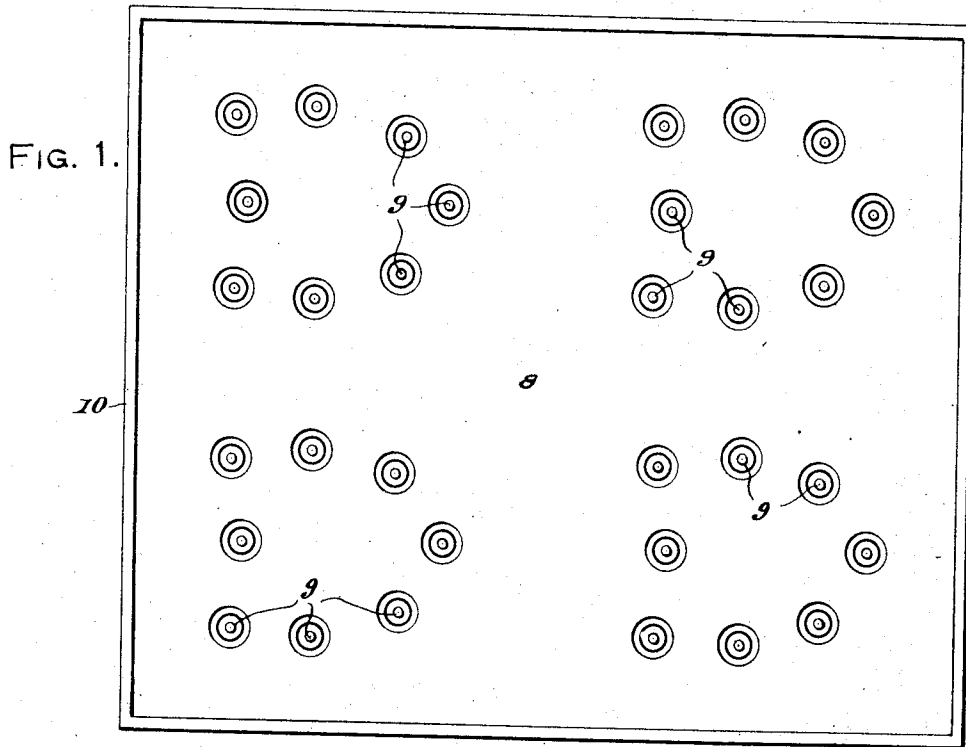
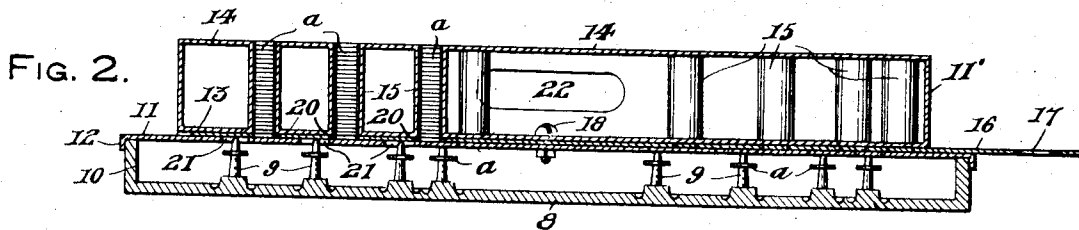
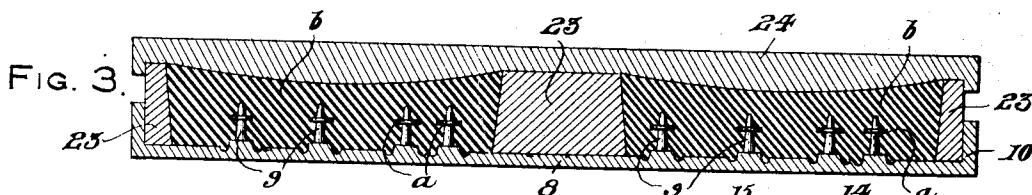
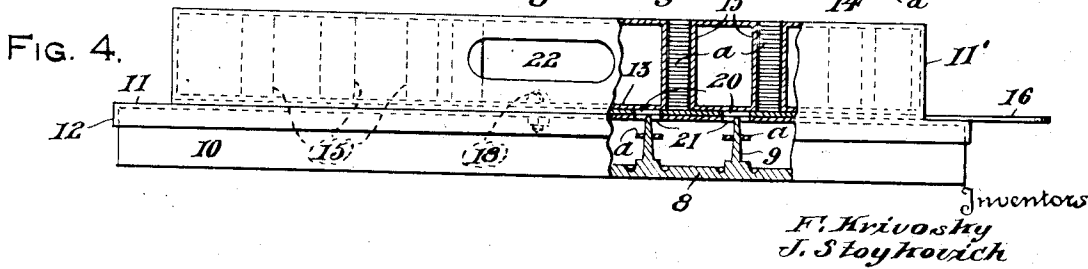


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 WASHER SETTER FOR RUBBER HEEL MOLDS
 APPLICATION FILED AUG. 18, 1919.

