D. E. WINAGLE.

SHOE PROTECTOR.

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1,189,329.

Patented July 4, 1916.

FIG. 1.

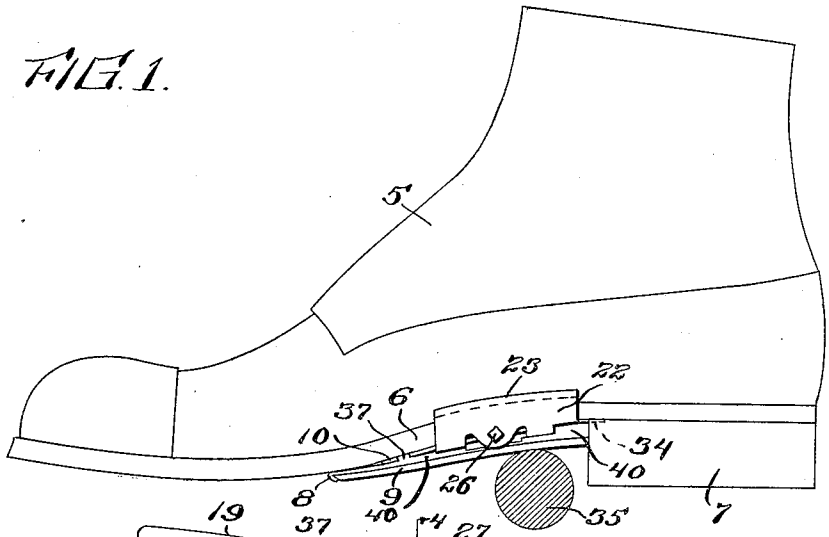


FIG. 2.

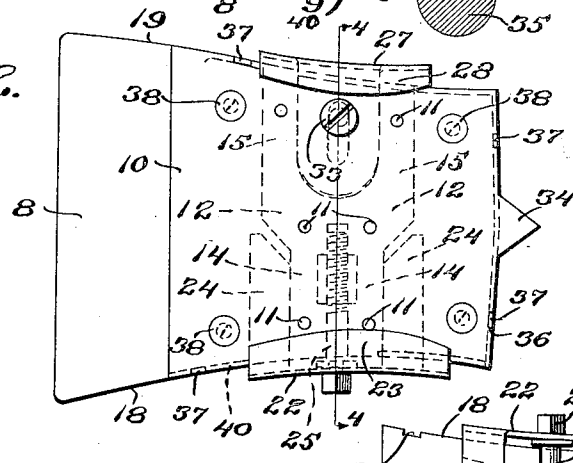


FIG. 3.

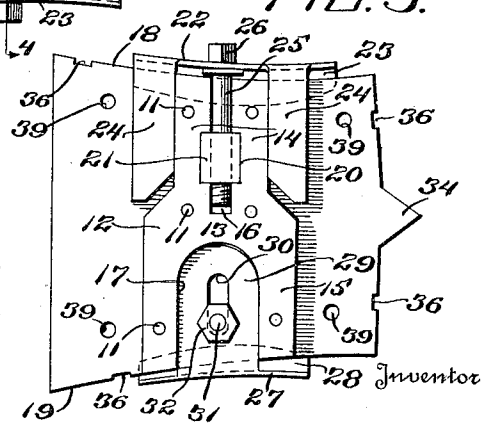
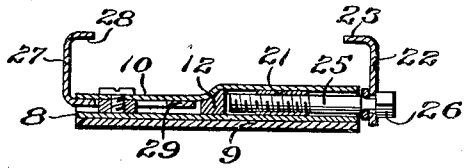


FIG. 4.



Witness:

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SHOE-PROTECTOR.

1,189,329. Specification of Letters Patent. Patented July 4, 1916.

Application filed January 29, 1916. Serial No. 75,055.

To all whom it may concern:

Be it known that I, DANIEL E. WINAGLE, a citizen of the United States, residing at Gorham, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Shoe-Protectors, of which the following is a specification.

This invention is in the nature of a protector to be secured upon the shank of a shoe sole for use by persons compelled to use ladders, for such as use spades or shovels for tamping and like uses, and for all persons who may be compelled to press heavily upon the shanks of their shoes for any purposes.

In the performance of any work which requires pressure upon the shank of the shoe, the lack of a guard or protector leads quickly to the wearing out or breaking down of the shank and often to the injury of the foot of the workman and it is the special object of my invention to provide improved means whereby such results are prevented and with this object in view the invention consists in the improved construction, arrangement and combination of parts of a shoe shank protector which will be hereinafter fully described and afterward specifically claimed.

In order that the construction and operation thereof may be readily comprehended, I have illustrated an approved embodiment of my invention in the accompanying drawing, and will now proceed to fully describe the same in connection with said drawing in which—

Figure 1 represents, in side elevation, a shoe equipped with a protector made in accordance with my invention in the form preferred for use in ladder climbing; Fig. 2, represents, in top plan view, my improved protector, removed from the shoe; Fig. 3 represents, in inverted plan view, my protector with the lower plate removed; and Fig. 4 represents a sectional view on the transverse vertical plane indicated by the broken line 4—4 of Fig. 2.

Like reference characters indicate the same parts in all of the figures of the drawing.

Referring specifically to the drawings, 5 indicates a shoe having a sole with a shank 6 and a heel 7, all of which are of any desired form and style.

