June 9, 1936. E. T. STEVENS 2,043,841

RACK

Filed June 4, 1934

FIG. 1.

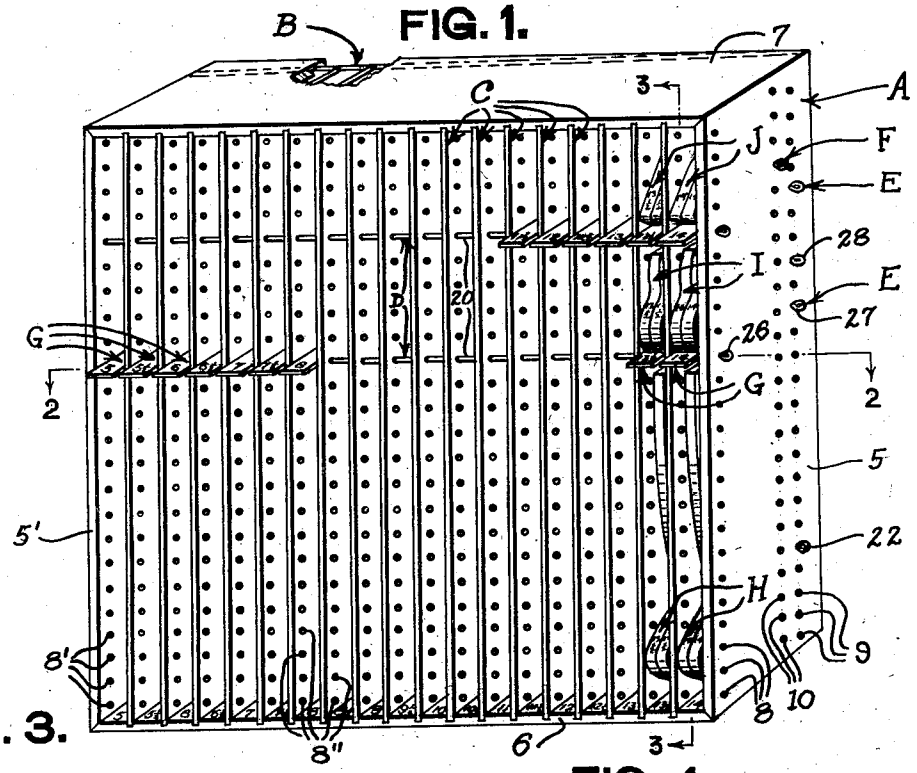


FIG. 3.

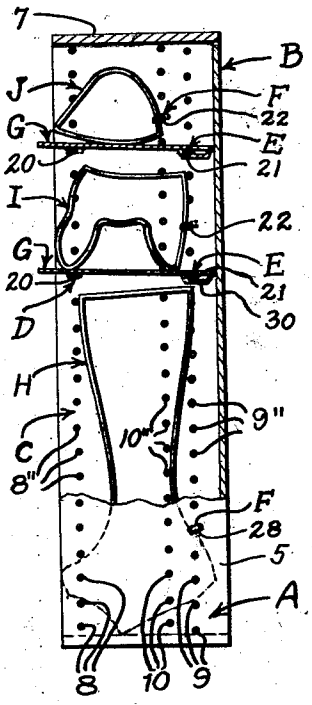


FIG. 4.

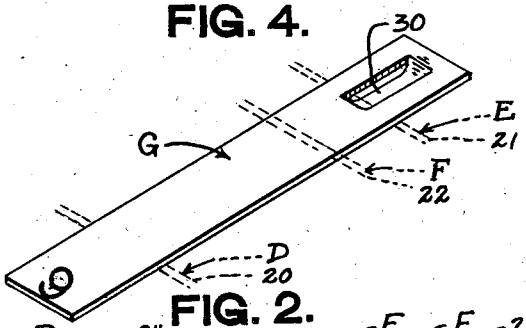
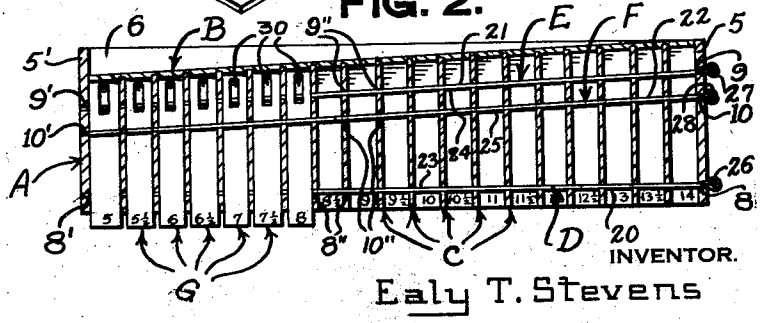


FIG. 2.



