July 12, 1966 I. TRAKTMAN 3,260,561

MOBILE DISPLAY RACK

Filed Feb. 10, 1964 2 Sheets-Sheet 1

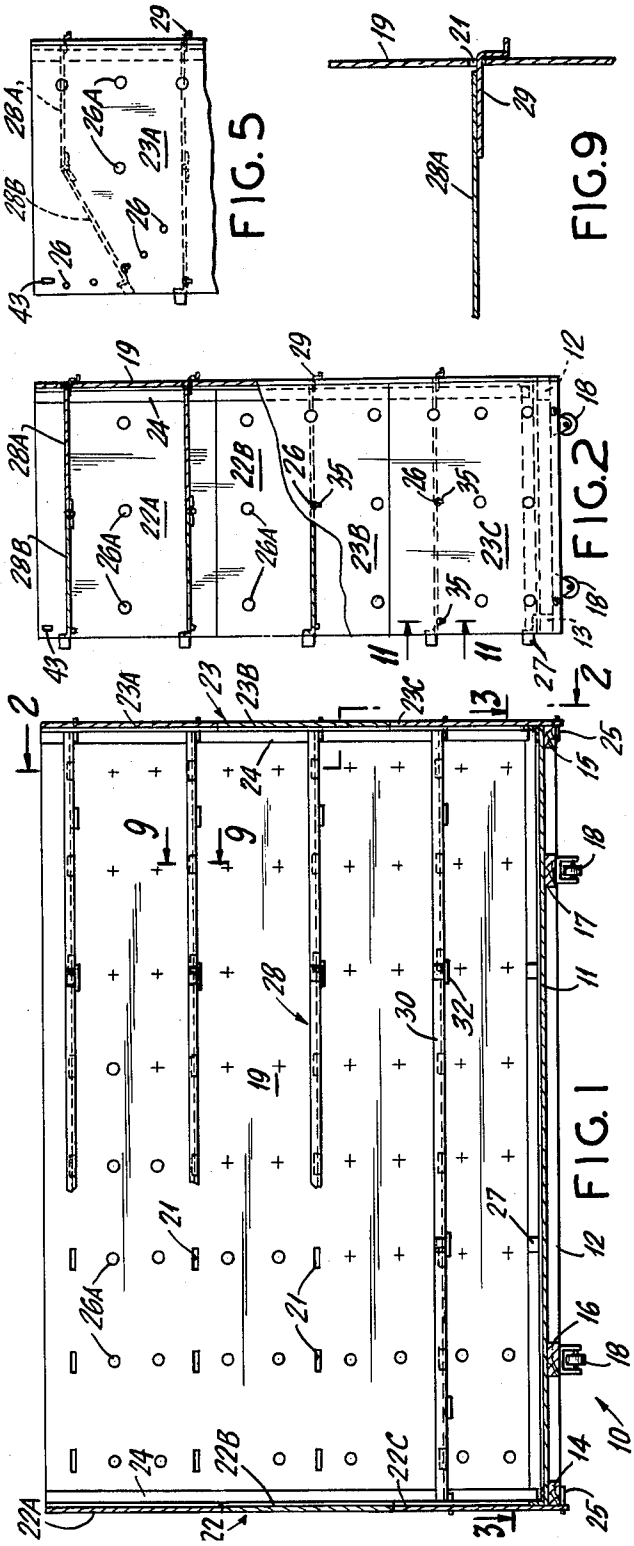


FIG. 1

FIG. 2

FIG. 5

FIG. 9

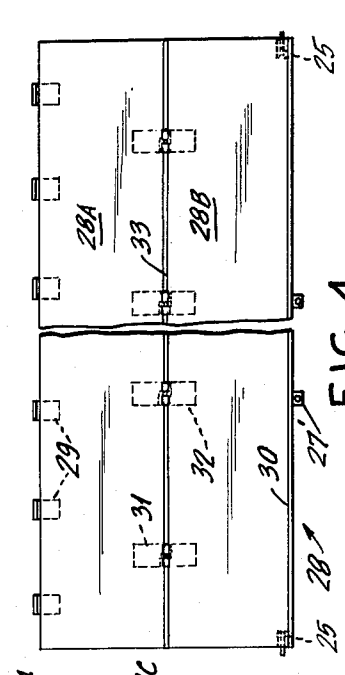


FIG. 4

