

UNITED STATES PATENT OFFICE.

FRANK C. WOLFE, OF ALLENTOWN, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO LIZZIE MOYER WOLFE, OF SAME PLACE.

SHOE.

SPECIFICATION forming part of Letters Patent No. 586,325, dated July 13, 1897.

Application filed January 9, 1897. Serial No. 618,646. (No model.)

To all whom it may concern:

Be it known that I, FRANK C. WOLFE, a citizen of the United States, residing at Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in 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 appertains to make and use the same.

My invention relates to boots or shoes, and more particularly to armored or protected shoes especially adapted for the use of coal-miners, molders, furnacemen, and foundry-men generally.

The object of my invention is to produce a shoe of the above type in which the sole and heel and the counter and vamp shall be protected from wear and accidental cutting by sharp pieces of coal, stone, &c., and from accidental burning by molten metal or contact with heater-surfaces and which will effectually protect the foot of the wearer should he accidentally step upon broken coal and stone or a heater-surface or should molten metal become accidentally splattered upon his shoe.

To the above end the present invention comprises a boot or shoe provided with protective metallic guards for the counter, the vamp, and the edges of the sole and heel, and the novel construction of protective armor for footwear which will be hereinafter described and claimed.

The invention is shown in the accompanying drawings, in which—

Figure 1 is a side elevation of a shoe embodying the same, partly in section. Fig. 2 is a bottom plan view. Fig. 3 shows in plan view the heel-protector removed from the shoe. Fig. 4 shows a similar view of the sole-edge protector. Fig. 5 shows a section upon line *x x*, Fig. 1; and Fig. 6 shows a broken view of the vamp-protector removed from the shoe.

Similar letters of reference refer to corresponding parts throughout the several views.

In the drawings, A represents a shoe of the well-known brogan type, such as is commonly worn by workmen in mines, foundries, and rolling-mills, and as commonly constructed

this class of shoes comprises the quarters *a* and vamp *a'*, united by a seam *a* in the usual manner, forming the upper. It also comprises an insole *a⁵* and outsole *a³*, united to the insole and upper by a row of fastenings *a⁷* and heel *a⁴*, all of which, as shown in the drawings, may be of any usual or preferred construction and which form no part of the present invention and which may be made of leather, rubber, or any other suitable material.

In order to protect and strengthen the shoe at the counter portion and at the seam which unites the quarters and vamp and to prevent the shoe from wear and at the same time protect the foot of the wearer from injury from the causes hereinbefore mentioned, I have provided a protective metallic counter B, which surrounds the counter portion of the shoe upon its exterior and which extends forward upon each side of the shoe to the forward edges of the quarters *a*, covering and protecting the seam *a²* and protecting said seam from wearing or accidental injury, thus insuring a strong union between the quarters *a* and vamp *a'*.

The protective metallic counter is preferably secured to the quarters at its upper edge by rivets or other suitable fastenings *b'*.

The lower turned-in edge of the counter B is inserted between the inner sole *a⁵* and the outer sole *a³*, and in order to insure a permanent and secure connection at this point it is provided with upwardly-turned prongs or points *b²*, which are embedded in the insole *a⁵*, and with downturned prongs or points *b³*, which are embedded in the outsole *a³*, the prongs *b²* and *b³* forming a strong fastening to retain the counter B in a fixed position and at the same time acting to unite the inner and outer soles at the heel and shank portions, as will be clear from an inspection of Fig. 1 of the drawings.

C indicates a vamp-protector which is stamped up from sheet metal of the general contour of the fore part of the vamp of a shoe, the wings *c* of the protector C extending backwardly along the sides of the shoe to a point approximating the forward edge of the protective counter B, and when in the position shown in Fig. 1 effectually preventing the

wear of the vamp and protecting the toe and sides of the vamp and the foot of the wearer from accidental injury.

The bottom edge of the protector C is turned inwardly and is provided with a series of inwardly-projecting lugs c' , which are perforated, as shown at c^2 , the turned-in edge being inserted between the vamp and sole, and the lugs c' extending between the inner and outer soles, where they are secured by tacks c^3 or similar fastenings driven through the perforations c^2 .

It will be noted that the lugs c' are projected inwardly beyond the row of pegs or other fastenings which secure the outsole, upper, and insole together, the cut-away or notched portion of the flange affording a free passage for the pegs or other fastenings. In this manner the upper-armor is secured to the shoe in a permanent and durable manner without weakening the connection between the parts of the shoe.

It has heretofore been an objection to this class of shoes that either the armor was not secured thereto with sufficient permanency or if so secured the union between the parts of the shoe was weakened.

In order to protect the sole a^3 and heel a^4 from wear and from accidental cutting and burning, I have provided the edge protectors or guards D, which are of the general shape of the lower edge of the heel and sole, respectively, and which are preferably formed of angular shape in cross-section, as shown in Fig. 5, forming the protective flange d for the edges of the heel and sole and the flange d' for the tread-surface thereof.

The protectors are secured in position by a line of prongs or teeth d^2 , which are struck up from the flange d' and which are driven into the sole and heel and are preferably provided with apertures d^3 in the horizontal flange d' , which in use become filled with sand or dirt, thus producing friction and preventing the wearer from slipping. The protectors B, C, and D are made of any suitable metal and may be of malleable castings or struck up from sheet metal, and when in position effectually protect the shoe from wear and from accidental burning and cutting and will prevent the burning of the foot of the wearer.

In some cases the bottom of the sole and heel may be protected by hobnails driven into the same, as is usual in shoes worn by miners, molders, &c.

Having fully described the construction of my invention, I claim as novel and desire to secure by Letters Patent of the United States—

1. An armored shoe having a protective metallic counter surrounding the counter of the shoe and extending forward upon each side over the seam uniting the vamp and quarter, said metallic counter having an intumed edge inserted between the inner and outer soles and provided with oppositely-bent prongs engaging the inner and outer soles, substantially as described.

2. An armored shoe, having a protective metallic vamp surrounding and covering the fore part of the vamp of the upper and provided with rearwardly-extending wings projected toward the heel portion, and having an intumed flange inserted between the inner and outer soles, and inwardly-projecting perforated lugs arranged to receive fastenings to secure the vamp-protector to the insole, the spaces between said lugs permitting the passage of the fastenings securing the outsole to the insole, substantially as described.

3. An armored shoe provided with the metallic sole and heel guards, said sole and heel guard covering the edges of the sole and heel and projected inwardly toward the medial line of the sole and heel and secured to the sole and heel by suitable fastenings, substantially as described.

4. An armored shoe, comprising an upper, an insole, and an outsole secured to the insole by suitable fastenings extending through the outsole and upper and insole, of a protective metallic armor for the upper projected through the line of fastenings uniting the upper, insole and outsole, and provision on said armor to allow the passage of said fastenings, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK C. WOLFE.

Witnesses:

THOMAS H. ANDERSON,
A. O. ORNE.