(No Model.)

S. BEATTIE.

BOOT OR SHOE.

No. 411,776. Patented Oct. 1, 1889.

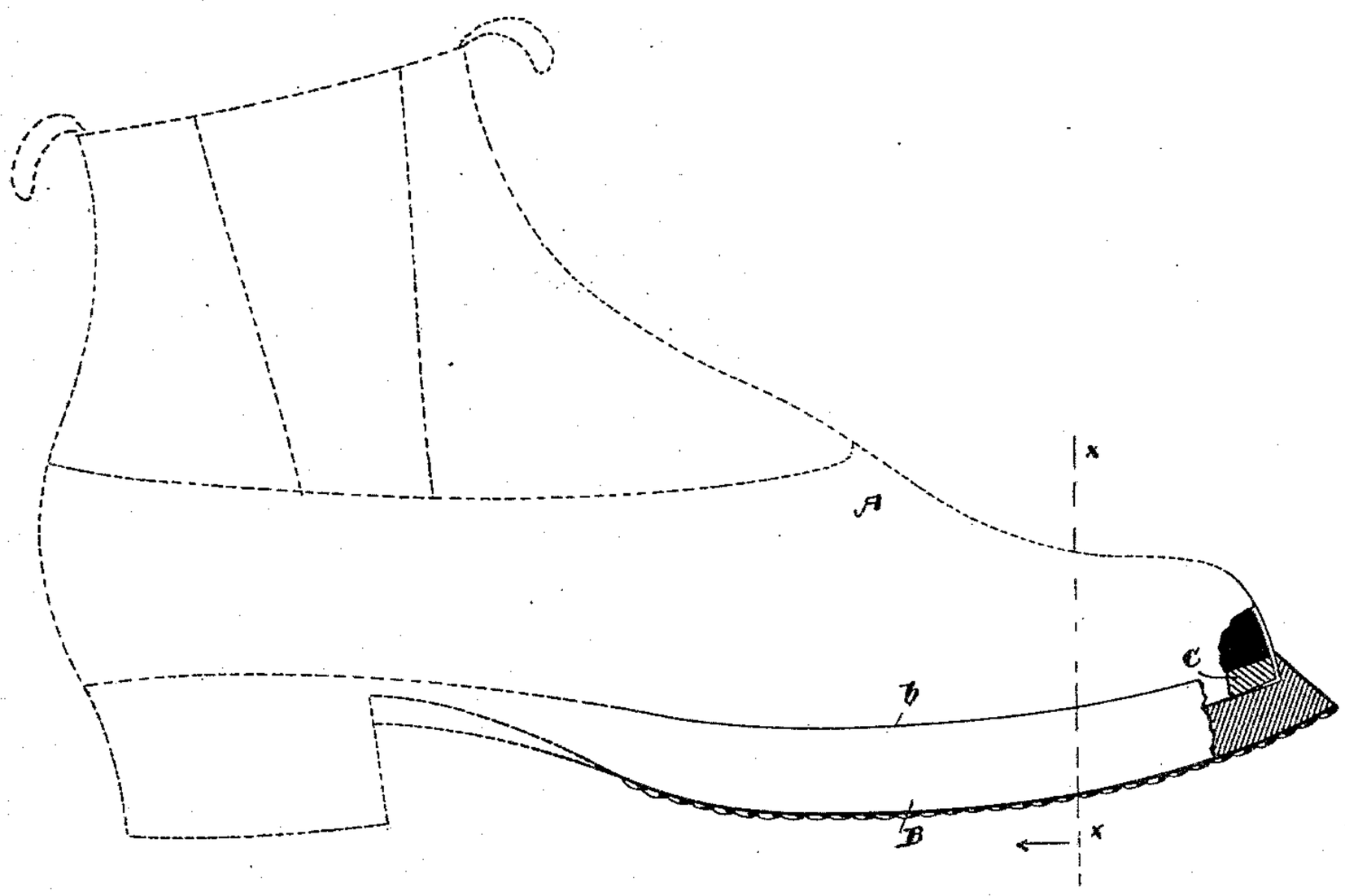
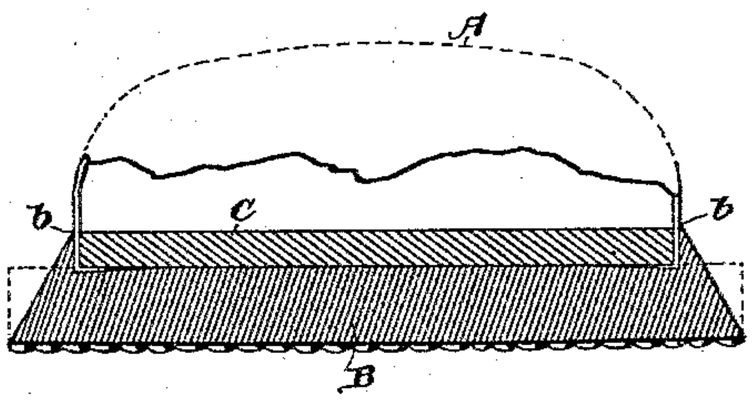


Fig. 1

Fig. 2.



