any convenient part thereof, and the material of which the coat is made and the

said life-belt may be inflated by blowing into the tube H, at the mouth-piece *m*. The lower end of the tube H is fitted with a valve of any suitable construction, by preference that represented full size at Fig. 7, where *n* marks a short tube of india-rubber, the end *o* whereof is flattened, and the other end fixed to the tube as a mouth. The effect of a valve thus formed is to open slightly upon blowing into the tube to which the said valve is connected; but upon the blowing being suspended the flattened parts of the tube will immediately close by the pressure of the surrounding air thereon, and in this manner and by these means the life-saving belt may be readily inflated. To discharge the air from the life-belt when it is not required to be used the belt must be provided with an ordinary outlet-valve.

In adapting a life-saving belt to the water-proof garment represented at Fig. 1, the loose lining thereof should be extended under the facings of the coat.

I claim as my invention—

1. In combination with a water-proof garment and its lining, the tubes or cords *b* and *i*, for keeping the parts separate, and the holes *c k l*, for ventilating the space between the garment and its lining, substantially as described.

2. In combination with the garment constructed as described, the life-saving belt, secured between the garment and its lining, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

C. W. MEITER. [L. S.]

Witnesses:

THOS. D. PIERCE,
Town Clerk, Bortle, Lancashire.

BENJAMIN S. TAYLOR,
Clerk, 87 Gracechurch Street, London.