No. 896,971. PATENTED AUG. 25, 1908.

R. CHRISTENSEN.

FOOTWEAR.

APPLICATION FILED MAR. 12, 1908.

Fig. 1.

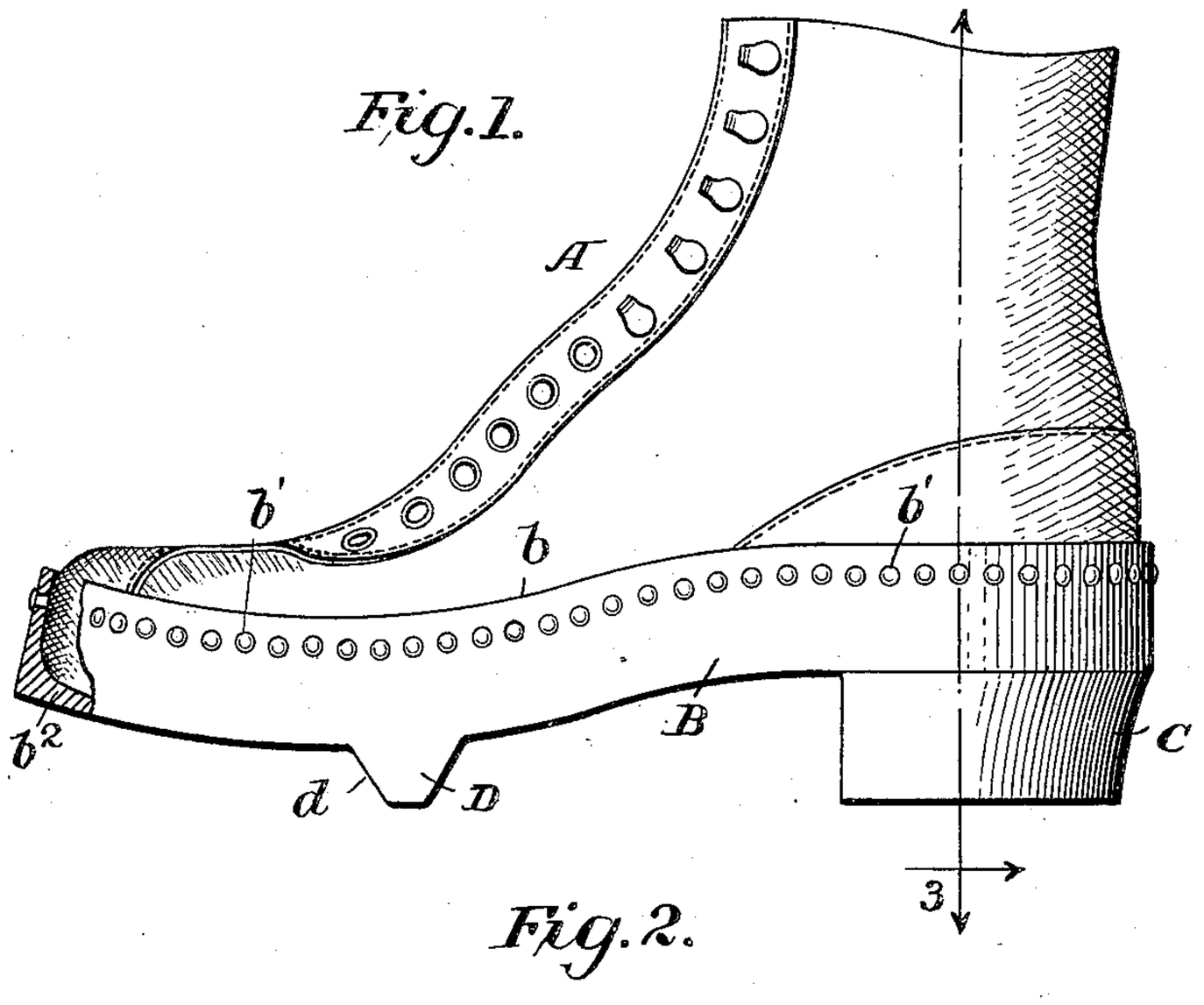
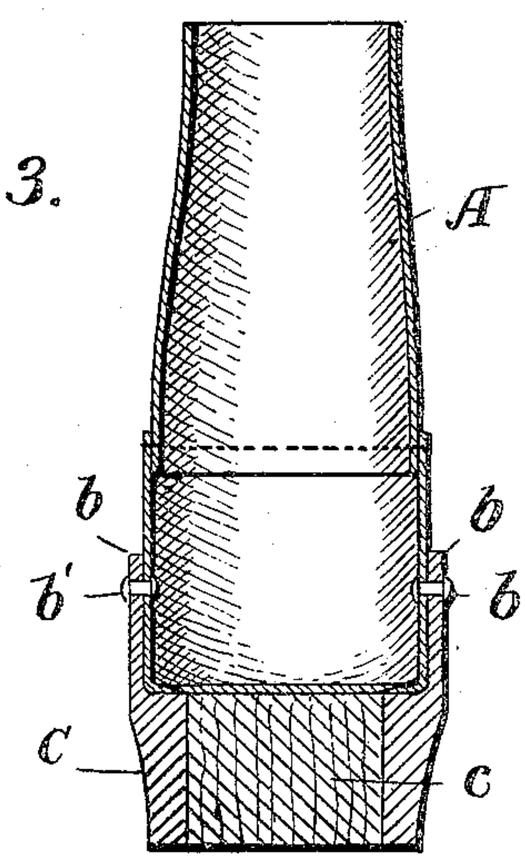


