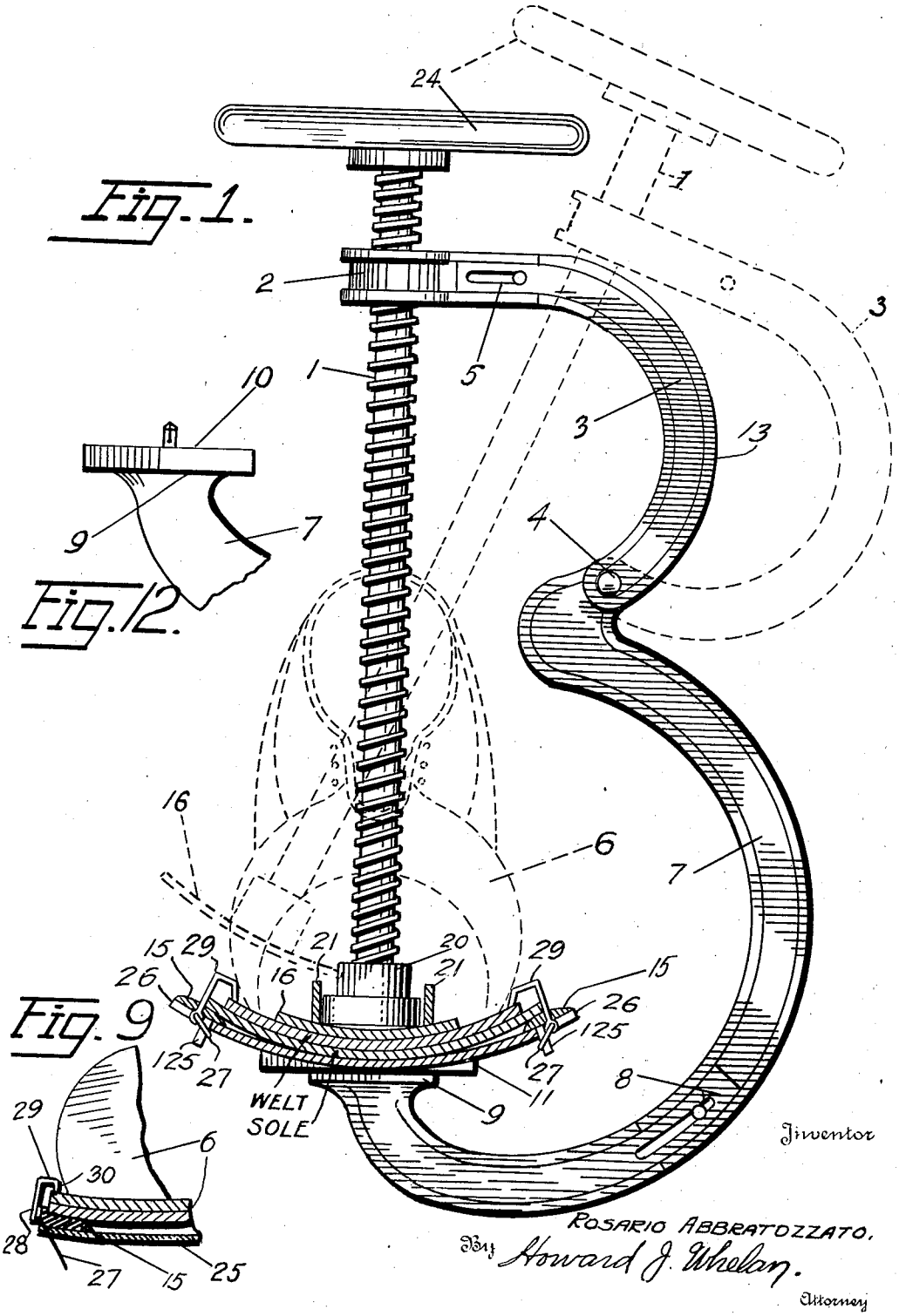
Aug. 5, 1941. R. ABBRATOZZATO 2,251,815

SHOE CLAMPING PRESS

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SHOE CLAMPING PRESS

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Fig. 4.

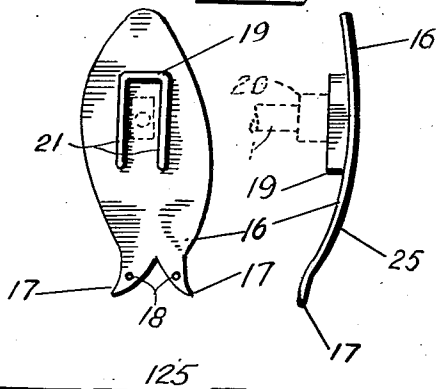


Fig. 5.

Fig. 2.

