

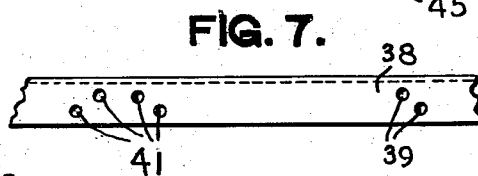
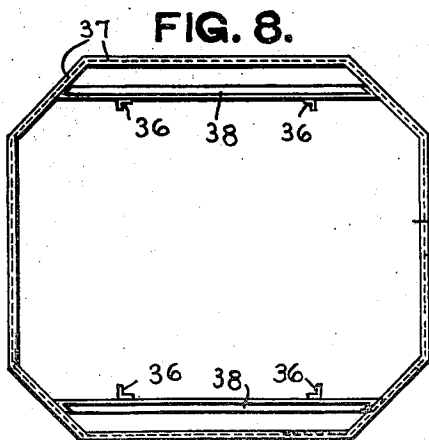
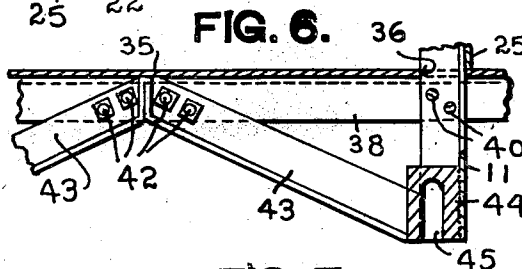
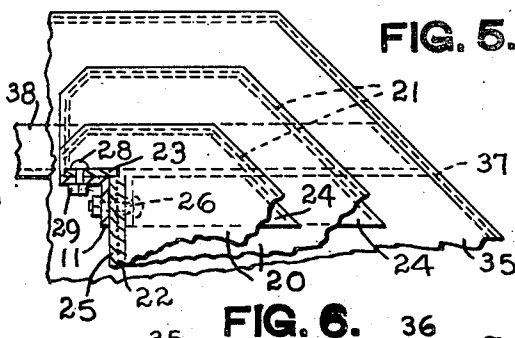
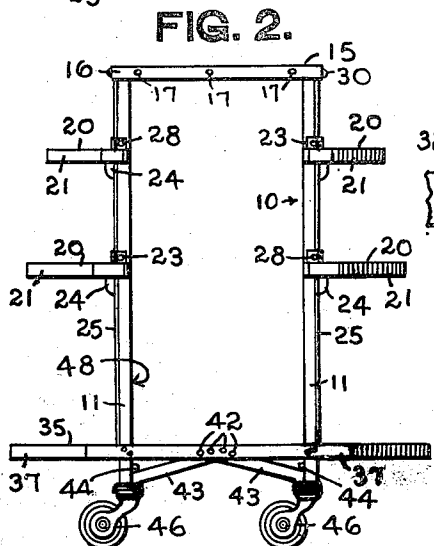
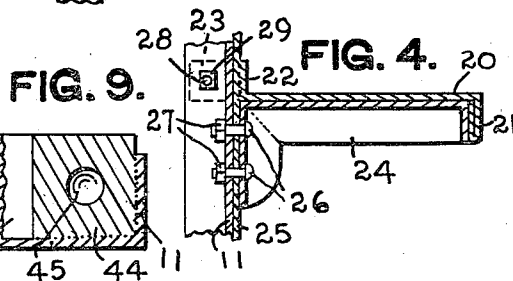
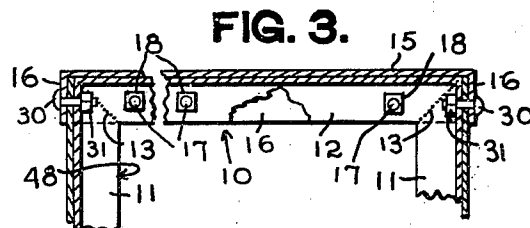
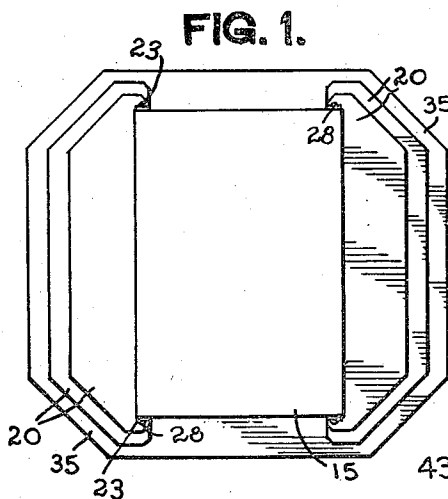
Nov. 30, 1937.

