Feb. 20, 1923. 1,445,962.

J. E. KRUCKS.

MOLDER'S SHOE.

FILED JAN. 13, 1921. 2 SHEETS—SHEET 1.

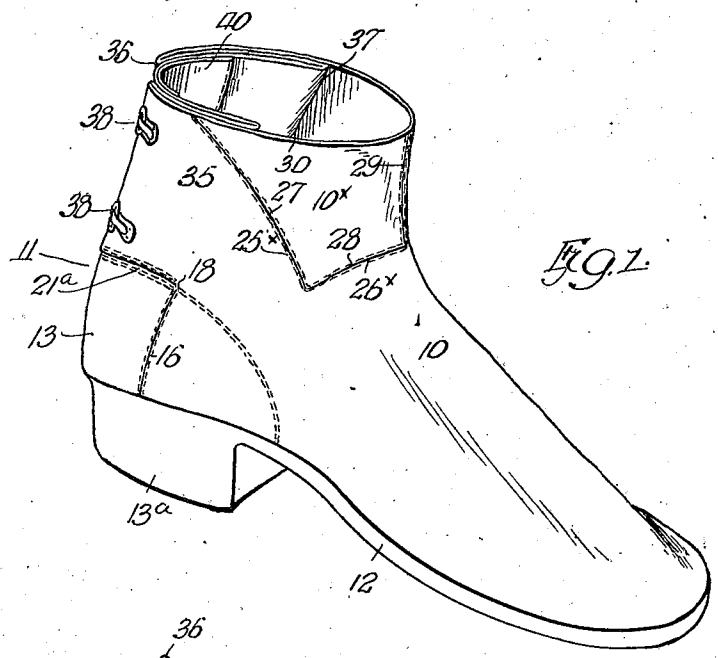


Fig. 1.

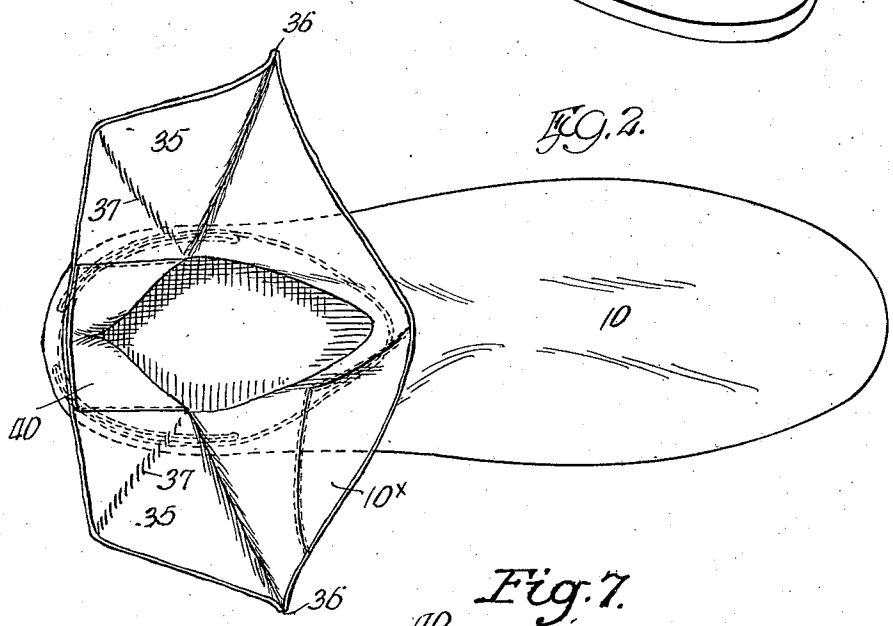
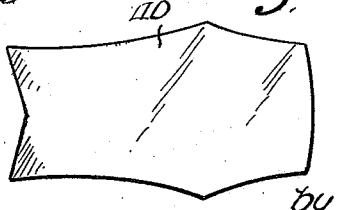


Fig. 2.

Fig. 7.



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MOLDER'S SHOE.

FILED JAN. 13, 1921. 2 SHEETS—SHEET 2.

Fig. 3.