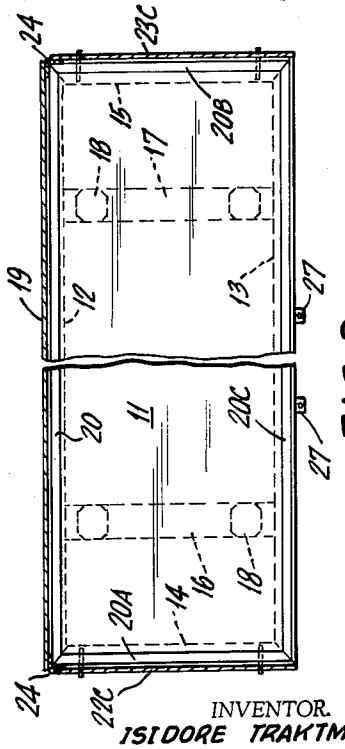


FIG. 3

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July 12, 1966 I. TRAKTMAN 3,260,561

MOBILE DISPLAY RACK

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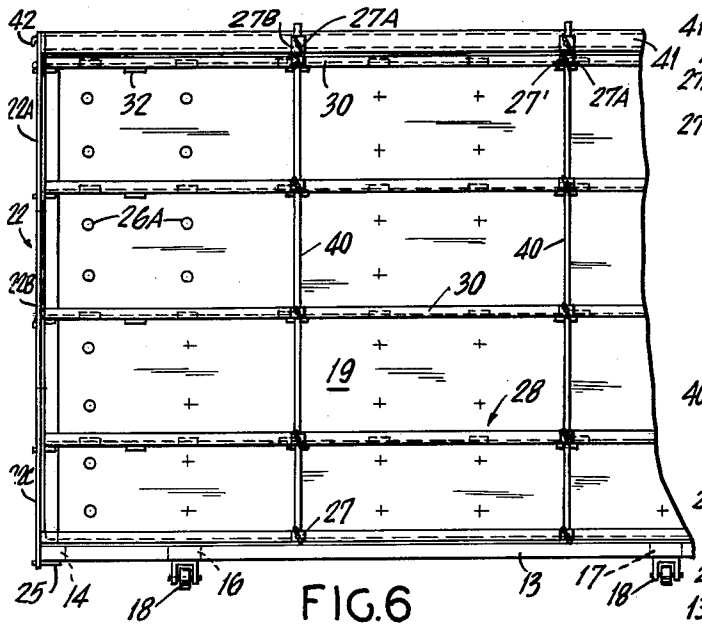