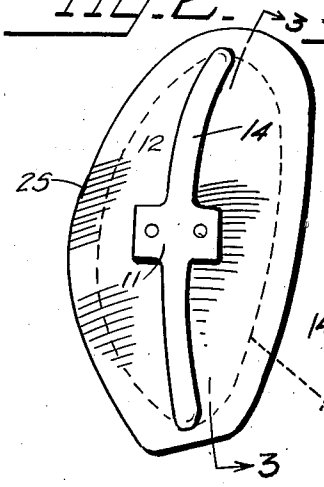


Fig. 3.

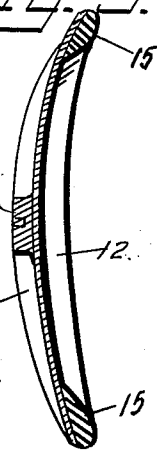


Fig. 7.

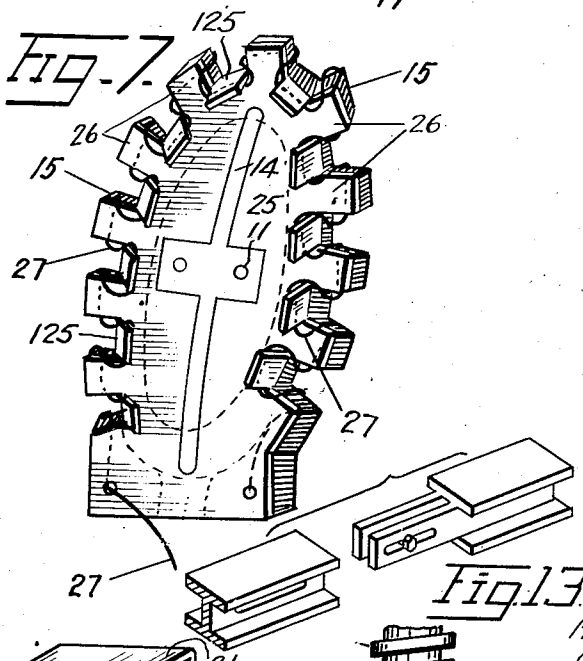


Fig. 13.

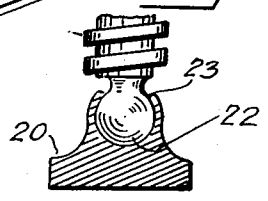
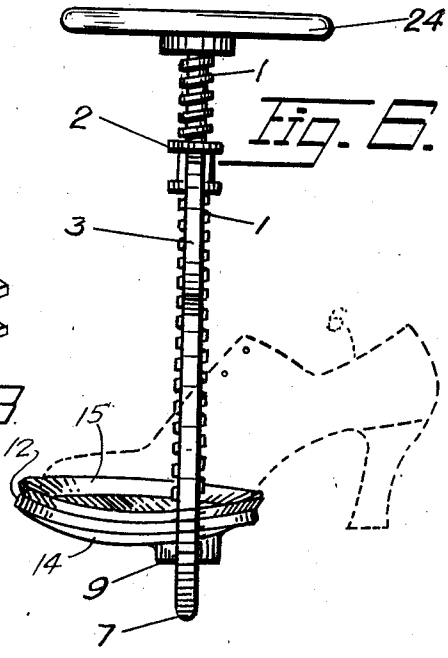


Fig. 6.



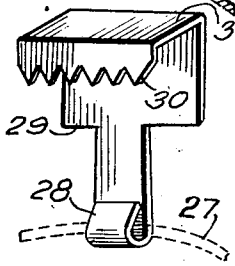


Fig. 8.

Fig. 10.

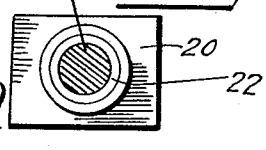


Fig. 11.

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2,251,815

SHOE CLAMPING PRESS

Rosario Abbratozzato, Baltimore, Md.

Application May 27, 1939, Serial No. 276,170

5 Claims. (Cl. 12—33)

This invention refers to shoe or boot making equipment and more particularly to a device that will facilitate the manufacture of shoes or boots, repairing same, or otherwise attaching or assembling their parts to meet the requirements of modern conditions. It has several objects, among which are included; the development of a device that will hold and exert pressure on the parts of the shoe to be finished, especially when a sole or the like is to be cemented in place, and bring about satisfactory and effective results; and to have such device provided with many mechanical features that will make its use convenient and expeditious, as well as render its cost economical. Further objects are to have the gripping parts interchangeable and adaptable to the special requirements and conditions that arise in connection with this work, and thereby increase the capacity of the machine.

Other objects will become apparent as the invention is more fully set forth.

