P. MILLER.

SHOE HEEL HOLDING APPARATUS.

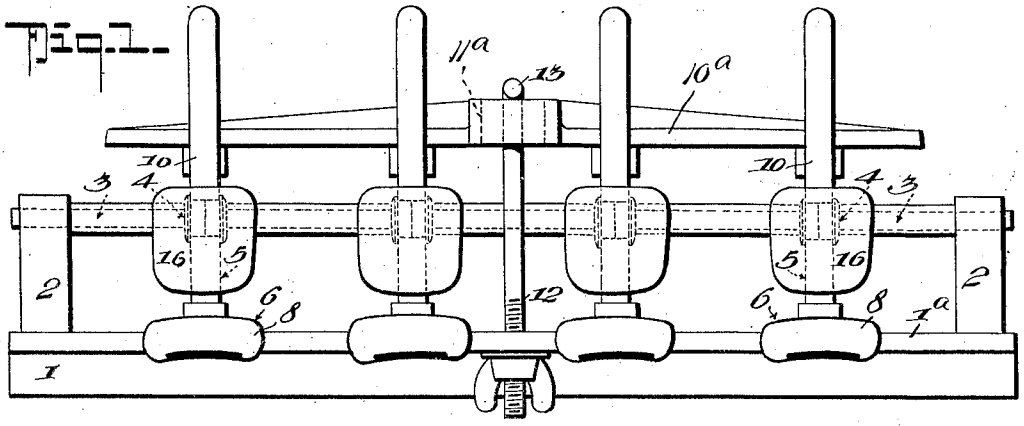
APPLICATION FILED MAY 22, 1920.

1,355,840.

Patented Oct. 19, 1920.

2 SHEETS—SHEET 1.

Fig. 1.



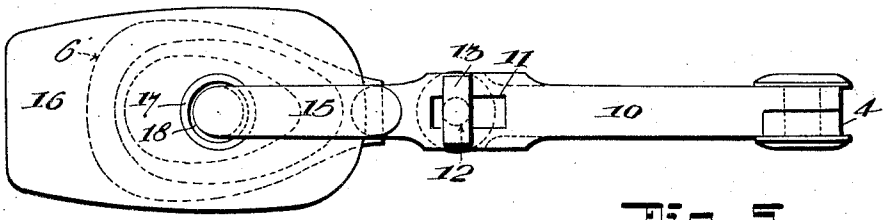
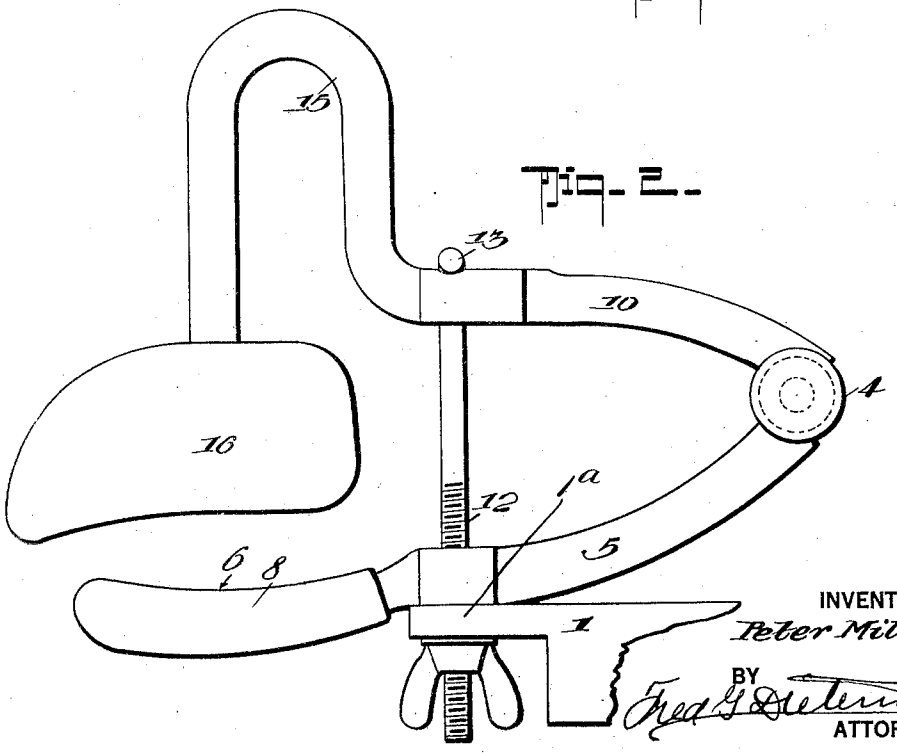


Fig. 3.