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2,100,331

RACK

Filed Nov. 21, 1936



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UNITED STATES PATENT OFFICE

2,100,331

RACK

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Application November 21, 1936, Serial No. 112,165

7 Claims. (Cl. 211—137)

This invention relates to racks and more particularly to display and vending racks.

The principal object of the invention is to provide a rack, having a plurality of terraced shelves, in connection with a compartment adapted to house a relatively heavy article or articles, the rack being built so that it may be easily moved about yet is sturdy and particularly free from the defects which cause distortion and buckling of racks of this kind after being subjected to use.

Another object is to provide a rack, having a compartment associated therewith, the assembly being such that the articles on the shelves of the rack and those within the compartment may be easily reached.

Still another object is to provide a rack which may be readily and easily cleaned.

Another object is to provide a rack wherein portions of the construction have dual functions.

Other objects and advantages of the invention will be apparent during the course of the following detailed description, taken in connection with the accompanying drawing, forming a part of this specification, and in which drawing:—

Figure 1 is a top plan of the novel rack.

Figure 2 is an end elevation of the same.

Figure 3 is a fragmentary transverse section of the upper end of this rack.

Figure 4 is a fragmentary section of a shelf and bracket, forming a portion of the rack construction.

Figure 5 is a fragment of a corner of the novel rack.

Figure 6 is a vertical section through a foot portion of the novel rack, also showing support and bracing means associated therewith.

Figure 7 is a fragment of the support shown in Figure 6.

Figure 8 is a bottom plate, forming a portion of the construction.

Figure 9 is an enlarged horizontal section through the leg portion of the rack.

In the drawing, wherein for the purpose of illustration is shown a preferred embodiment of the invention, and wherein similar reference characters designate corresponding parts throughout the several views, the novel rack is shown as including a pair of spaced apart frame members 10 each, preferably, comprising a single length of angle iron formed into a pair of leg portions 11 and a bridge portion 12, joining the upper ends of the leg portions. Preferably, the length of angle iron is mitered, bent and finally welded as shown at 13 in Figure 3, in order to form a strong but light-weight frame construction.

A top plate or rack top 15 is provided and extends over each of the bridge portions 12. This top plate 15 has a downturned rim 16 which overlaps a section of the upper end of each of the leg portions 11.

Means to secure the top plate 15 to the frame members 10 is provided and, for example, comprises in part, bolts and nuts 17 and 18 which former extend to the bridge portion 12 and downturned rim 16. Thus the top plate, insofar as its downturned rim 16 is concerned, provides an additional portion of the frame of the rack.

Disposed below the horizontal plane of the top plate 15 are a suitable number of spaced apart, substantially horizontally extending shelves 20. In the example shown, there are two of such shelves extending outwardly from each side of the rack frame and they also extend outwardly from a portion of each end of the frame, as may be seen particularly in Figures 2 and 5. Other than that the lowermost shelf is deeper than the shelf above it, the shelves are preferably alike and each may be formed from a sheet of suitable material, having a downturned rim 21 along the, preferably, nine edges forming the front and end of each shelf. The rim 21 is formed of a double thickness of the material comprising a shelf, by turning up the material, after the outer thickness of the rim is formed, as shown in Figure 4. The inner edges of each shelf are upturned, as at 22 and 23 in Figures 4 and 5, so that, a continuous upturned portion 22 extends across the rear of the shelf and an upturned portion 23 extends along the inner end edges of the shelf, where the latter extends around the ends of the frame members.

Preferably, the shelves 20 are mounted upon the frame members as follows:—Each shelf 20 is provided with two brackets 24 which are disposed adjacent the ends of the shelf and extend from front to rear. They are spaced apart a distance equal to the distance between the two leg portions 11 which will carry them. Each shelf 20 is first suitably attached to an upright or vertically extending wall portion 25, which may comprise a sheet of suitable material having a length about equal to the length of the rack frame and a height so that it may extend from directly below the top plate 15 to below the lowermost shelf 20. There are, of course, two of these wall portions 25, and it is preferred to weld the shelves 20 to the wall portions 25,—two to one of them and two to the other,—at their upturned portions 22. When so welded, the brackets are associated with the shelves and the wall portions 25 attached to the leg portions 11 by bolts and nuts 26 and 27 while

the inner edges 23 of the shelves 20 are secured directly to the leg portions 11, as by bolts and nuts 28 and 29, shown particularly in Figures 4 and 5.