Fig. 2.

Fig. 3.



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UNITED STATES PATENT OFFICE.

ROBERT CHRISTENSEN, OF RACINE, WISCONSIN, ASSIGNOR OF ONE-HALF TO T. P. HARDY, OF RACINE, WISCONSIN.

FOOTWEAR.

No. 896,971. Specification of Letters Patent. Patented Aug. 25, 1908.

Application filed March 12, 1908. Serial No. 420,545.

To all whom it may concern:

Be it known that I, ROBERT CHRISTENSEN, a citizen of the United States, residing at Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Footwear, of which the following is a specification.

My invention relates to the making of boots and shoes and particularly to such as are intended for the use of miners, railway men, quarrymen, brewers, and others engaged in rough and wet work and therefore require a strong and durable article which will properly protect the feet. In making foot-wear of this character, it is usual to provide a sole that is more or less stiff and inflexible, and especially is this the case where metal is the material employed in the construction. One form of such a shoe devised by me is provided with a sole-portion of metal having a heel and an upstanding flange, the latter of which extends around and receives the base of the upper portion of the shoe, as disclosed in Patent No. 837,385, granted to me December 4, 1906. While such a device has in a large degree proved successful, it has been found to cause undue fatigue to the wearer, owing to the inflexibility of the sole-portion. To obviate this difficulty I have devised a shoe of the above general character having a bar extending transversely across the bottom of the sole beneath the ball of the foot and of sufficient height to constitute a pivot, ball or axis upon which the foot rocks in walking, so that flexibility of the sole is unnecessary.

My invention consists, therefore, in the improved construction of foot-wear hereinafter described, and shown in the accompanying drawings in which—

Figure 1 is a side elevation of a shoe embodying my improvements; Fig. 2 is an inverted plan view of the sole thereof: and Fig. 3 is a vertical section taken on line 3—3, Fig. 1.

Referring to the drawing, A is the upper or body-portion of a shoe, which may be in any style and material. B is the sole-portion formed preferably of aluminum or aluminum alloy cast in a mold and constituting an integral structure having an upstanding flange *b* to receive and surround the base or lower part of the body-portion A, to which it is attached in any suitable manner as by rivets b^1.

Sole-portion B has a heel C formed integral therewith and hollow in the center for greater lightness, the hollow being filled by a wooden or other plug *c*. Sole-portion B is also provided with a bar D cast integral therewith and extending transversely across the bottom of the sole just under the ball of the foot. The sides *d* of this bar preferably slope towards each other, and the metal of the bar may be hardened or reinforced to give greater wear. This bar is of sufficient height to constitute a pivot or axis upon which the foot rocks when walking, and the heel is made of sufficient height to give the proper slope to the foot.. The bar also acts to prevent slipping.

The toe or front end of the sole-portion is preferably thickened for a short distance, as shown at b^2, to compensate for the greater wear at this point.

Having described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is—

In a device of the character described, the combination with an upper or body-portion, of a unitary cast-metal sole-portion having an integral hollow heel provided with a suitable filling, an integral upstanding flange to receive the base of said body-portion and suitably attached thereto, and an integral transverse bar formed upon the casting and extending across the bottom of said sole-portion beneath the ball of the foot.

In testimony whereof I have affixed my signature, in presence of two witnesses.

ROBERT CHRISTENSEN.

Witnesses:
T. P. HARDY,
JOHN T. WENTWORTH.