1,344,237.

Patented June 22, 1920.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

FIG. 5.

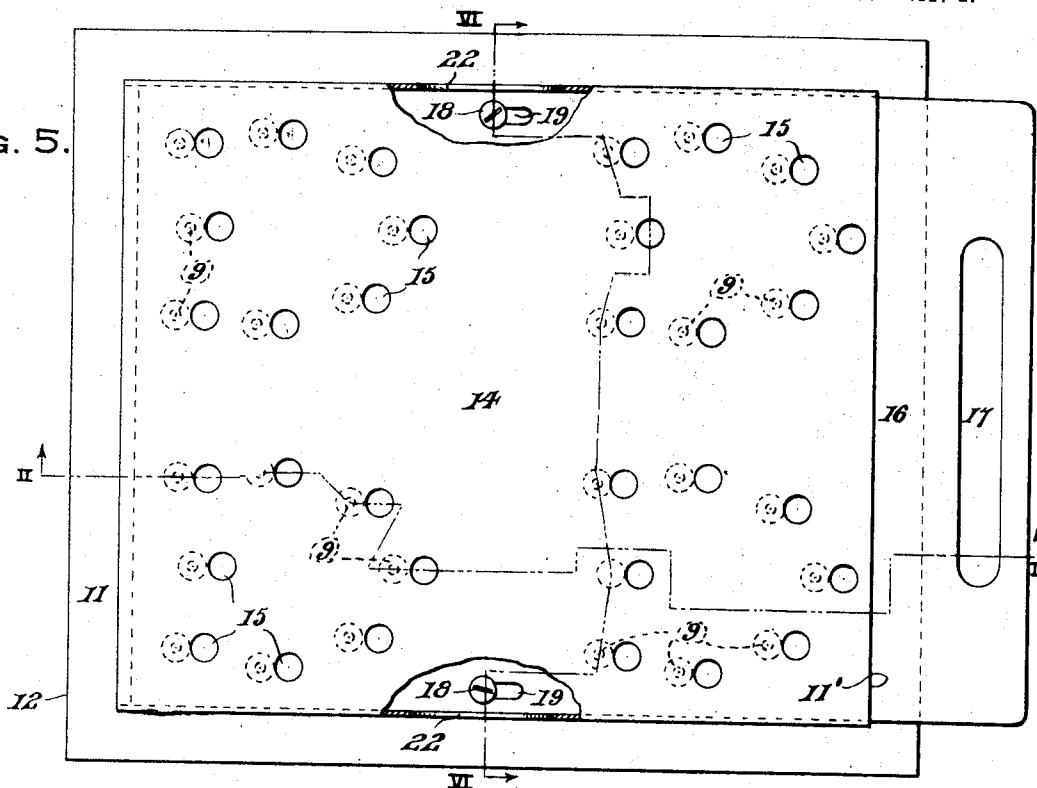


FIG. 6.

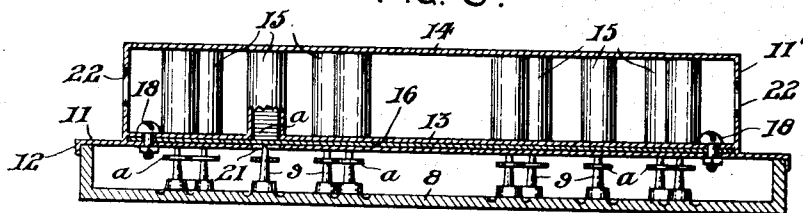
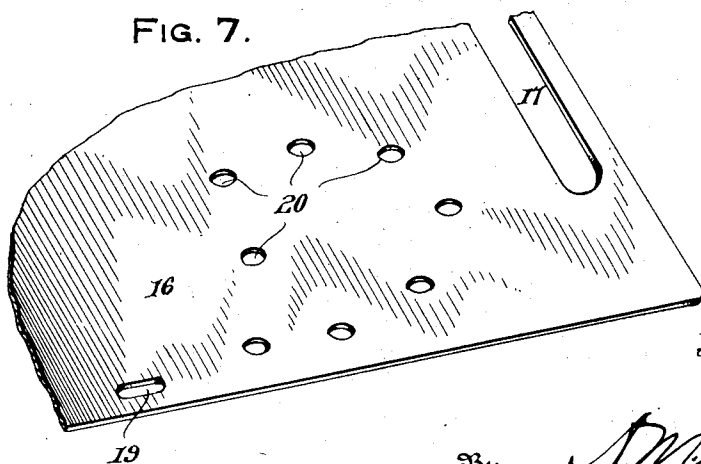


FIG. 7.