By the construction just described, the shelf-carrying uprights or wall portions 25 are detachable from the frame at any time and are also readily attached thereto, so that a semi-knock-down structure is provided, yet one having none of the lack of sturdy characteristics of many knockdown and folding structures of this type, intended to support a relatively heavy load.

Where the uprights or wall portions 25 extend between the upper ends of the leg portions 11 and the downturned rim 16 of the top plate 15, bolts and nuts 30 and 31 may be employed, the shanks of the bolts 30 extending through the rim 16, wall portions 25 and leg portions 11, as shown particularly in Figure 3.

Spaced below the lowermost shelf 20 is a bottom plate 35, shown particularly in Figure 8. This bottom plate 35 may have a width and length greater than the width and length of the top plate 15 and shelves 20, and is adapted to extend wholly across the end of the frame. The leg portions 11 extend through suitable L-shaped slots 36, spaced inwardly of the edges of the bottom plate 35. A rim 37, preferably like those of the shelves 20 may be provided for the bottom plate 35, but this rim extends wholly around the bottom plate, as does the rim 16 of the top plate 15.

Supporting the bottom plate 35 and providing bracing and frame work for the rack, are a pair of cross members 38, shown particularly in Figures 5 to 8. Preferably, these cross members 38 are of angle iron with one outer face of each in contact with the bottom face of the bottom plate 35 and the other outer face of each in contact with the leg portions 11. These cross members 38 are perforated, as at 39, for receiving the shanks of bolts 40 for bolting the cross members 38 to the leg portions 11, and further perforated as at 41 for receiving the shanks of bolts 42 for bolting the cross members to braces 43 which may be of angle iron, welded or otherwise suitably secured to the leg portions 11 and extending upwardly therefrom to substantially the longitudinal medial line of the bottom plate 35, where they are bolted, as by the bolts 42 to the cross members 38.

It will be noted, particularly in Figure 6, that the bottom edges of the wall portions 25 abut the upper face of the bottom plate 35.

The bottom part of each leg portion 11, below the bottom plate 35, may be provided with a socket member 44, having a suitable downturned opening socket 45 to receive the shank of a castor 46, or the like, so that the assembly may be rolled about as required. There are, of course, four of such castors 46.

The top plate 15, wall portions 25, and a portion of the bottom plate 35 define an open ended compartment 48, with other portions of the bottom plate jutting out beyond the compartment at its opposite mouths. This compartment 48 is free of projections, as may be noted, and adapted to contain articles of some bulk and weight, such as oil or lubricant tanks or containers. Being open at its opposite ends, the containers may be placed within the compartment with their outlets arranged to face outwardly of the compartment, and the terraced shelves 20 and bottom plate 35 (where it projects outwardly of the wall portions 25) provide shelves for smaller lubricant containers, price and display cards, and the like.

By way of example, proportions for the novel

rack may be as follows:—Height substantially 33 inches, length at the top of about 24 inches, width at the top of about 14 inches, length of the bottom plate 35, substantially 29 inches and width of the same about 30 inches. The mouths of the compartment 48 may be substantially 12 inches by 25 inches, so that two 24-gallon lubricant containers, 11½ inches by 11½ inches by 23 inches may be housed therein. Where the term "angle iron" is employed, it should be understood that the material may be any suitable rigid material.

The wall portions 25 not only strengthen the frame but provide rear walls for the shelves 20 and bottom plate 35, and conceal the lubricant containers. They also hold down the bottom plate 35, as has been described.

As for the cross members 38, they carry the bottom plate 35 and also aid in bracing the frame of the rack.

Blows upon either the upper or lower surfaces of the shelves 20 or upon their downturned rims 21 will not be apt to cause the shelves to bend or buckle, because of the upturned portions 22 and 23 of the shelves and the double thickness of the rims 21 thereof.

Various changes 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 claims.