FIG. 6

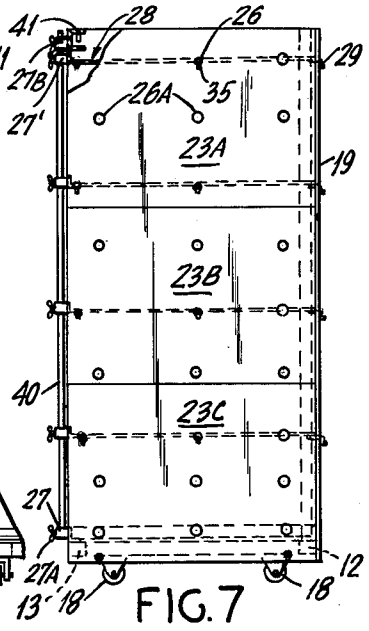


FIG. 7

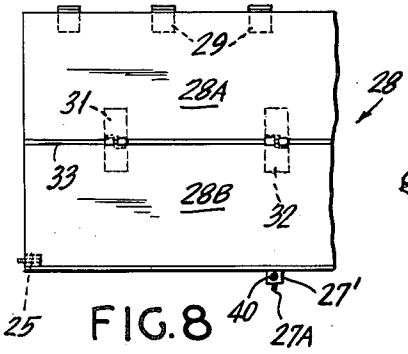


FIG. 8

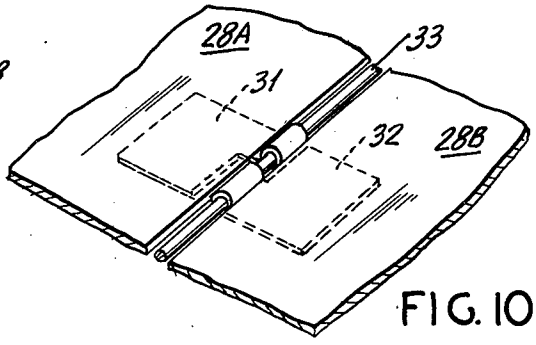


FIG. 10

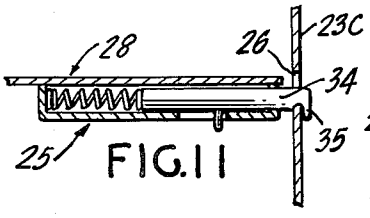


FIG. 11

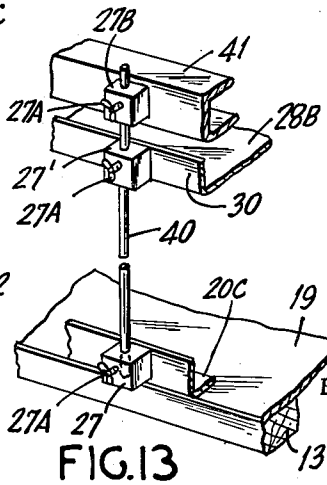


FIG. 13

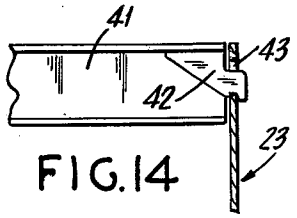


FIG. 14

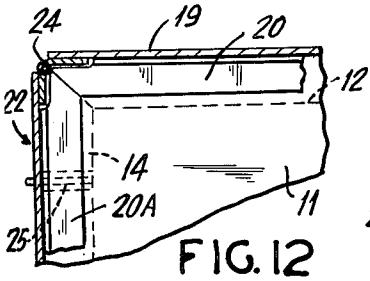


FIG. 12

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3,260,561

MOBILE DISPLAY RACK

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Filed Feb. 10, 1964, Ser. No. 343,643
6 Claims. (Cl. 312—262)

This invention relates to mobile display racks, and more particularly concerns racks for carrying and displaying fruits, vegetables and other consumer items.

Conventionally, fruits and vegetables, as well as other items sold in supermarkets and the like are transported to the retail establishment from the warehouse or other distribution point, in crates, large boxes or other suitable containers. Such containers on being brought into the retail establishment, are opened and their contents removed therefrom and transferred to the fixed racks of the establishment.

Obviously, this type of transfer of goods from the distribution point to the racks of the retail establishment, not only entails excessive handling and increased labor costs, but also may give rise to spoilage, breakage and other impairment of quality of the goods, as well as nonuniformity in the optimum racking and display of the goods to the detriment of merchandising operations.

Accordingly, an object of this invention is to provide an improved mobile display rack construction, which permits the preloading of the same with selected goods such as fruits, vegetables or other consumer items, at a warehouse or other central distribution point, whereby said racks are loaded in an optimum manner to minimize handling costs and to maximize efficiency in the display of the goods.

Such preloaded racks may then be transported to retail establishments by trucks or the like, where the racks are rolled directly into the establishment to selected floor locations where the displayed goods are immediately available for purchase, thereby eliminating the need for uncrating and rack loading operations at the retail establishment.

Another object of this invention is to provide an improved mobile rack for holding and displaying various goods, including fruits, vegetables or other consumer items, the racks being preloaded at a central distribution point and transported to retail points where the racks may be located where desired, shifted between positions, rolled into refrigerated areas when desired and otherwise making the spot location of the goods carried by the racks highly flexible.

Still another object of this invention is to provide an improved mobile display rack having a construction which facilitates the return of emptied racks to warehouse or other distribution centers for reloading with various goods.

A further object of this invention is to provide a rack construction of the character described which includes an adjustable shelf structure including removable shelves, thereby allowing for variations in the mode of display of selected goods thereon.