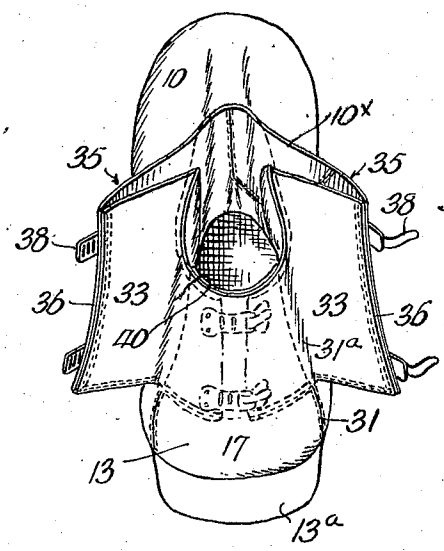


Fig. 5.

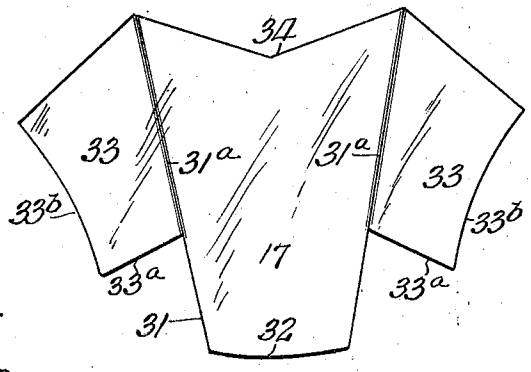


Fig. 6.

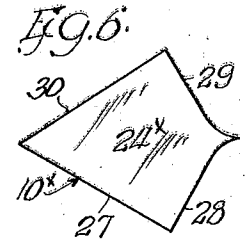
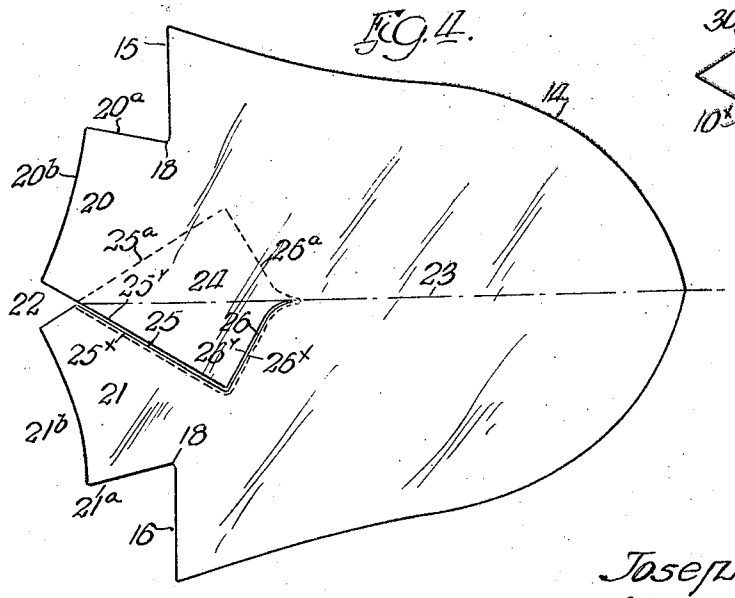


Fig. 4.



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Patented Feb. 20, 1923. 1,445,962

UNITED STATES PATENT OFFICE.

JOSEPH E. KRUCKS, OF CHICAGO, ILLINOIS.

MOLDER'S SHOE.

Application filed January 13, 1921. Serial No. 437,129.

To all whom it may concern:

Be it known that I, JOSEPH E. KRUCKS, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Molders' Shoes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in boots or shoes, and consists of the matters hereinafter described and more particularly pointed out in the appended claims.

The invention relates more particularly to an improvement in shoes of the kind worn by molders or others who work in foundries, in blast furnaces and in other metal industries where the workmen are engaged in handling or working with or near molten metal.

In the case of shoes heretofore used for the purpose, the front or vamp of the shoe, after it becomes stretched from wear, assumes wrinkles or creases transversely across the instep and said wrinkles are apt to catch and retain any drops or particles of molten metal that may fall upon the shoe, and the hot metal will soon burn through the upper of the shoe and burn the foot.

One of the objects of the invention is to construct a shoe wherein the vamp or front will not wrinkle or crease across the instep, but will always maintain substantially its original unbroken contour across the instep so that it will freely and quickly shed any molten metal that may fall upon it.

