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RACKS FOR SUPPORTING LASTS DURING THE
MANUFACTURE OF BOOTS AND SHOES
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FIG. 1.

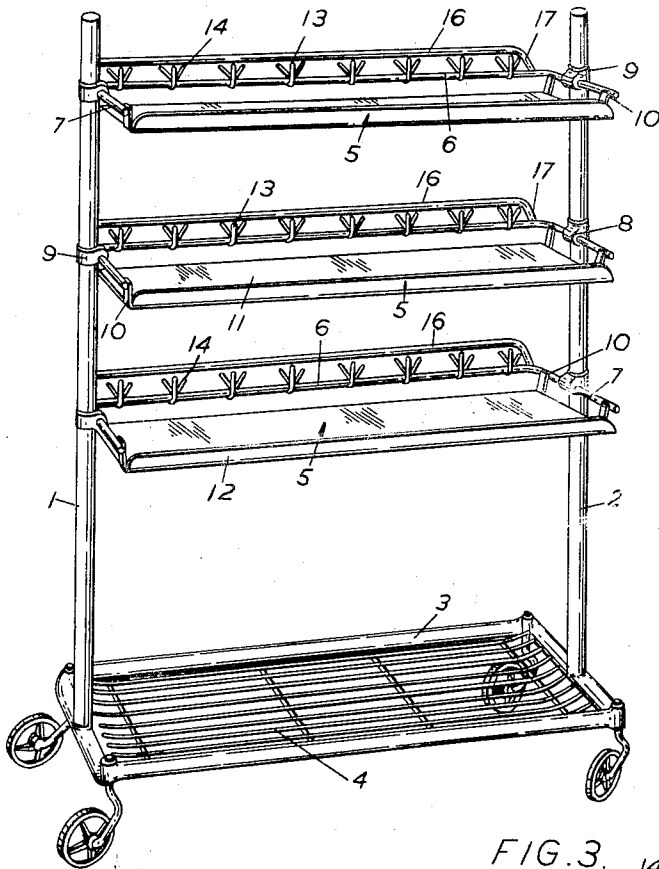


FIG. 2.

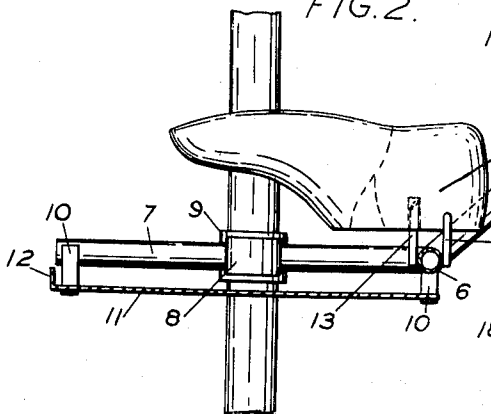


FIG. 3.

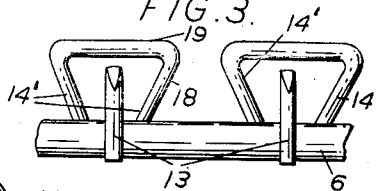
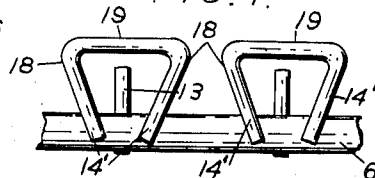


FIG. 4.



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RACKS FOR SUPPORTING LASTS DURING THE MANUFACTURE OF BOOTS AND SHOES

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4 Claims. (Cl. 211—37)

This invention relates to racks of the class employed for supporting boot or shoe lasts at any appropriate stage or stages during the manufacture of articles of footwear.

The heel part of a boot or shoe last is formed with a socket adapted for reception of a so-called "jack" pin such as is customarily provided for the support of a last on a machine for performing lasting, nailing, heel attaching, sole levelling or an analogous operation in the manufacture of footwear.

The present invention has reference to last racks of the kind including a rail furnished with a longitudinal series of upstanding pins adapted for engagement in the aforesaid sockets in boot or shoe lasts. With a rack of this kind the lasts, in their normal inverted position of use, are simply placed upon the upstanding pins and thereby supported at required times—with their foot portions extending forwardly towards the front of the rack.

Now, the strictly correct way to take a last with a shoe thereon off an upstanding pin of a last rack is to stand at the front of the latter, lift the last off the pin and then draw the last and the shoe forwardly. In this way the toe of the shoe is prevented from damage. Very often, however, an operator will, for convenience and to save time, attempt to remove a last while standing at the back of the rack. To do this, the last and shoe, after being lifted off the pin, will, of course, have to be drawn rearwardly over the top of the said pin. When being drawn rearwardly, however, a last, by reason of its weight, tends to fall as a consequence of which the toe of the shoe almost inevitably strikes, and may be drawn over, the upper end of the pin and is damaged. If, as may be, the upper end of the pin is of pointed form, then the damage is increased.

The object of the present invention, then, is to provide, in a last rack of the kind herein referred to, an improvement designed positively to prevent a last from falling on to the upper end of a supporting pin and causing damage to the toe of a shoe in the event of the last being taken off the pin and drawn away rearwardly by an operator standing at the back of the rack, as will be hereinafter described.

According to this invention there is provided at the back of the series of upstanding last-supporting pins, a fixed member or members located above the upper ends of the pins and adapted to constitute a guard or guards for arresting the downward movement of a falling last and support the same at a position clear of the appropriate pin.

Thus, when a last with a shoe thereon is lifted off a supporting pin and drawn rearwardly, the worst that can happen, if the weighty last tends to fall, is for the shoe to be dragged over the guard, or the appropriate guards, as the case may be. This causes far less damage to a shoe than for its toe to fall upon a pin.