Still another object of this invention is to provide an improved mobile display rack construction, which lends itself to economical manufacture, ease in manipulation for loading the same with goods and the display thereof, and reducible in bulk when empty, for return for reloading.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

In the drawings, FIG. 1 is a front elevational view of a mobile display rack embodying the invention;

FIG. 2 is an end elevational view thereof;

FIG. 3 is a sectional view taken on the line **3—3** of FIG. 1;

FIG. 4 is a top plan view of a shelf assembly forming a part of the rack;

FIG. 5 is a partial side elevational view showing a modified adjustment feature of the rack;

FIG. 6 is a partial front elevational view of a modified form of the rack;

FIG. 7 is an end elevational view thereof;

FIG. 8 is a partial top plan view of the shelf assembly thereof;

FIG. 9 is a sectional view taken on the line **9—9** of FIG. 1;

FIG. 10 is a perspective view showing the hinging details of the shelf assembly;

FIG. 11 is a sectional view taken on the line **11—11** of FIG. 2;

FIG. 12 is a partial top plan view with parts in section, showing details of the base member of the rack; and

FIG. 13 is a partial perspective view showing details of the shelf support means of the rack shown in FIG. 6.

FIG. 14 is a partial front view showing the interconnection of a channel reinforcing member and an end wall of the rack.

Essentially the mobile display rack of the instant invention comprises a flat base member carrying rollers and having upstanding back and end wall members, together with shelf means hingedly and removably mounted on the back wall member and supported on the end wall members, whereby the shelf means may be preloaded with fruits, vegetables or other goods, transported to retail establishments and rolled into selected floor locations or shifted between locations. The racks when empty may then be partially collapsed to facilitate the transportation thereof back for reloading with merchandise at a warehouse or other distribution point.

Thus, as shown in FIGS. 1–4, a mobile display rack employing the invention is generally indicated at **10**. The same comprises a flat rectangular base member **11**, formed of a relatively light gauge metal sheet and ribbed to reinforce the same. A frame of wood or metal comprising longitudinally extending strips **12, 13** and transversely extending strips **14, 15** are secured to the marginal edges of base member **11** on the underside thereof. A pair of spaced transverse strips **16, 17** extending between longitudinal strips **12, 13** have swivel type roller assemblies **18** mounted thereon.

A rectangular back wall member **19** extends upwardly from the rear side edge of base member **11**, being secured thereto by an elongated member **20** of angle section. Member **19** is also formed of ribbed sheet metal and is provided with vertically spaced horizontal rows of openings **21** which may be of rectangular shape, for the purpose hereinafter appearing.

A pair of end wall members **22, 23**, also of ribbed sheet metal and horizontally split to provide sections **22A, 22B, 22C; 23A, 23B, 23C**, are hingedly connected along their rear vertical edges to the end edges of back wall member **19**, by hinges **24**. The bottom edges of end wall members **22, 23** abut angle members **20A, 20B** affixed to the opposite ends of base member **11**. Releasable lock pins of conventional design, indicated at **25**, detachably connect the forward bottom edge portions of end wall members **22, 23** to frame strips **14, 15**.

The end wall members **22, 23** are formed with vertically spaced, horizontal rows of openings **26**, for the purposes hereinafter appearing. An angle member **20C** is fixed to the front side edge of base member **11** and carries spaced footing blocks **27**, for the purpose later described.

A plurality of similar shelf assemblies **28** are hingedly mounted on back wall member **19** and detachably supported at their opposite ends on end wall members **22, 23**. Each shelf assembly **28** comprises a rear section **28A** provided with longitudinally spaced hooked, hinge elements **29** fixed along the rear side edge thereof, said

elements 29 being removably received in openings 21 in back wall member 19, thereby pivotally mounting shelf assemblies 28 on said back wall member 19.

Each shelf assembly 28 further includes a front section 28B having a flanged front edge 30 and being hingedly connected along its rear edge to the front edge of rear section 28A by hinge elements 31, 32 which are pivotally interconnected by a longitudinally extending hinge rod 33.

The shelf assemblies 28 are supported at their opposite ends by spring pressed lock pins 34 mounted on the underside of shelf sections 28A, 28B and having hooked end portions 35 which pass into openings 26 in end wall members 22, 23 and engage the bottom edge portions of said openings, FIG. 11. Thus, the shelf assemblies 28 are detachably connected at their ends to end wall members 22, 23.