Shoes or boots for the purpose must be made to fit closely about the ankle or lower leg, in order to prevent, as near as may be, the entrance of molten metal at the top of the shoe. At the same time, the shoe should be capable of instant and easy removal in case any metal does enter at the top of the shoe, as otherwise the metal will run down inside the shoe with serious results before the shoe can be removed.

My improved boot or shoe is designed to meet these requirements, and thus another object of the invention is to provide a boot or shoe which will fit snugly about the ankle or leg and which, at the same time, may be instantly and easily kicked off by the wearer, when desired.

I have illustrated my invention as applied to a high shoe or low boot, but it will be manifest that it is applicable to higher shoes or boots, that is to say, to shoes or boots which extend further up the leg.

In the drawings:—

Figure 1 is a perspective view of a shoe made in accordance with my invention (the shoe shown being the one for the left foot).

Figure 2 is a view representing a top plan view of the shoe when the top is open and expanded so that it may be easily kicked from the foot.

Figure 3 is a perspective view of the shoe as looked at from the rear and from above.

Figure 4 is a plan view of the pattern for the vamp.

Figure 5 is a plan view for the pattern of the back of the shoe upper.

Figure 6 is a plan view of an insert or gusset for the vamp.

Figure 7 is a plan view of a lining piece for the back of the upper.

Referring now to that embodiment in the invention illustrated in the drawings:—10 indicates the vamp or front of the shoe; 11 indicates the back; 12 indicates the sole; 13 indicates the counter, and 13^a, the heel.

The vamp or front of the shoe, instead of being stretched on a form to give it the proper contour to fit about the lower leg or ankle as heretofore, is provided with an insert or gusset 10^x, which provides additional leather above the instep and about the front of the ankle or lower leg, so that the front piece may be conformed to the rise and transverse curve of the ankle without stretching the leather. As a result, the front or vamp will always hold its original shape without any tendency to wrinkle or to crease.

The insert or gusset is preferably introduced on one side of the median line of the vamp (and for the sake of appearance on the inside as shown) and is of such size as to extend down into the hollow or angle formed at the rise of the ankle. The blank for the insert 10^x is of such shape and extent that it will provide sufficient material to form the curve from the median line at the front to the side of the leg, and is of sufficient depth, decreasing to nothing at the top of the boot or shoe, to provide the curve or

contour which merges into the substantially flat side of the shoe upper, as clearly shown in Figure 1.

The piece providing the vamp is extended backwardly at each side above the counter 13 towards the median line of the back as shown in Figure 1, and the piece providing the back 11, is extended laterally above the counter 13, as clearly shown in Figure 3, to provide lateral extensions, the two pieces being attached together to provide manifold wings, which, when folded, may be drawn closely and snugly about the ankle with their vertical edges brought into close, abutting relation, as shown in Figure 1, so that they may be fastened together by suitable fasteners at the back, and which, when the fasteners are disconnected, may be easily and quickly opened out and expanded into the position shown in Figure 2. With the wings open and their folds expanded, the shoe may be readily kicked from the foot. The construction and formation of the shoe will be better understood from the following description of the patterns for the pieces from which the shoe upper may be made.

The main part of the upper, that providing the vamp 10, is cut from a flat piece of leather, to the pattern indicated by the full lines in Figure 4. In this pattern the welt line 14, is in the usual form, said line terminating at both sides of the pattern at the rear edges 15, 16, to which the back piece 17 of the upper is to be attached. Said edges 15, 16, are of such length as to determine the height of the quarter or counter 13 of the shoe, and terminate at the points 18—18. At the points 18—18, the usual continuous outline to the top of the upper, defining the edge to which the back piece is to be sewed is, in this case, broken by substantially triangular extensions 20—21, which constitute wing extensions.

At the rear end of the vamp pattern is cut a V-shaped notch 22 having its apex in the median line 23 of the piece. A kite-shaped figure 24, is laid out on the pattern with its main axis coinciding with the median line 23 of the pattern. The said pattern is then cut along one side of the said figure 24, as indicated by the full lines 25—26 in the case of the vamp for the left shoe, as illustrated in the drawings. In case of the right shoe, it would be cut along the dotted lines 25^a, 26^a. An additional piece, in the form of the kite-like figure 24, outlined on the pattern of the vamp piece, namely, the piece 24^x, the pattern for which is shown in Figure 6, is then sewed to the vamp with its edges 27 and 28 respectively attached to the edges 25^x, 26^x, left at one side of the cuts 25, 26. The edge 29 of the piece 24^x is then sewed to the edge 26^y left on the other side of the cut 25, thereby joining the parts of the pattern divided by the aforesaid cuts, as clearly shown in Figure 1. The kite-shaped piece 24^x thus constitutes the insert or gusset 10^x heretofore referred to.

