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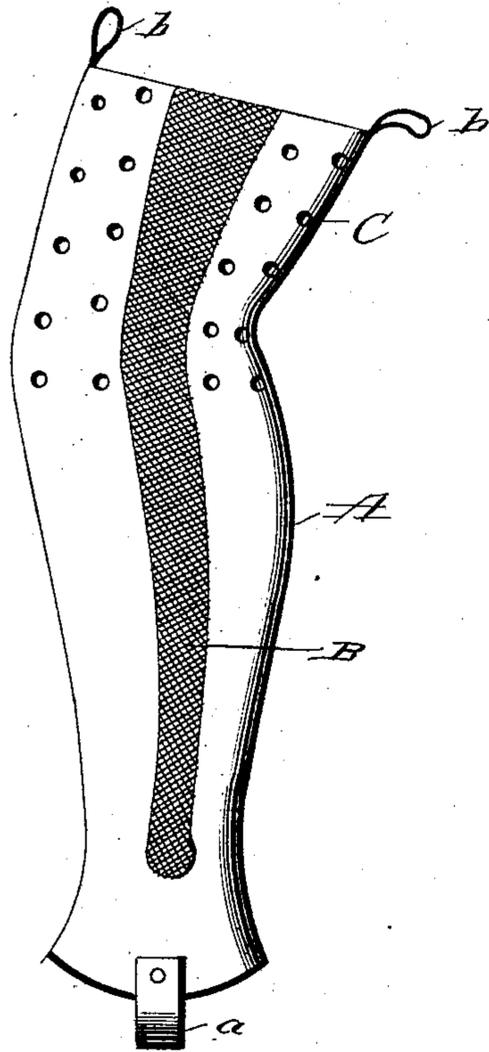
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L. W. GROAT & W. J. VAN VLECK.
WATER PROOF LEGGIN.

No. 444,489.

Patented Jan. 13, 1891.

Fig. 1.



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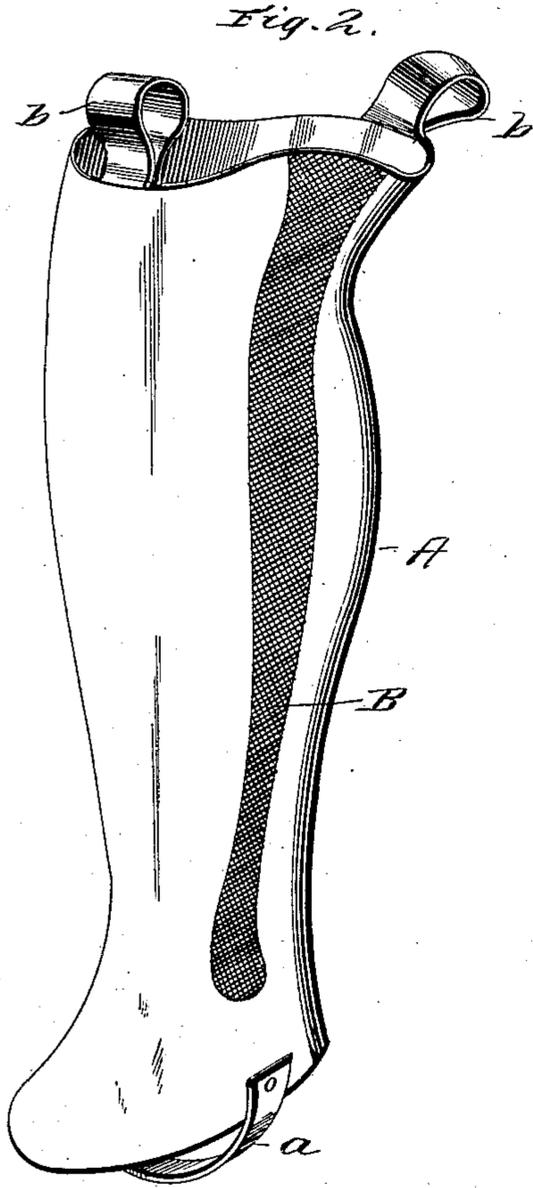
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2 Sheets—Sheet 2.

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Witnesses:
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UNITED STATES PATENT OFFICE.

LOUIS WILLIAM GROAT AND WILLIAM JUDSON VAN VLECK, OF HUDSON,
NEW YORK.

WATER-PROOF LEGGIN.

SPECIFICATION forming part of Letters Patent No. 444,489, dated January 13, 1891.

Application filed July 24, 1890. Serial No. 359,788. (No model.)

To all whom it may concern:

Be it known that we, LOUIS WILLIAM GROAT and WILLIAM JUDSON VAN VLECK, citizens of the United States, residing at Hudson, in the county of Columbia and State of New York, have invented certain new and useful Improvements in Water-Proof Leggings; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in leggings, designed more particularly for ladies' use, the object being to provide a leggin which will fit close to the limb, beneath the clothing, and extend above the knee, and while being water-proof will afford ventilation at such points that water or snow would not ordinarily reach. These objects are accomplished by the means illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of our improved leggin, and Fig. 2 is a perspective view of a modification thereof.

In carrying out our invention the leggin A, which may be made in any preferable manner of pliable leather or other water-proof material, is provided at its bottom with the usual instep-strap *a*, and at its top with tug-loops, as *b*, to assist in drawing the leggin upon the limb.

On each side of the leggin we cut out the leather, as illustrated, to allow for the interposition of rubber or other suitable elastic strips B, which are, preferably, of a thickness similar to the leather, and which extend from the top of the leggin down to or near the bottom thereof. These elastic strips B may be attached to the edges of the cut-out portions by any well-known means, as by sewing or the like, and they are designed at once to give elasticity to the leggin, whereby it will take into and conform with the curves

of the limb, and to assist said leggin in the exclusion of moisture.

Extending from a point slightly below the knee portion of the leggin to the top thereof we provide perforations C in the leather portion for the admission of air to the leggin to ventilate the same.

It is obvious that the elastic nature of the leggin will be such as not to pinch the limb or hug it too closely to allow of the air penetrating the space between limb and leggin, and it is also obvious that, if desired, the leggin may be suitably lined. It is also obvious that, if desired, the leggin may be of a length to extend to a point below the knee, and in this case the perforations for the ventilation of the same may extend to a few inches below the top.

In Fig. 2 of the drawings we have illustrated a modified construction, in which we employ woven elastic strips instead of rubber or analogous material, in which case the ventilation perforations may be dispensed with.

Having described our invention, what we claim is—

The improved leggin herein described, composed of leather or analogous material having the straps *b b* at its upper end and vertical slots in its sides extending partly the length of the leg, in which elastic goring is inserted and its lower portion continuous or unbroken, having the instep-strap *a* secured at each side of the open lower ends, said leggin also having perforations C through its upper portion, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

LOUIS WILLIAM GROAT.

WM. JUDSON VAN VLECK.

Witnesses:

C. W. BOSTWICK,

WM. F. ROSSMAN, Jr.,

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