The essential features of this invention include a pressure device, with mechanical adjustments and features that enable it to hold a shoe or boot securely at the sole; with the heel free for attention, while the sole parts are becoming cemented together. Clamps have been used heretofore and their use has developed a series of stands or frames that have increased the cost without increasing their practical worth. This invention returns to the simplest form and comprises a press, but in order to enable the pressure device to do work more effectively over a larger scope, the form of the press has been varied from the conventional design and extended to provide for shoes large and small. Further, shoes being repaired or made up with soles of uncut leather form may be placed in the device without first roughly removing the excess sole leather. There is ample room for this leather piece, and when the prior operations are completed, may be readily cut to finish fit in one operation, instead of two or more, as previously required. The holding plate used for the sole, employs a rubber or resilient mat or gasket, which contacts the new sole piece and presses it to the shoe structure, along the surfaces that are to be cemented. This reduces the area required for cementation, makes a better job, economizes in cement material, and the labor required to place same on. The pressure device itself is adjustable throughout and provided with arrangements to permit the ready mounting thereon of the various horn and last plates to suit the particular class of work, involved on each occasion. The low relative cost of the devices enables them to be used specifically for each shoe, and provide for individual consideration, independently of all others. At the same time it permits the heels of the shoes to be worked on without regard to the portions sustained by the pressure device. In other words, the work on the sole portion and the heel can be proceeded with concurrently. The device may also be used effectively for shoes or boots having large welts, that cannot be supported by the inside horn plate towards the edges, and in this way get the soles on securely, because the edge portions are kept under pressure while in the device. The device can be mounted and removed from the shoes without requiring same be bent or twisted around to do so.

In the drawings appended to this specification, to indicate an example of this invention:

Figure 1 is a side elevation of clamping press embodying this invention, with sole plate partly in section,

Figure 2 is a detail under-plan of the sole or last plate used with the clamping press,

Figure 3 is a sectional view along the line **3—3** of Figure 2,

Figure 4 is a plan view of an inner or horn plate used in with the press,

Figure 5 is a side elevation of Figure 4,

Figure 6 is a front view of Figure 1,

Figure 7 is a view in perspective looking up at the outside bottom portion of the last or sole plate used in this device, for shoes with large overhanging welt and sole pieces.

Figure 8 is a perspective detail of a claw used in connection with the last or sole plate,

Figure 9 is a detail indicating the manner in which the claw is used on the shoe,

Fig. 10 is a plan of the foot piece,

Fig. 11 is a detail in sectional elevation of the foot piece,

Fig. 12 is a detail of the clamping press last holder used for supporting the sole plate,

Fig. 13 is a view in perspective showing the adjustable joint structure of arms **3** and **7**.

Similar reference characters refer to similar parts throughout the drawings.

In the drawings **1** represents a shank bolt which preferably has a square thread designed to withstand the pressure and wearing uses of the device. This bolt operates in a head **2**, which is suitably screw-threaded internally for the purpose. This head is attached to a clamping and pressing frame **3** that is formed in a **3**-like shape. The frame consists of the upper adjustable member **13** curved as illustrated; which is hinged

tightly at 4, and adjustable at 5, through the use of a type of bayonet joint, indicated in a general manner for purposes of illustration. This member can swing back as shown by the dotted outline in Figure 1, to remove the shank bolt 1 out of the shoe 6 readily without requiring the shoe to be twisted or bent for the purpose. This method is easier on the shoe and prevents undue bending of its structure, at the time, when such stresses might prove harmful. The bottom member 7 of the frame is also circularly curved and is adjustable at 8 to permit it to be extended or retracted to a limited extent. A last plate head 9 is formed as illustrated, being enlarged and its upper surface 10 planed smooth to permit the base 11 of the last or sole plate 12 to rest flat thereon, with split pins of the former resiliently placed in holes provided in the last. The last-plate is preferably curved slightly to conform to the contour of the sole of the shoe, and is reinforced with a web 14. The plate is covered with a resilient mat or ring 15 along its edge portion so as to come into contact with the outside rim of the shoe sole, that is ready to be cemented on. This mat of rubber or other suitable resilient material is bevelled inwardly to make it exert pressure from the outer edge towards the central portion. The inside surface of the shoe is pressed upon by a horn plate 16, which is slightly curved and formed to the general shape of the toe portion of the shoe. The rear border stops at the shank of the shoe so as not to interfere with the placing of a heel last thereon. The inner plate has its rear portion formed with fish tails 17 having holes 18 that allow the plate to be temporarily tacked to the inside of the shoe and thus keep it in place. The upper surface of the inner plate has a rib 19 transversely across it, that prevents a foot piece 20 from placing itself too far towards the toe of the plate, as well as preventing the plate moving backwardly. This rib is flanked at both ends with other ribs 21 at right angles thereto, which are formed to guide the foot-piece longitudinally therein. These last ribs keep the horn plate central in the shoe. The foot-piece is formed interiorly with an orifice 23 adapted to permit the end portion 22 of the shank bolt 1 to adjust itself therein to suit the plate position.