My improved protector may be made of any suitable material, preferably of steel, and comprises a bottom plate 8, which, when used without a cushioning plate 9, preferably of rubber, will preferably have its bottom surface suitably roughened. This plate 8 supports the upper plate 10, also preferably of steel although possibly of some other suitable metal, upon the under face of which plate 10, and facing the bottom plate 8, is integrally formed, or secured in any suitable manner such for instance as rivets 11, a structure 12, which I denominate a yoke or housing comprising a main body 13 centrally located and arms 14, 14 and 15, 15, extending laterally therefrom to the side edges of the plates, spaces or guideways 16, 17, extending between said arms from the main body 13 to the edges of the plate, their outer ends being open.

My improved protectors will be made in pairs, the shapes of the edges being slightly modified to fit right and left shoes, the embodiment illustrated in the drawing being for the right shoe and having an inner edge 18 and an outer edge 19. The arms 14 of the yoke or housing 12 project to the inner edge and the space 16 between said arms is widened, at substantially its midlength, to form a seat 20, between the arms, to removably receive a nut 21.

On each side of the protector is a clamp, that on the left hand or inner side 18 being provided with a jaw 22 comprising an upper edge 23 inwardly bent to engage over the edge of the shank 6 and two wings 24 which are turned inward, horizontally, against the under surface of plate 8 and on opposite sides of the arms 14 of the yoke or housing 12. A bolt 25 is swiveled in the jaw 22, with its head 26 projecting beyond the jaw for ease of access, and passes in between the arms 14 in the guideway 16, being threaded through the nut 21.

A jaw 27 on the outer edge, with an upper inner edge 28 to engage over the top edge of the outer side of the shank 6, comprises also a main body 29 which rests in the guideway 17 between the arms 15. This main body is slotted as 30, and is adjustably secured in position on the plate 8 by means of a bolt 31 passing through said slot and through a suitable opening in the plate. This jaw is first adjusted and then rigidly secured in position by tightening up the nut 32, the bolt being turned by any suitable tool, such, for instance, as a screw driver in the slot in its head 33.

The housing 12 is thicker than the wings

24, of one clamp and the body 29 of the other clamp so that space is provided between the plates 8 and 10 for the free movement of said wings and body, and such spaces are covered by the upper plate 10. The uses of this invention are such that but for the provision of these spaces and the upper plate to preserve the clamp parts from the pressure of the foot, there would be great liability of breakage or disarrangement of the parts.

To secure the protector upon a shoe, the jaw 27 is first adjusted and rigidly fixed in the manner just described, the protector placed on the shank of the shoe, a tooth 34 projecting from the rear edge of the plate 9 driven or forced into the forward edge of the heel, and finally the jaw 22 tightened into position by turning the bolt 25, thus rigidly securing the protector in a readily removable manner.

As herein before stated this protector is applicable for use on the shoes of ladder climbers, spade users, tampers, etc., and as the construction shown is particularly adapted for ladder climbing, a section of a ladder is shown at 35 in Fig. 1 and the cushioning plate is shown at 9. It will, however, be readily understood that my invention is not confined to ladder users, nor to the use of the cushioning plate 9, the plate 8 affording desired protection in many situations without such cushioning plate.

In order to properly secure the plates 9 and 10 together notches 36 are made in the edges of one plate, and teeth or wings 37 on the other plate to fit into said notches to properly fit the plates together, after which rivets or split bolts or the like 38, are fitted in suitable openings 39 in the plates, and rigidly, but preferably removably secured. The teeth or wings 37 may be turned at substantially right angles to the plate, or may project from flanges 40 on the plate as may be desirable.

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

1. A shoe protector comprising a lower plate, an upper plate secured thereon, a clamp on one side of the protector between the plates and having its body slidable transversely of the protector, means for fixing the clamp in adjusted position, an opposite clamp, and means for forcing the last named clamp toward or from the first.

2. A shoe protector comprising a lower plate, an upper plate secured thereon, a housing between the plates provided with a transverse guideway, a clamp having its body freely slidable in said guideway, means for securing the clamp in adjusted position in the guideway between the two plates, a clamp on the opposite side of the protector, and means for forcing the last named clamp toward or from the first.

3. A shoe protector comprising a lower plate, an upper plate secured thereon, a housing between the plates comprising parallel arms forming a transverse guideway, a clamp having it body freely slidable in said guideway between the two plates and provided with a slot, a bolt passing through said slot and one of the plates to secure the clamp in adjusted position in the guideway, a clamp on the opposite side of the protector, and means for forcing the last named clamp toward the first.

4. A shoe protector comprising a lower plate, an upper plate secured thereon, a housing between the plates provided with parallel arms forming a transverse guideway, a clamp having wings of less thickness than the housing inclosing the arms of the housing, a nut seated in the guideway, a bolt swiveled in the clamp and threaded through the nut, an opposite clamp, and means whereby it may be adjusted and fixed in adjusted position.

5. A shoe protector comprising a lower plate, an upper plate secured thereon, a housing between the plates provided with guideways extending from near its midlength to the opposite side edges of the plates, a clamp freely slidable in one guideway, means for fixing it in adjusted position therein, an opposite clamp freely slidable upon the housing, a nut seated in the opposite guideway, and a bolt in the opposite guideway swiveled in the clamp and threaded through the nut.

6. A shoe protector comprising a tooth to enter the front of the heel, a lower plate, an upper plate secured thereon, a housing between the plates provided with parallel arms extending transversely from its midlength to the edges of the plates forming opposite guideways one of which is provided with a nut-seat, a clamp having its body slidable in one guideway and slotted longitudinally, a bolt passing through the slot and the plate for securing the clamp in adjusted position, an opposite clamp having parallel wings inclosing the arms of the opposite guideway and slidable thereon, a nut in the seat in the last named guideway, and a bolt swiveled in the last named clamp and threaded through the nut.

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

DANIEL E. WINAGLE.

Witnesses:
R. J. Six,
Raymond G. Fake.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."