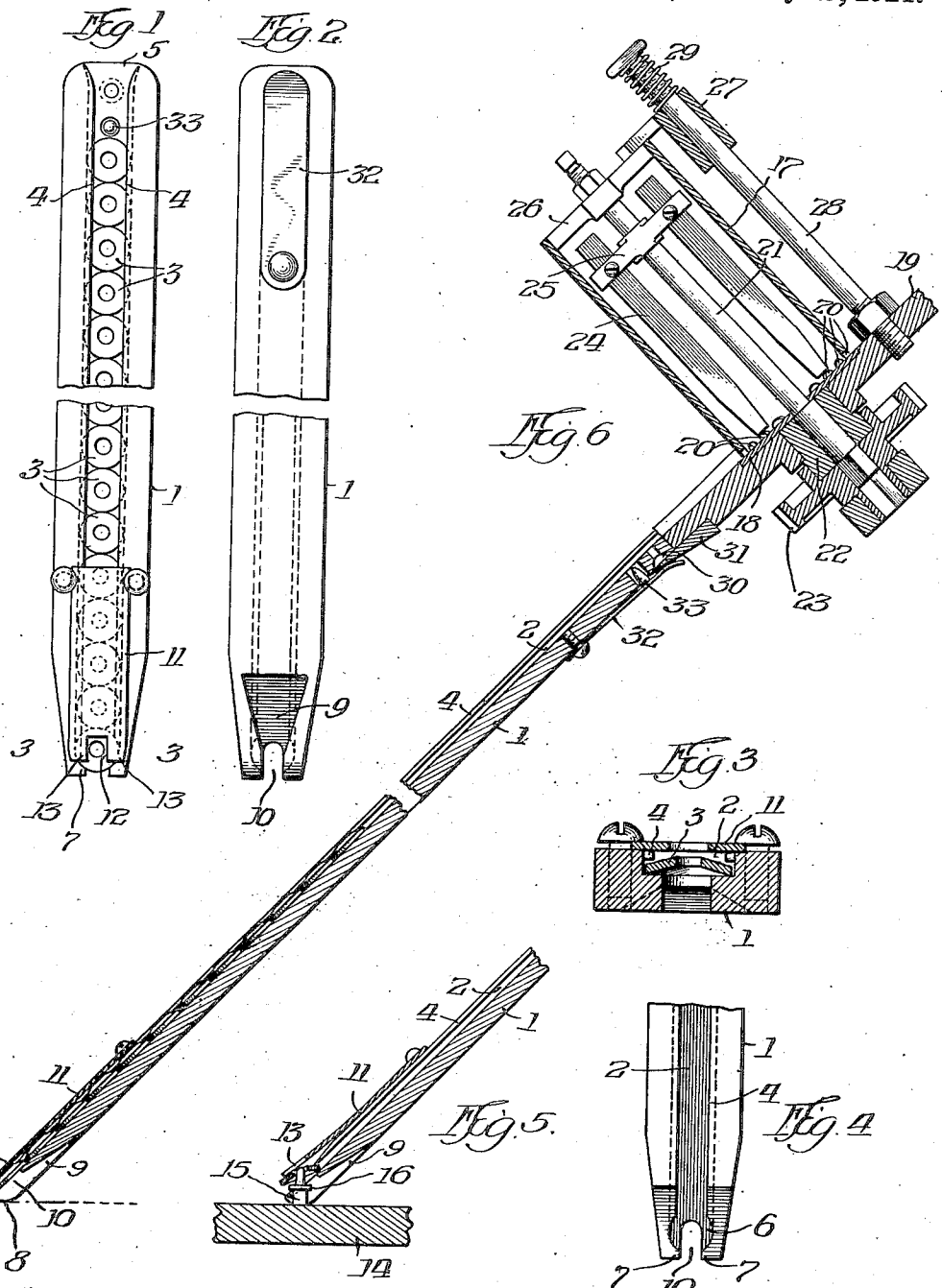
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HOLDER FOR RUBBER HEEL WASHERS.

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HOLDER FOR RUBBER-HEEL WASHERS.

1,385,086. Specification of Letters Patent. Patented July 19, 1921.

Application filed January 18, 1919. Serial No. 271,879.

To all whom it may concern:

Be it known that I, HARVEY F. MARANVILLE, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Holders for Rubber-Heel Washers, of which the following is a specification.