The operation of using the device consists in placing the selected under plate on the device. The sole then receives a coat of cement and is placed on the under plate, the shoe with the selected horn plate is placed on the sole, the shank bolt is swung into the shoe and screwed against the horn plate, the clamps are applied to the welt of the shoe and tightened until the sole and welt are firmly joined. While the cement is drying the shoe and the device may be placed on a standard shoe repairer's stand where the heels may be repaired without disturbing the sole, or the under plate and clamps may remain attached to the welt and sole and the shoe removed from the device while the cement is drying.

The sole plate shown in Figure 7 consists of a last-plate 25 with the edge portion formed into rectangular projections 26 which extend beyond the soles and keep the whole sole piece supported. The portions of plate 125 between these projections are bent downwardly and stiffen the underplate as well as affording lugs for a tightening cord 27. This cord is inserted through loops 28 on claws 29 and passes around 125 thence through loops of other claws 29. The claws are provided with teeth 30 on flanges 31 which engage with the soles of shoes having large and extending welts and keeps them properly placed to the sole plate, since the inner horn plate is smaller in width than the welt portion and cannot keep the edges extending outside of the shoe, down against the under sole or last plate.

While the construction indicated is somewhat limited, it is not desired to limit this application for patent to the particular construction indicated, or in any other way otherwise than limited by the prior art, as it is appreciated that other forms of construction could be made, that would use the same principles and come within the scope of the appended claims.

Having thus described the invention, what is claimed is:

1. In a shoe press of the class described, the combination of a frame structure, having a 3-like contour with portions arranged for extending and retractive adjustment and hinged at the connecting portions of the two arcuate sections to permit the upper portion to swing backwards on a restricted arcuate travel, heads on the end portions of the sections, a shank bolt operable in one of the heads, an inner plate, a foot piece pivotally attached on said bolt adapted to engage the surface of the inner plate and permit positional adjustment thereon; an underplate attached to the head on the other end section adapted to be positioned on the exterior sole surface of the shoe and to completely cover and extend beyond same, and a mat extending around the edge of the underplate to permit resilient action and pressure on the sole and welt surface of the shoe as the shank bolt is screwed down on the inner plate in the shoe.

2. In a shoe press, the combination of a hinged frame of 3-like contour with heads at the end portions, a shank bolt in one of the heads arranged for screw-like adjustment to and from the other head an inner plate, a foot piece pivotally attached on said bolt adapted to adjustably engage the surface of the inner plate in the shoe to permit positional adjustment of said shoe, means on the other head for engagement with the exterior surface of the sole of the shoe for clamping cooperation with said foot piece and said inner plate, means on the under plate for resiliently cushioning the edge of the shoe, and additional means for retaining the sole and shoe structure together.

3. In a shoe press of the class described, the combination of a frame of 3-like contour hinged together, a head member provided on one of the contours of said frame with internal screw-threaded means therein, another head member on another contour of said frame adapted to align itself with the first mentioned head when the hinged portions are manipulated into normal position, a screw bolt disposed and operable in said first mentioned head member, and provided with a foot plate, a horn-plate engaged by the foot-plate for placement inside a shoe to be pressed and adapted to be adjusted variably therein, a guide mounted on the horn plate for engaging the foot plate and adjusting the shoe in position, a sole plate on the second mentioned head member formed to engage and bend the sole of the shoe on a transverse curve and tightly press the sole between it and the horn plate for holding same securely, substantially as described.

4. In a shoe press of the class described, the combination of a frame of 3-like contour hinged together and adapted to open out with its back

portions contacting and restricting their hinged travel, a head member provided on one of the said portions with internal screw-threaded means therein, another head member on another of said portions adapted to align itself with the first mentioned head when the hinged portions are manipulated into normal position, a screw bolt disposed and operable in said first mentioned head member, and provided with a foot plate, a horn plate engaged by the foot plate for placement inside a shoe to be pressed and adjusted variably therein, a guide mounted on the horn plate for engaging the foot plate and adjusting the same in position, a sole plate on the second mentioned head member formed to engage and bend the whole sole of the shoe on a transverse curve and tightly press the sole between it and the horn plate for holding same securely, and hook means for retaining the sole and welt together substantially as described.

5. A sole clamp for pressing an outsole against a shoe bottom having plates for bearing against the inner side of the shoe bottom and whole outsole, and means for pressing the plates towards each other, and marginal clamps provided with hook means resiliently connected to the plate which extends beyond and bears against the whole portion of the outsole, the connecting means for the marginal clamps consisting of U slots with downward projecting stops in the outsole bearing plate around which is entwined a binder medium cooperating with a plurality of hook means on the clamps.

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