Fig. 2.



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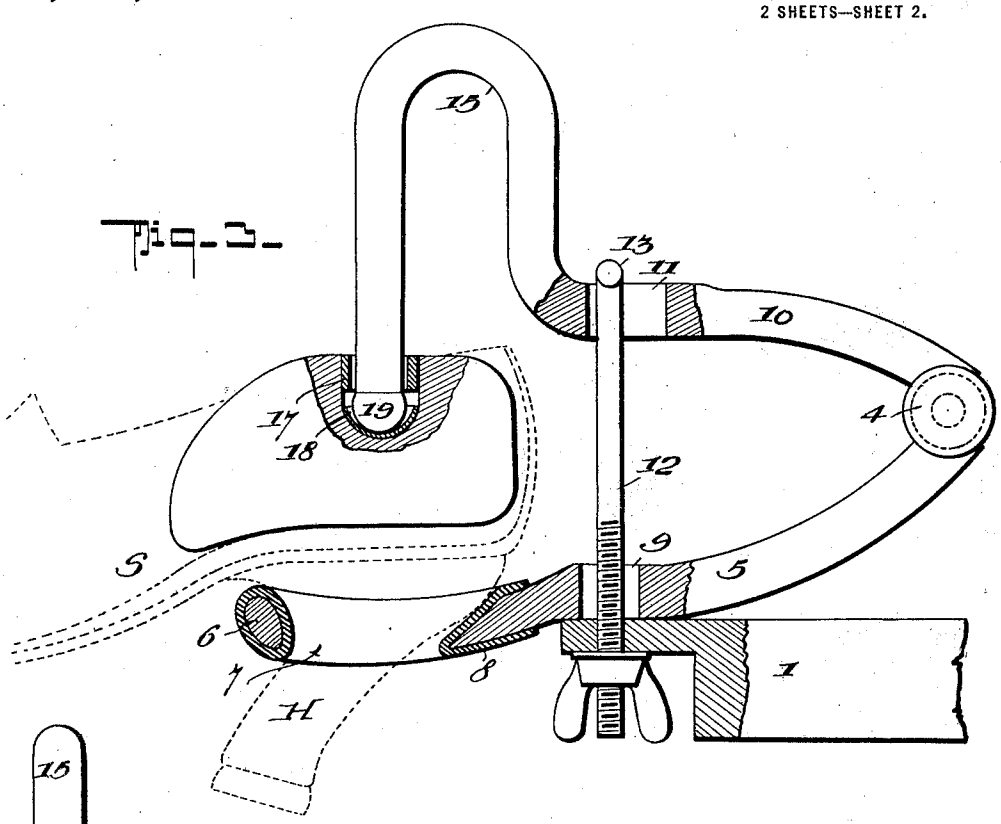
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Fig. 3.



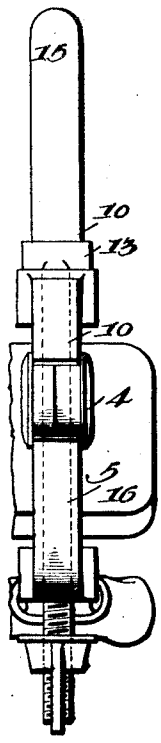


Fig. 5.

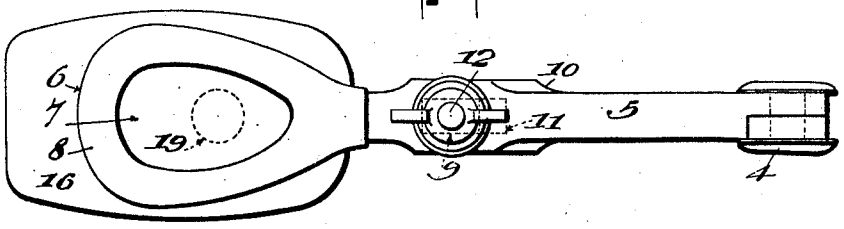


Fig. 6.