INVENTOR.

Ealy T. Stevens

BY Lancaster, Allwine and Rommel ATTORNEYS.

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RACK

Ealy T. Stevens, Nashville, Tenn.

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5 Claims. (Cl. 211—60)

The present invention relates to racks for supporting articles of various sizes.

An important object of the invention is to provide a rack which will support, in an orderly manner, articles of gradually varying heights and depths, such as the dies used for cutting the uppers and other portions of shoes and boots.

Another object of the invention is to provide a rack having movable trays from which articles of desired size may be quickly selected and easily removed.

A further object of the invention is to provide a rack which will support articles in an efficient manner, even though the rack is subjected to vibration, as in factories or elsewhere.

A still further object of the invention is to provide racks that are adjustable thereby enabling the user to locate the trays at various elevations in a manner to use as much as possible of the space within the racks according to the size and character of the material to be stored.

Other objects of the invention will appear in the following detailed description taken in connection with the accompanying drawing, forming a part of this specification, and in which:

Figure 1 is a perspective view of the improved rack showing the preferred manner of supporting and arranging articles of different sizes.

Figure 2 is a horizontal sectional view of the rack taken on the line 2—2 of Figure 1.

Figure 3 is a vertical sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a perspective view of a tray forming a part of the rack.

In the drawing, where similar characters refer to similar parts throughout the several views, the letter A designates a frame, provided with a rear panel B, and having partitions C, cooperating with the frame A to carry supports D, support and stop means E, and stops F; and G designates trays supported by the supports D and the support and stop means E, carrying articles H, I, and J in cooperative relation to the stops F.

Referring first to the frame A, it preferably comprises upright end members 5 and 5', and bottom and top cross members 6 and 7 respectively.

The upright end member 5 is preferably provided near its forward edge with a vertical row of openings 8, and at a short distance from its rear edge with a vertical row of openings 9. Intermediate the rows of openings 8 and 9, a vertical row of openings 10 is provided.

The upright end member 5' is preferably provided near its forward edge with a vertical row of openings 8', similar to and aligning with the openings 8 in the upright end member 5; and vertical rows of openings 9' and 10' in axial alignment with the rows of openings 9 and 10 respectively of the upright end member 5. The rows of openings 9' and 10' differ in location from the rows of openings 9 and 10, however, in that the former are located nearer the front of the frame than the latter, as clearly shown in Figure 2.

Although the openings 8, 8', 9, 9', 10, and 10' preferably correspond in number and spacing, the openings 8 and 8', and 10 and 10', are preferably located at a slightly higher level than the companion openings 9 and 9' respectively, as shown.

As to the rear panel B, it is preferably arranged in oblique relation to the front of the rack. One end of the panel B preferably is secured to the upright end member 5 at a short distance in the rear of the vertical row of openings 9, while the other end of the panel B is preferably secured to the upright end member 5' at an equal distance in the rear of the vertical row of openings 9'. As the vertical row of openings 9' is located nearer the front of the frame than the vertical row of openings 9, the rear panel B will thus be arranged in oblique relation to the front of the rack.

The partitions C, in the example shown, are vertically positioned within the frame A. When the rack is intended for use in supporting articles that vary in some dimensions, but are generally of common width, such as the dies used for cutting the uppers and other portions of shoes and boots, the partitions C are preferably spaced equal distances apart.

The partitions C, preferably extend from the front portion of the frame A to the oblique rear panel B, thus providing a series of vertical compartments 11 of gradually varying depths, as shown in Figure 2.

The partitions C are provided with vertical rows of openings 8'', 9'', and 10'' aligning with the openings 8, 9, and 10 respectively of the upright end member 5 and with the openings 8', 9', and 10' respectively of the upright member 5' thus forming horizontal series of aligning openings.

It will be noted that forward horizontal series of aligning openings 8, 8'' and 8' will therefore be provided in parallel relation to the front of the frame, and that rearward horizontal series of aligning openings 9, 9'', and 9', and intermediate horizontal series of aligning openings 10, 10'', and 10' will be provided in oblique relation to the front of the frame.

Supports D, support and stop means E, and stops F may be made from wire of suitable strength and in the example shown are in the form of rods 20, 21, and 22 respectively, having shank portions 23, 24, and 25 respectively, preferably of lengths to extend the entire distance between the uprights 5 and 5', and hook portions 26, 27 and 28 respectively, which may be pushed or wedged into the openings in either of

the upright end members 5 or 5' as desired, to prevent the rods from working from the rack due to vibration.

Trays G are for the support of articles such as the dies H, I, and J, and may be each struck from a piece of sheet metal or other material and include sleeve or eye portions 30 for engaging a rod 21 for limiting withdrawal of the tray from the rack. The trays of course are of various lengths to conform with the gradually varying depths of the rack and they may project from the rack and be provided with suitable size numbers or other indicia on the projecting portions, as shown.