In one embodiment of the invention there is provided a bar or rod constituting a single guard rail which extends from end to end of the rack and is common to all the upstanding last-supporting pins of the series. The

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said guard rail may conveniently be disposed horizontally and parallel with the rail to which the pins are fitted, the upper edge of the guard rail being at a level above the upper ends of the pins.

In an alternative arrangement, each of the last-supporting pins is associated with an individual and comparatively short guard.

It is principally the intention to apply the invention to a last rack furnished with last supporting elements of the character described and claimed in U. S. Patent No. 2,466,406 issued April 5, 1949. Such an element comprises a pin adapted to be fitted in an upright position for engagement in the socket of a last and, integral and spaced rearwardly from the said pin, a support adapted for contact with the opposite sides of the heel part of the last so as to prevent turning movement thereof angularly about the pin, the formation of the element being such that under the weight of its forepart a supported last is free to tilt forwards to the extent of causing points on the front and rear walls of the aforesaid socket to bind on opposing points of the pin, for the purpose specified. The upper end of the pin is of pointed form, being bevelled at the front and rounded and smoothed off, and the rear support comprises downwardly convergent limbs adapted to make contact with the opposite sides of the heel part of a last.

A series of last supporting elements of this particular form may conveniently be secured in a longitudinal tubular rail extending between the opposite ends of a tubular steel frame furnished with castors.

An embodiment of the invention is illustrated by way of example in the accompanying drawings in which:

Figure 1 is a front perspective view of the rack,

Figure 2 is an enlarged detail, being a view from the side of a section of rack with a lasted shoe component thereon,

Figure 3 is a detail of a modified form of guard, as seen from the front, and

Figure 4 corresponds to Figure 3, but is a rear perspective view.

The rack illustrated comprises a pair of uprights 1 and 2 mounted on a cast or otherwise suitably fabricated frame 3 with a basket 4 extending across the same. Supported by the uprights 1 and 2 are three shelves or trays 5 of identical form, one of which is described hereunder.

Thus each tray comprises a frame made up of a transverse back rail 6 and two side arms 7 integral with the back rail, these side arms being passed through a boss 8 on a sleeve 9 connected to the respective upright. Secured to each arm 7 is a pair of brackets 10 serving to support an imperforate metal sheet 11 representing the tray proper and having an upturned front edge 12.

Last supporting pins 13 and associated V-shaped supports 14 are disposed in alignment along, and respectively welded to the front and rear of, the rail 6. Each pin 13 is disposed in an upright position for engagement in a socket in a last 15 positioned thereon, while the companion support 14 embraces the opposite sides of the heel of the last to prevent turning movement of the latter angularly about the said pin, as is described in U. S. Letters Patent No. 2,466,406. Figure 2 of the accompanying drawings illustrates a last, with a partly-made shoe thereon, supported in this way.

In accordance with the present invention a guard rail 16 is associated with the set of pins 13 in each rail 6, this guard rail being bent round at its end parts 17 and secured by welding to the back of the corresponding rail 6. As will be observed, the guard rail 16 is located shortly to the rear, and above the upper ends of, the pins 13 and the associated supports. Hence, if it should happen that a last with a lasted shoe thereon is lifted off a pin 13 and

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removed over the guard rail 16, and if—as may be—the weighty last drops, the toe of the shoe will then strike this rail 16 and be guarded from damage by the said pin and the upwardly divergent limbs of the associated V-shaped support 14.

In the modification illustrated in Figures 3 and 4 the inclined limbs of each support 14' are connected together at their upper ends by a loop which is cranked rearwardly as at 18 and includes a horizontally disposed portion 19, this constituting an individual guard located above and at right angles to the corresponding pin 13.

I claim:

1. A last rack comprising at least one rail, a series of upstanding last-supporting pins on said rail for engagement in last sockets, a pair of divergent last-steadying arms on said rail and associated with each said pin adapted to make point contact with the opposite sides of the heel portion of the last, and a second rail supported by the first rail and extending to a position above and to the rear of the upper ends of said last-supporting pins and arms and adapted to constitute a guard for arresting downward movement of a last removed from its support over second rail.

2. A last rack comprising at least one rail, a series of upstanding, last-supporting pins on said rail for engagement in last sockets, a pair of divergent last-steadying arms on said rail and associated with each said pin adapted to make point contact with the opposite sides of the heel portion of the last, and a rearwardly-cranked loop connecting the upper ends of each pair of divergent arms and each adapted to constitute a guard for arresting downward movement of a last removed from the associated pin and lifted rearwards.

3. A last rack comprising a supporting member, a rail carried by said supporting member, a series of upstanding last supporting pins on said rail for engagement in last

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sockets, means connected to said rail and associated with each of said pins spaced rearwardly of each pin adapted to make point contact with the opposite sides of the heel portion of the last and at least one fixed member supported by the rail extending to a position above and to the rear of each of said pins and means, adapted to define a guard for arresting downward movement of the last removed from said pin.

4. A last rack comprising a wheeled carriage, a vertical post carried by said wheeled carriage, a horizontally disposed surface fixed to said post, a horizontally disposed rail attached to said post and horizontally disposed surface, a series of upstanding last supporting pins on said rail for engagement in last sockets, a pair of divergent last steadying arms on said rail rearwardly of and associated with each of said pins adapted to make point contact with the opposite sides of the heel portion of the last, and a second rail secured to said first rail extending to a position above and rearwardly of the upper ends of the last supporting pins and steadying arms adapted to define a guard for arresting downward movement of a last removed from its supporting pin and last steadying arms.

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