The subject matter of this invention comprises an implement or hand tool which may be used as a hand tool for placing washers on the pins on which they are supported in molds for rubber heels, or which may be used in conjunction with an apparatus for filling, and conveying the mold under the holder, which apparatus constitutes the subject matter of my copending application, Serial No. 271,878, filed concurrently herewith.

The purpose of this invention is to construct a tool or holder which will carry a supply of washers and which may be passed over a rubber heel mold, the arrangement of the lower end of the tool permitting the washers to escape one at a time and to be forced into position on the shoulders of the mold pins.

In the drawings accompanying this application, one form of my invention is shown, but it is understood that such details as will be described as are capable of alteration without departing from the scope of the invention, are intended to be covered broadly. As far as known to me, I am the first to successfully supplant the old practice of placing a single washer on mold pins by the thumb and forefinger of the operator, and I consider myself, therefore, entitled to a wide range of equivalents.

In the drawings:

Figure 1 is a view of the upper face of the washer holder.

Fig. 2 is a view of the rear face thereof.

Fig. 3 is a section on the line 3—3 of Fig. 1.

Fig. 4 is a view of the mouth of the tool, the spring plate being removed.

Fig. 5 is a view showing the manner in which the washer is passed on to the pin.

Fig. 6 is a longitudinal section through the tool showing the apparatus for filling it.

The tool comprises a body portion 1, the upper face of which is provided with a longitudinal groove or channel 2 wide enough to receive a file of washers 3, the channel, except at the two extremities, being provided with over hanging flanges 4 which prevent the escape of the washers. At its upper end the channel is flared slightly, as at 5, to assist the entrance of the washers, while at its lower end, the flanges are cut away providing an exit 6 of the size of the washer. The lowermost point on the tool is formed as a pair of abutments 7 against which the lowermost washer rests. The foot of the tool is rounded off, as at 8, so that it can be dragged over the upper surface of the mold plate, and on the under side is cut a V-shaped recess 9 which converges toward the end of the tool near which point it meets a slot 10 located in line with the hole in the washer.

On the upper face of and a short distance above the end of the tool is secured a flat leaf spring 11, the free end of which extends over the washer seated in the recess 6 and holds it in place. At its lower end, the spring is formed with a central aperture 12 and two fingers 13 which project over the washer, the aperture registering with the hole in the washer.

A fragment of a mold plate is shown at 14 and a single mold pin at 15, the shoulder on which the washer rests being designated by the numeral 16. It will be noted that the top of the pin is slightly above the highest point in the slot 10, the result being that as the tool is dragged over the mold plate, it rides up on the top of the pin and the latter enters the hole in the washer just as the tool leaves it. The spring 11 allows the washer to be lifted out of place on the shoulder 16.

As the tool is shown, it may be held by the operator and passed over the mold plate. The recess 9 serves to guide the movement of the tool over the pin and the pin into the hole in the washer so that it is impaled on the pin. The tool may also be used as a part of a machine in which the molds are passed under the tools or holders, such a machine forming the subject matter of the copending application referred to above.

In Fig. 6 is shown a device for filling the holders, provision being made for positioning the washers in one direction. It is necessary that the washers, which are dished or concave-convex, be placed with the concave face down, in order that in the

finished rubber heel such concave face may be presented to the entering nail by which it is guided into the center of the washer.

The filling apparatus comprises a removable distributing hopper 17 seated on a plate 18 set into a table 19 arranged at an angle so that the washers descend by gravity into the holder. The lower edge of the hopper is provided with a number of apertures 20 shaped so as to insure the washers leaving the hopper, concave side down. A central shaft 21 passes through the hopper, the lower end of the shaft being received in a bearing 22 in the table 19 and carrying a gear 23 by which it may be rotated. Any suitable form of stirring or agitating means is carried by the shaft 21, the form shown consisting of resilient blades 24 suspended from a cross-head 25 on the upper end of the shaft. The upper end of the shaft is received in a spider 26 across the hopper.

The hopper is held in place by a cross arm 27 slidably mounted on a rod 28 and pressed downwardly by a coil spring 29. As the agitator is revolved, the washers pass out of the apertures 20 and into the holder, which is removably mounted on a pin 30 secured to a plate 31 projecting from the lower edge of the table 19.