What is claimed is:

1. In a rack of the class described, a pair of spaced-apart frame members, each comprising a pair of leg portions and a bridge portion joining the upper ends of said leg portions; a top plate extending over each of said bridge portions and having a downturned rim extending over a section of said leg portions and bridge portions; means for securing said top plate to said frame members; a plurality of shelves extending outwardly beyond the vertical plane of said top plate; means for securing said shelves to said leg portions; a pair of horizontally-disposed cross members, one of each extending from one leg to the other leg of each of said pair of frame members and secured thereto; and a bottom plate spaced below said shelves and disposed upon said cross members.

2. In a rack of the class described, a pair of spaced-apart frame members, each comprising a pair of leg portions and a bridge portion joining the upper ends of the leg portions; a top plate extending over each of said bridge portions and having a downturned rim in contact with said leg and bridge portions; means for securing said top plate to said frame members; a plurality of shelves extending outwardly beyond the vertical plane of said top plate; means for securing said shelves to said leg portions; a pair of horizontally disposed cross members, one of each extending from one leg to the other of each of said pair of frame members and secured thereto; and a bottom plate spaced below said shelves and disposed upon said cross members, said bottom plate being provided with openings thru which said legs extend and said cross members being in contact with said leg portions directly below said openings.

3. In a rack of the class described, a pair of spaced-apart frame members, each comprising a pair of leg portions and a bridge portion joining the upper ends of said leg portions; a top plate extending over each of said bridge portions and having a downturned rim extending over a section of said leg portions and bridge portions;

means for securing said top plate to said frame members; a plurality of shelves extending outwardly beyond the vertical plane of said top plate; a bottom plate disposed below said shelves; and means for securing said shelves to said leg portions, including a wall portion extending downwardly from said top plate to said bottom plate and interposed between said leg portions and shelves.

downwardly from opposite sides of said top plate between the downturned rim thereof and said leg portions, and in abutment with the upper face of said bottom plate, said last named means also including screw threaded members extending through said wall portions, said leg portions and said downturned rim.

4. In a rack of the class described, a pair of spaced-apart frame members, each comprising a pair of leg portions and a bridge portion joining the upper ends of said leg portions; a top plate extending over each of said bridge portions and having a downturned rim extending over a section of said leg portions and bridge portions; means for securing said top plate to said frame members; a plurality of shelves extending outwardly beyond the vertical plane of said top plate; a bottom plate disposed below said shelves; and means for securing said shelves to said leg portions, including a wall portion extending downwardly from opposite sides of said top plate and in abutment with the upper face of said bottom plate, and said last named means also including a weld of said shelves to said wall portions and screw threaded members extending through said wall portions and leg portions.

6. In a dispensing and display rack of the class described, a pair of spaced-apart frame members, each comprising a pair of leg portions and a bridge portion joining the upper ends of the leg portions; a top plate disposed upon said bridge portions; means securing said top plate to said frame members; a pair of shelves extending outwardly beyond the vertical plane of said top plate; means for securing said shelves to said leg portions; a substantially horizontal bottom plate spaced below said shelves and extending beyond the vertical plane of the lowermost shelf; and means for both bracing said leg portions and supporting said bottom plate above the lower ends of said leg portions.

5. In a rack of the class described, a pair of spaced-apart frame members, each comprising a pair of leg portions and a bridge portion joining the upper ends of said leg portions; a top plate extending over each of said bridge portions and having a downturned rim extending over a section of said leg portions and bridge portions; means for securing said top plate to said frame members; a plurality of shelves extending outwardly beyond the vertical plane of said top plate; a bottom plate disposed below said shelves; and means for securing said shelves to said leg portions, including a wall portion extending

7. In a dispensing and display rack of the class described, a pair of spaced apart frame members each comprising a pair of leg portions and a bridge portion joining the upper ends of said leg portions; a top plate extending over each of said bridge portions; means for securing said top plate to said frame members; a bottom plate spaced below said top plate and extending from leg portion to leg portion and beyond the vertical plane of said top plate; means supporting said bottom plate in a substantially horizontal position above the lower extremities of said leg portions; a wall portion extending downwardly from said top plate to said bottom plate and secured to said leg portions; and terraced shelves secured to said wall portion and disposed above said bottom plate, said shelves extending outwardly beyond the vertical plane of said top plate.

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