WITNESSES:
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UNITED STATES PATENT OFFICE.

SAMUEL BEATTIE, OF CLEVELAND, OHIO.

BOOT OR SHOE.

SPECIFICATION forming part of Letters Patent No. 411,776, dated October 1, 1889.

Application filed September 20, 1888. Serial No. 285,937. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL BEATTIE, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Boots or Shoes; and I do hereby 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 pertains to make and use the same.

My invention relates to improvements in boots and shoes, designed more especially for molders, metal-workers, &c., such improved boot or shoe being provided, respectively, with broad sole for protecting the "upper," the upper edge of such sole being upset or worked up against the upper opposite the edge of the insole to protect and cover the upper of the boot or shoe farther up from the tread thereof, and to obliterate any ledge, groove, crease, or depression at the union of the sole and upper, such as would give lodgment to molten or hot metal, hot sand, or other injurious substance, to the end that such boot or shoe is rendered more durable for the purpose for which it is intended.

For molders, rolling-mill men, &c., a broad sole for the boot or shoe is indispensable to protect the upper by warding off, for instance, hot iron, hot bricks, and sand; otherwise the upper might be burned and ruined in a day or hour's usage. The broad heavy sole, usually well supplied with hob-nails, is able to withstand any amount of hard usage and to give the aforesaid protection to the upper; but heretofore the ledge and groove at the union of such broad sole and upper furnished lodgment for particles of hot and molten metal, hot sand, &c., from contact of which the uppers are likely to be burned, so that they would crack off near the sole, and such damage was just as likely to accrue to a new boot or shoe as to an old one, and the broader the sole employed the broader usually was the objectionable ledge aforesaid. I have therefore devised the "finish" for a boot or shoe illustrated in the accompanying drawings, in which a broad sole is retained, but the objectionable groove and ledge are dispensed with.

Figure 1 is a side elevation, a portion thereof being broken away to show the construction. Fig. 2 is an elevation in transverse section.

A represents the upper, B the sole, and C the insole. The latter is preferably left square-edged, as it comes from the die or from the cutter's knife, as the insole was left square edged in the days of primitive shoe-making, before the guild had learned to trim off the under edge of the insole to prevent the upper from cracking by bending and vibrating at so sharp an angle. The sole B is made broad, as shown, to protect the upper, the form of the sole before the "working up" thereof being shown approximately in dotted lines, Fig. 2. While the sole from previous soaking is comparatively soft and in a measure plastic, so to speak, by rubbing and hammering, if the work is done by hand or by the aid of machinery, the upper edge of sole B is upset or worked up against the upper opposite to the edge of the insole, for instance, as shown at *b*, and until there is no groove or ledge at the union of the upper and edge *b* of the sole. The sole as it dries and hardens after such working-up process shrinks more or less, and thus causes the edges *b* to press more firmly against the upper, which latter in turn is supported on the inside by the insole. Under such conditions the upper cannot bend or vibrate at the lower edge of the insole, and therefore it is no detriment to the boot or shoe to leave the lower edge of the insole square. The working up of the edge of the sole against the upper, as aforesaid, accomplishes three important objects: First, it covers and protects the upper some little distance farther from the ground; second, it prevents the upper from vibrating where it is bent across the edge of the insole and where otherwise the upper would be most likely to crack, and, third, it does away with any ledge or crease where any hot or injurious material could find lodgment next the upper.

It is a matter of frequent occurrence for a molder to spill a little molten metal on his shoe, in which case the molten metal breaks into drops and glances off of the shoe, doing little more harm than so much water, unless perchance some of the particles lodge in the groove next the sole, in which case the upper

is burned so that it cracks off usually in a day or two. Of course the uppers under such usage as they receive in a molding-room, furnace, or rolling-mill become dry and hard, and consequently the ordinary shoe, if not burned, will be likely to crack where the upper bends under the insole before the shoe is worn out. With my improved construction or finish the upper is kept from bending at the very point where it would be likely to crack, and consequently the upper is likely to last until the shoe is worn out.

With my improved construction the additional cost is but trifling, while the improved boot or shoe, for reasons aforesaid and for such uses as specified, is likely to last two or three times as long as the ordinary boot or shoe.

What I claim is—

The combination, with upper and substantially square-edge insole, the outer edges of the latter resting against the inner face of the upper, of the broad sole, the upper outer edge of which is worked up against the upper to a point approximately opposite the upper face of the insole, so as to leave no appreciable ridge projecting beyond the upper or channel between the upper and sole, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 2d day of May, 1888.

SAMUEL BEATTIE.

Witnesses:
CHAS. H. DORER,
ALBERT E. LYNCH.