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UNITED STATES PATENT OFFICE.

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SHOE-HEEL-HOLDING APPARATUS.

1,355,840. Specification of Letters Patent. Patented Oct. 19, 1920.

Application filed May 22, 1920. Serial No. 383,487.

To all whom it may concern:

Be it known that I, PETER MILLER, a citizen of Greece, residing at Little Rock, in the county of Pulaski and State of Arkansas, have invented certain new and useful Improvements in Shoe-Heel-Holding Apparatus, of which the following is a specification.

My invention relates to certain new and useful improvements in clamping devices for holding French heels on the shoe while the glue or cement is drying and becoming set.

In cementing heels of this type to the shoe, it is desirable that the pressure should be applied in such manner as to avoid displacement of the heel upon the sole, that is to say to keep the heel from slipping while the cement is hardening.

It is one of the objects of my invention to provide a clamping apparatus that may be used with multiple units or a single clamp may be used so as to hold one shoe and heel or a plurality of shoes and heels as the case may be, thus adapting the invention either for repair work or for use in factories where the shoes are manufactured in quantities.

In its general nature, the invention comprises a clamp having an upper and a lower arm, the lower arm being provided with a loop to embrace the heel, the loop being provided with a protecting covering to prevent marring of the heel material, the upper arm of the clamp being so formed that the device may be used with equal facility on low quartered shoes and high quartered shoes, the clamp including a draw bolt for holding the clamp arms together and there is also provided a shoe heel insert block to coöperate with the upper clamp arm in pressing the shoe down on the heel held in the loop of the lower arm.

In its adaptation to manufacturing establishments, the invention comprises a support having a rod on which a number of clamp units are located and suitably spaced apart with either individual clamp pressure producing elements or a single clamp for a group of units as may be desirable in practice.

In its more specific nature, the invention resides in those novel features of construction, combination and arrangement of parts, all of which will be first fully described and then be specifically pointed out in the appended claims, reference being had to the accompanying drawings, in which:

Figure 1 is a front elevation of one form of the invention adapted to multiple units with a single clamping pressure producing device for all of the units.

Fig. 2 is a side elevation of another form of the invention, illustrating a unit mounted on a support and operated individually.

Fig. 3 is a side elevation of a single unit in use, the shoe being indicated in phantom and parts being broken away.

Fig. 4 is an inverted plan of the device shown in Fig. 3.

Fig. 5 is a top plan view of the same.

Fig. 6 is a rear elevation of the same.

In the drawings in which like numerals and letters of reference indicate like parts in all of the figures, 1 is the base or support on which there may be provided suitable posts 2 for supporting a rod 3, the latter being adapted to pass through the hinged joints 4 of a series of clamp units, the units being suitably spaced by collars on the rod 3, as indicated in Fig. 1 of the drawings.

Each unit consists of an upper arm 10 and a lower arm 5, hinged together at 4 with a carriage-top-joint hinge of the usual type, the hinge, however, being bored through to fit on the rod 3, when the unit is to be used in connection with other units.

The arm 5 is provided with a loop 6 shaped, in plan, to conform to the cross sectional configuration of the heel, the loop 6 also having its passage 7 shaped to conform to the curvatures of the heel and the loop is covered with a suitable felt sheathing 8 to protect the material of the heel H against damage.

The arm 5 (when single units are employed) is provided with a slot 9, through which the clamp bolt 12 passes, the bolt 12 having a key head 13 which is adapted to seat in a slight depression on top of the arm 10 and which may be turned at right angles

and slipped through the longitudinal slot 11 in the upper arm 10, when it is desired to throw back the upper arm.

When multiple units are employed with a common clamping device, as shown in Fig. 1, the cross bar 10^a engages the various arms 10 of the several units and a single bolt 12 passing through the flange 1^a of the base 1 serves to hold the members in the clamping position, the bar 10^a having a slot 11^a corresponding in function to the slot 11 of the single units.

When a single unit is employed the bolt 12 passes through the flange 1^a of the base which serves to hold the apparatus on the base (see Fig. 3).