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FRANK KRIVOSKY AND JOSEF STOYKOVICH, OF AKRON, OHIO.

WASHER-SETTER FOR RUBBER-HEEL MOLDS.

1,344,237.

Specification of Letters Patent.

Patented June 22, 1920.

Application filed August 18, 1919. Serial No. 318,175.

To all whom it may concern:

Be it known that we, FRANK KRIVOSKY and JOSEF STOYKOVICH, citizens of Czechoslovakia, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Washer-Setters for Rubber-Heel Molds, of which the following is a specification.

The primary object of the present invention resides in the provision of devices associated with a vulcanizing mold for rubber heels for shoes wherein a plurality of washers to be embedded in a rubber heel simultaneously placed upon the supporting pins of the mold with the hands of the operator distantly positioned from said supporting pins, thus obviating the danger of burning the fingers by contact with the pins which was inevitable when washers were individually placed upon the pins by the operators.

A further object of the invention resides in the provision of a hand operated device adapted for removable attachment to the pin carrying plate of a rubber heel mold whereby upon a single operation, one washer is simultaneously positioned upon each pin, the washer setting device being then removed and the remaining parts of the mold substituted for setting and vulcanizing the rubber heel with the washer embedded therein.

With the above and other objects in view, the invention consists in the novel form, combination and arrangement of parts herein more fully described in connection with the accompanying drawings and in which like reference characters indicate similar parts throughout the several views.

In the drawings,

Figure 1 is a top plan view of the pin carrying plate of the mold, the pins thereon being arranged in sets each defining the arrangement of the nail receiving openings in a rubber heel, four sets being illustrated.

Fig. 2 is a longitudinal sectional view taken on line II—II of Fig. 5, showing the pin supporting plate shown in Fig. 1 with the present invention mounted thereon in longitudinal section, the washer setting device illustrating a hopper containing washers associated with each pin and a washer feed plate receiving a washer from each hopper, with a washer upon each pin.

Fig. 3 is a longitudinal sectional view of the rubber heel mold, with rubber heels positioned therein and vulcanized, the washers

being embedded in the rubber heels and the withdrawal of the pins providing the nail receiving openings,

Fig. 4 is a side elevational view, partly in section of the pin carrying plate and the washer feeding device in position thereon, the same being partially shown in section to illustrate the feed plate of the washer carrying device in a position to deliver a washer to each pin,

Fig. 5 is a top plan view of the form shown in Fig. 4, partially broken away to illustrate the limited movement of the washer feeding plate,

Fig. 6 is a cross sectional view taken on line VI—VI of Fig. 5 showing the feeding plate contacting the pins and

Fig. 7 is a detail perspective view of a portion of the washer feeding plate showing one set of washer passage openings thereon arranged in the formation of a heel, the slot for limiting the movement of the plate and the end opening therein.

In the art to which this invention pertains, in the vulcanization of rubber heels for shoes, a mold is employed embodying a plate having a plurality of sets of pins thereon, each set arranged for association with one rubber heel and are adapted to be embedded in the rubber heels when the same are vulcanized and to be withdrawn therefrom with the supporting plate for vulcanization to provide nail receiving openings in the rubber heels. At the present time, small metallic washers embedded in the rubber heels surround these openings and each washer is individually placed upon the pins by operators. This method is very slow, extremely expensive in view of the amount of help required to perform this duty and is also quite dangerous to the operators inasmuch as these molds are in constant use and are employed immediately after the vulcanization of one set of heels so that when the operators are engaged in the act of individually placing a washer upon each pin with the fingers, contact of the fingers with the pins causes burns and the consequent loss of time and labor in the preparation of the mold for another set of rubber heels. All of these disadvantages are overcome with the employment of the device disclosed herein, as a washer is simultaneously fed to each pin and correctly positioned thereon by mechanical devices asso-

ciated with the pin carrying plate of the mold, the present device being capable of carrying sufficient quantity of washers to extend over an entire day.

5 Referring more in detail to the accompanying drawings, there is illustrated in Fig. 1, a top plan view of the pin carrying plate 8 of a rubber heel mold, the plate 8 having pins 9 arranged thereon in sets in the formation of a rubber heel, it being understood that any desired number of sets may be employed, four being shown for illustrative purposes only while the edges of the plate 8 carry upstanding walls 10 to support the washer feeding device to be presently described, it being noted as shown in Fig. 2 that the pins 9 slightly taper substantially in the form of cones and terminate at their upper ends above the upper edges of the edge walls 10.