When the rack is employed for holding dies used in cutting the uppers and other portions of shoes and boots, it is preferred that the dies be arranged in pairs, one right and one left die of each size being placed in each compartment. It is preferred that the largest dies be placed in the bottom portion of the rack.

In the present embodiment of the invention, the bottom portion of the rack is employed for holding all the sizes of dies H, they being supported in a vertical position on the base 6, in pairs; and a rod 22 may be extended through a suitable rearward series of aligning openings for holding the dies F in position for easy withdrawal from the rack, and to prevent them from working or being pushed too far back in the rack.

The sizes of the dies are preferably placed upon portions of the dies which are exposed to view when the dies are in position in the rack. The base portion 6 of the rack may be provided along its front or top surface with the size numbers of the various compartments to aid in the withdrawing and replacing of the dies H.

By selecting a suitable rearward series of horizontal aligning openings at a level above the dies H, for insertion of a rod 21, and a corresponding forward series of horizontal aligning openings for insertion of a rod 20, trays G may be supported above the dies H, it being understood that the sleeve or eye portions 30 of the trays G engage the rod 21, and that trays of suitable lengths are provided for the varying depths of the compartments. As the horizontal aligning openings in the rear portion of the rack are at a slightly lower level than their corresponding openings in the front of the rack, the trays will be supported in a rearwardly sloping manner.

Upon the trays G, it is preferred, when the rack is employed for storing of dies used in cutting the uppers and other portions of shoes and boots, to place all sizes of dies I. A rod 22 may be extended thru a suitable rearward series of horizontal aligning openings for holding the dies in place with their forward portions in substantial alignment with the front of the rack, and to prevent the dies from working too far back in the compartments due to the rearward slope of the trays G. The projecting portions of the trays may carry suitable size numbers to aid in withdrawing and replacing the proper sizes of dies. The projecting portions of the trays form handles whereby the trays may be pulled out a limited distance to facilitate the withdrawal and replacement of the desired dies. The weight of the dies upon the trays G will tend to prevent the rods from working out of the rack.

Another series of trays G may be employed above the dies I for carrying all sizes of the relatively small dies J. In order to prevent the dies J from working or being pushed too far back in the rack, it is preferred to employ a rod 22 extending through an intermediate series of horizontal aligning openings at a level above the tray thereby maintaining the small dies in approximately the same relation to the front of the rack as the larger dies supported by a rod 22 in the rearward series of horizontal aligning openings.

The rear panel B may be used for a back-stop instead of the rods 22 when the rack is employed for supporting extra large dies or other articles.

Various changes in the shape, size, and arrangement of parts may be made to the form of invention herein shown and described without departing from the spirit of the invention or the scope of the following claims.

What is claimed is:

1. In a rack, a plurality of spaced apart members having rows of axially aligning openings therein, a rear vertical panel arranged in oblique relation to the front of the rack whereby a series of compartments of gradually varying depth is provided, rods extending through predetermined series of axially aligning openings, and trays carried by the rods for supporting articles of gradually varying sizes.

2. In a rack, a plurality of spaced apart upright members having vertical rows of axially aligning openings, a rear panel arranged in oblique relation to the front of the rack whereby a series of compartments of gradually varying depth is provided, rods horizontally extending through predetermined series of axially aligning openings, and trays carried by the rods for supporting articles of gradually varying sizes.

3. In a rack, a frame including end members having rows of openings therein, a plurality of spaced apart partitions carried by the frame and having rows of openings axially aligning with the openings in the end members of the frame, a rear panel arranged in oblique relation to the front of the frame whereby a series of compartments of gradually varying depth is provided, rods extending through predetermined series of axially aligning openings in the partitions and end members, and trays carried by the rods for supporting articles of gradually varying sizes.

4. In a rack, a frame including end members having rows of openings therein, a plurality of spaced apart vertical partitions carried by the frame and having vertical rows of openings axially aligning with the openings in the end members of the frame, a rear panel arranged in oblique relation to the front of the frame whereby a series of vertical compartments of gradually varying depth is provided, rods horizontally extending through predetermined series of axially aligning openings in the partitions and end members, and trays carried by the rods for supporting articles of gradually varying sizes.

5. In a rack for articles of gradually varying sizes, such as the dies used for cutting the uppers and other portions of boots and shoes, the combination with a plurality of upright supporting members, of rods horizontally carried by the upright supporting members in oblique relation to each other, and trays transversely supported by the rods, said trays being of lengths varying similar to the varying distances between the rods at the several tray locations.

EALY T. STEVENS.