The back piece pattern 17, shown in Figure 5, is cut to provide the usual quarter 17, which is defined by the edges 31, 31, extending up from the bottom edge 32 to the points 18—18. Above the points 18, 18, the back piece is a substantially wedge-shaped figure with wing extensions 33, 33, projecting at each side beyond the lines 31^a, 31^a, which represent longitudinal projections of the edges 31, 31. The top of the back piece is a flat V-shaped notch 34.

The back piece is sewed to the vamp piece so that the edges 31, 31 of the back piece are attached to the edges 15, 16 of the vamp piece; the bottom edges 33^a, 33^a of the wing extensions of the back piece are attached to the edges 21^a, 20^a at the bottoms of the wing extensions of the vamp piece; and the edges 33^b, 33^b of the wing extensions of the back piece are attached to the rear edges 20^b, 21^b of the wing extensions of the vamp piece. The wing extensions of the two pieces forming the shoe upper provide the manifold wings of the shoe hereinbefore referred to.

When the parts are thus sewed together, the upper will assume the form shown in Figure 2 when the manifold wings are extended. The manifold wings are indicated by the numerals 35, 35 in Figures 1 to 3, and their rear abutting edges, by the numerals 36, 36. Said wings are adapted to unfold when expanded, not only about their edges 36, 36, but also along the lines 37, 37 (see Figure 2), which correspond to the lines 31^a, 31^a of the back piece 17 (see Figure 5) and thus produce a wide expansion about the ankle. When the wings are folded about the ankle, their rear edges 36, 36 abut and are locked together by means of any suitable, easily and quickly manipulated fastening devices 38, 38, such, for example, as those used on overshoes or the so-called arctics.

The construction of the improved shoe will be manifest to those familiar with the art from the foregoing description. By reason of the insert 10^x, the shoe upper will always maintain and hold its shape over the instep without any tendency to wrinkle or crease, thus presenting a smooth, unbroken contour, which will freely shed any molten metal or hot metal particles that may fall upon the shoe.

While the construction of the shoe is such that it is designed to closely hug the ankle or lower leg so as to prevent the entrance of any hot particles or splashes of metal in the space between the shoe top and the ankle, nevertheless, if, because the shoe does not fit, or if it should become looser about the ankle than intended by reason of wear, so that hot metal may happen to enter, the fastening devices may be quickly loosened,

whereupon a forcible kick will bring about the unfolding and expanding of the manifold wings into the position shown in Figure 2, so that the shoe will instantly be dislodged from the foot.

In Figure 7 I have shown a pattern for the usual lining piece 40, which is preferably attached on the inside of the back piece covering the inside of the quarter and of the central part of the back piece above the quarter.

While in describing my invention I have referred to certain details of construction, it will be understood that the invention is in no way to be limited thereto, except as may be pointed out in the appended claims.

I claim as my invention:—

1. In a shoe of the kind described, an upper open at the back, said upper comprising a main piece, and a back piece, the main piece overlapping the back piece above the counter and having edges abutting at the back and adapted to be clasped together, said main piece being cut to provide the vamp, the quarters, and one side of the front above the rise of the ankle, and an insert to provide the other side of the front above the rise of the ankle.

2. In a shoe of the kind described, an upper open at the back, said upper comprising a main piece and a back piece, the main piece overlapping the back piece above the counter and having edges abutting at the back and adapted to be clasped together, said main piece being cut to provide the vamp, the quarters, and one side of the front above the rise of the ankle, and an insert to provide the other side of the front above the rise of the ankle, said insert being of a depth to extend to the angle at the rise of the ankle across the instep, said depth decreasing to nothing at a point near the back.

In testimony that I claim the foregoing as my invention, I affix my signature in the presence of two witnesses, this 10th day of January, A. D. 1921.

JOSEPH E. KRUCKS.

Witnesses:

T. H. ALFREDS,

CHRISTINA DEANS.