The present invention being in the form of a washer feeding device is adapted for removable mounting upon the walls 10 of the pin carrying plate 8 of the mold and includes a bottom member 11 of the same form in plan as the pin carrying plate 8 and having depending flanges 12 engaging the outer sides of the walls 10 to seat upon the plate 8 in the form of a cap to be prevented from relative movement. A pair of spaced plates 13 and 14, the latter constituting a top wall, carried by the bottom plate 11 while cylindrical hoppers or pockets 15 having open upper and lower ends extending through the plates 13 and 14 are arranged between said plates as is clearly illustrated and adapted for the reception of washers —a—. The plate 13 is spaced from the bottom plate 11 to provide a clearance slide for the washer feeding plate 16, the washer feeding plate projecting from one side of the plate 11 and having an end receiving opening 17 therein by which the same is operated, the sliding movement thereof being limited by small screws or similar devices 18 extending through openings in the plates 11 and 13 and through a slot 19 in the opposite side edges of the plate 16. As shown more clearly in Fig. 7, the washer feeding plate 16 has a plurality of openings 20 provided therein and arranged in a formation corresponding to the pins 9 upon the plate 8 and with the washer feeding plate in its normal position as shown in Fig. 2 the openings 20 register with the open lower ends of the washer pockets 15, it being understood that the pockets 15 are arranged in sets of similar formation so that a single washer —a— in each hopper, with the plate positioned as illustrated in Fig. 2, will fall into each opening 20 in the plate 16 and rest upon the bottom wall 11 of the washer feeding device.

With the washer feeding device mounted upon the pin carrying plate 8 as illustrated

in Figs. 2, 4, and 6 with the hoppers filled with washers and with a washer in each opening 20 supported upon the plate 11, the feed plate 16 is engaged at the end opening 17 and moved the length of the slot 19 to shift the washer —a— contained in the opening over the plate 11 until the same moves into position directly over a set of openings 21 arranged in similar formation to the sets of openings before described, but offset therefrom as illustrated in Figs. 4 and 6 and when the washers have been moved to this position, the same will fall through said openings and from the feed plate 16 and all of said washers will be simultaneously received upon the pins 9. When the plate 16 is in this position, the plane surface thereof closes the lower ends of the washer hoppers 15 which remain closed during the shifting or removal of the device from the pin carrying plate. In order to facilitate this transference, the side walls 11' connecting the lower end upper plates 13 and 14 are provided with end receiving openings 22.

When each of the pins 9 upon the plate 8 has been provided with a washer as above indicated, the device is gripped by the operator at the points 22 and removed from the plate 8, at which time, the mold carrying the rubber heels is arranged on the pin carrying plate as indicated in Fig. 3. The mold section 23 has a plurality of openings therein in the shape of a rubber heel and adapted to receive a rubber heel —b— while a cover plate 24 of the mold is received upon the section 23 whereby the rubber heels —b— are clamped between the pin carrying plate 8 and the section 24. With the rubber heels tightly clamped between, the mold is then heated to a proper temperature to cause a vulcanization of the rubber heels contained therein with the consequent permanent embedding in the heels of the washers —a—. At a suitable time, the mold sections are separated, and the pin carrying plate 8 separated from the section 23 whereupon the withdrawal of the pins 9 from the rubber heels and washers affords nail receiving openings in the rubber heels with the washers permanently embedded therein intermediate the upper and lower sides of said heels with their central openings surrounding the nail receiving openings in the heels. The practical utility of this device will at once be understood when it is realized that a plate carrying a plurality of pins may have each pin thereof simultaneously receive a washer that is fed thereto by mechanical devices manually operated and wherein the fingers of the operator are distantly spaced from the comparatively hot pins while a great labor saving device is thus provided as at the present time, these washers are indi-

vidually positioned upon the pins by operators.

While there is shown the preferred embodiment of the invention, it is nevertheless
5 to be understood that minor changes may be made in the form, combination and arrangement of parts without departing from the spirit and scope of the same as claimed.

What is claimed as new is:—

10 The combination with a heel mold comprising a bottom plate provided with

washer supporting pins of upwardly tapering formation throughout their lengths, of means for simultaneously placing a washer upon each pin, the continuously tapered
15 sides of the pins determining the relative positions of the washers supported thereon.

In testimony whereof we affix our signatures.

FRANK KRIVOSKY.
JOSEF STOYKOVICH.