To the upper end of the holder, on the under side, is secured a light spring plate 32, the end carrying a pin 33, which, when the tool is removed from the table, projects into the channel and locks the file of washers therein. When the tool is in place, the free end of the spring rides on the under side of the plate, and the pin is withdrawn, the spring plate at the same time serving to hold the tool on the pin 30.

It will be understood that in practical use there are a plurality of distributing hoppers with rotating agitators and a supply of holders, and that some of the holders are being filled at all times. When it is desired to fill a mold plate with washers, the workman removes a filled tool, substituting an empty one in its place. Holding the tool at approximately the angle shown in Fig. 5, he drags it over the pins in the mold. As the tool passes over each pin, it will be raised slightly and one washer will be placed thereon and pressed into position on the shoulder 16.

Changes may be made in specific embodiments of the invention and such modifications as may be made are within my invention and covered thereby.

I claim:

1. A holder for washers or the like, comprising a body, a guide for the passage of the washers, an exit at the foot of said body and a flexible element located over and normally closing said exit.

2. A rubber heel washer holder, comprising a body, a channel for the passage of the washers, an exit at the foot of said body, and a spring closing said exit, the end of said spring being formed with a washer placing finger.

3. A rubber heel washer holder, comprising a body, a channel for the passage of the washers, an escapement device at the foot of said channel, and a guide for directing a mold pin into the hole in the washer.

4. A rubber heel washer holder, comprising a body portion, a channel for the passage of the washers, means for permitting the lowermost washer to be removed from the channel, and a guiding formation on the under side of the holder, leading to the aperture in the said washer.

5. A rubber heel washer holder, comprising a body portion, a channel for the passage of the washers, means permitting the lowermost washer to be removed from the channel, and a guiding formation on the under side of the holder, which converges toward the aperture in the lowermost washer.

6. A rubber heel washer holder, comprising a body portion, a channel for the passage of the washers, an escapement device at the foot of said channel, and a guiding formation on the under side of the holder which converges toward the hole in the lowermost washer.

7. A rubber heel washer holder, comprising a body, a channel for the passage of the washers, a slot at the foot of said holder leading into the channel at the center of the washer, and an escapement device for said washers above the slot.

8. A rubber heel washer holder, comprising a channel for the passage of the washers, a slot at the foot of said holder registering with the hole in the lowermost washer, and a guiding formation on the under side of the holder leading to the slot.

9. A rubber washer holder, comprising a channel for the passage of the washers, a slot at the foot of said holder registering with the hole in the lowermost washer, a guiding formation on the under side of the holder leading to the slot, and an escapement device for said washers above the slot.

10. A hand tool for applying washers to rubber heel molds, comprising a body, a guide-way in the body for washers, an escapement mechanism at the foot of said tool and a locking device at the upper end of the guide-way.

11. A hand tool for applying washers to rubber heel molds, comprising a body, a guide-way in the body for washers, an escapement device at the foot of said body, a guide-way for directing a mold pin into the hole in the washer, and a locking device in the guide-way.

12. A device for handling rubber heel washers, comprising a body portion having provision for holding a column of washers,

and an escapement device for the lowermost washer of the column, and a guide-way for directing the mold pin to impale the lowermost washer.

13. A device for handling rubber heel washers, comprising a body having provision for holding a column of washers, an exit for a single washer at the lower end of said body portion, and means for guiding a mold pin so that it will impale the lowermost washer.

14. A device of the character described, comprising a body, a guide-way in said body for holding a plurality of washers, an exit at one end of said guide-way, and means for directing a mold pin so that it will impale the washer at the exit.

15. A device of the character described, comprising a body, a guide-way in said body for holding a plurality of washers, an exit at one end of said guide-way, means for directing a mold pin so that it will impale the washer at the exit, and a device for pressing said washer into place on the mold pin.

16. A device of the character described, comprising a body, means for supporting a stack of washers, an exit for one of said washers, and means adjacent the exit for guiding the mold pin to impale the washer.

17. A device of the character described, comprising a body, means for supporting a stack of washers, an exit for one of said washers, means adjacent the exit for guiding the mold pin to impale the washer, and an escapement device at said exit.

18. A device of the character described, comprising a body, means for supporting a stack of washers, an exit for one of said washers, means adjacent the exit for guiding the mold pin to impale the washer, an escapement device at said exit, and a pressing device for seating the washer on the pin.

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