The upper arm 10 has a goose neck bend 15 projecting upwardly so as to pass over the uppers of high quartered shoes without damaging the same and the arm 10 has a ball end 19 that bears on the socket plate 18 located within a recess in the shoe heel block 16, the recess being also provided with a ferrule 17 for the usual purpose.

It is to be observed that the point of thrust of the upper arm 10, *i. e.* where the ball end 19 engages the socket plate 18, is substantially over the center of the heel so that the pressure applied to the heel block 16 to force the shoe S and heel H together and hold them in position while the cement is setting, is such as to prevent slipping of the heel with respect to the sole on which it is being cemented, thereby insuring the holding of the parts in proper position at all times.

It should be understood that the heel block 16 is not intended to be a last but is simply a heel part and does not occupy the entire interior of the shoe, as does a shoe last.

This block may be termed a heel last or semi-last to distinguish it from a full last such as is usually used in connection with shoe construction.

The use of the small block or semi-last is found to be better in practice than the full last, especially in repairing old shoes, because, although the heel may be crooked or run over, the small block will fit it and the shape of the clamp has a tendency to straighten up the heel because the small block or semi-last fits the heel on the inside of the shoe completely.

It will be observed that by the use of my invention, the clamp loop which passes around the shoe heel bears equally on the heel at all points and it can neither slip forward, backward or sidewise, thus I have overcome one of the chief faults in devices heretofore provided for the purpose.

It will also be noticed that a single adjusting screw for each clamp or for each group of clamps is sufficient to bring the clamp or group of clamps into operative position, thus avoiding the necessity of making a number of adjustments on each shoe.

It should be understood that the clamp which I have designed to fit almost any class of heel of this character and while I have illustrated the preferred embodiment of my invention, yet I wish it understood other changes in the details of construction, combination and arrangement of the parts may be readily made without departing from the spirit of the invention or the scope of the appended claims.

What I claim is:

1. In a shoe heel holding apparatus, a support, a plurality of clamping units on said support, each unit containing an upper and a lower clamp arm, one of said arms having a heel receiving loop and the other arm being adapted to fit over the shoe and engage a heel last within the shoe, and means for drawing said upper and lower arms together.

2. A shoe heel clamp unit comprising a lower arm having a heel receiving loop, an upper arm to pass over the shoe upper, a heel last block recessed to receive the end of the upper arm, said arms having a hinged connection with one another, and means for holding said arms together to retain the heel in position on the sole of the shoe.

3. A shoe heel clamp unit comprising a lower arm having a heel receiving loop, an upper arm having a goose neck to pass over the shoe upper, a heel last block recessed to receive the end of the upper arm, said arms having a hinged connection with one another and a draw bolt for holding the said arms together to retain the heel in place on the sole of a shoe.

4. A shoe heel clamp unit comprising a lower arm having a heel receiving loop, an upper arm having a goose neck to pass over the shoe upper, a heel last block recessed to receive the end of the upper arm, said arms having a hinged connection with one another and a draw bolt for holding the said arms together to retain the heel in place on the sole of a shoe, said draw bolt comprising a T-member and a nut, said arms having holes through which the said bolt passes.

5. A shoe heel clamp unit comprising a lower arm having a heel receiving loop, an upper arm having a goose neck to pass over the shoe upper, a heel last block recessed to receive the end of the upper arm, said arms having a hinged connection with one another and a draw bolt for holding the said arms together to retain the heel in place on the sole of a shoe, said draw bolt comprising a T-member and a nut, said arms having holes through which the said bolt passes, the hole in the upper arm being elongated to allow the head of the T-bolt to be drawn therethrough, if desired.

6. A shoe heel clamp comprising a lower arm and an upper arm and a carriage-top-hinge joint connection between said arms, said lower arm having a heel receiving loop with a soft covering, said upper arm having a gooseneck terminating in a ball end, and a heel last block having a recess for said ball end, substantially as shown and described.

7. A shoe heel clamp comprising a lower arm and an upper arm and a carriage-top-hinge joint connection between said arms, said lower arm having a heel receiving loop with a soft covering, said upper arm having a goose neck terminating in a ball end, and a heel last block having a recess for said ball end with a socket plate in the block recess to bear against said ball end and a ferrule in the recess to encircle said arm above the ball end.

PETER MILLER.