End wall members 22, 23 may be provided with additional openings 26 located on an arc, FIG. 5, so that front shelf section 28B may be located in selected angular positions. Also the end walls 22, 23 as well as back wall 19 are provided with ventilating openings 26A.

Furthermore, one or more aligned pairs of the end wall sections 22A, 22B, 22C; 23A, 23B, 23C may be folded back on hinges 24 against back wall member 19 and the shelf assemblies 28 normally associated with such end wall sections, may be removed, thus increasing the flexibility of usage of rack 10.

It will be apparent that the mobile rack 10 with its shelf assemblies 28 set up and locked in place on end wall members 22, 23 may be preloaded with fruits, vegetables or other goods, in their original crates or other containers and in opened condition, at the warehouse or other distribution point. Such loaded racks may then be rolled into trucks or other delivery means for carriage to the various retail centers such as supermarkets or the like, where the loaded racks are rolled into selected floor positions.

It is understood that goods may also be suspended from suitable hooks, not shown, mounted on selected portions of back wall 19; appropriate shelf assemblies 28 being removed therefrom.

Such preloaded racks are immediately ready for display and sale of merchandise carried by the same. When the racks are empty, the lock pins 34 are manipulated to withdraw the hooked end portions 35 from openings 26 in end wall members 22, 23, thus allowing the shelf assemblies 28 to pivot downwardly in overlapping relation, close to back wall member 19. The end wall members 22, 23 are then released from base member 19 by manipulation of pins 25, allowing members 22, 23 to be swung back on hinges 24 against the rear of back wall member 19.

Thus, the partially collapsed racks 10 may be stacked together for convenient transportation back to the warehouse where the racks have their shelf assemblies and end wall members restored to normal condition, as previously described, to permit the same to be reloaded with various selected goods.

When the load carried by the shelf assemblies 28 is substantial, reinforcing may be provided in the form of rods 40 which are located vertically on the front edge portions of shelf assemblies 28 being received at the lower ends thereof in footing blocks 27 and fixed therein by a set screw 27A. The upper portions of rods 40 pass through blocks 27' fixed to the flange 30 on shelf sections 28B and fixed by set screws 27A.

Further reinforcement of the racks 10 may be provided by channel members 41 having hook members 42 at the opposite ends thereof, FIG. 14 whereby said channel members 41 may brace the end wall members 22, 23 at the top forward edges thereof, FIG. 13, the hook members 42 being received in openings 43 in members 22, 23 provided for the purpose. The upper ends of reinforcing rods 40 pass through block 27B fixed to channel member 41, and fixed therein by set screws 27A.

As various changes might be made in the embodiments of the invention herein described without departing from the spirit thereof, it is understood that all matter herein shown or disclosed shall be deemed illustrative and not by way of limitation except as set forth in the appended claims.

What is claimed is:

1. A mobile display rack comprising a rectangular shelf forming base member, roller means mounted on the underside of said base member, a back wall member upstanding from the rear side edge of said base member, a pair of end wall members hingedly connected along the rear vertical edges thereof to the opposite side edges of said back wall member, means for detachably connecting the bottom forward edge portions of said end wall members to said base member, shelf means extending between said end wall members, the front longitudinal edge of said shelf means extending toward the front vertical edges of said end wall members, means for hingedly and removably connecting the rear side edge of said shelf means to said back wall member, cooperating means on the end portions of said shelf means and said end wall members for releasably connecting said shelf means to said end wall members.

2. A rack as in claim 1 wherein said shelf means comprises longitudinally split shelf sections, means hingedly connecting said shelf sections along adjacent longitudinal edges thereof, and said cooperating means comprises retractable pin means on the opposite end portions of each of said shelf sections and openings in said end wall members for receiving said pin means in the projected position thereof, selected openings in said end wall members being disposed on an arc whereby the pin means on the forward shelf section may be received in certain of said selected openings to dispose said forward shelf section in selected angular positions relative to said rear shelf section with the forward longitudinal edge of said forward shelf section being located inwardly of the front vertical edges of said end wall members.

3. A rack as in claim 1 and further including means for reinforcing said shelf means against increased shelf loads, said reinforcing means including vertically disposed rod means located at the forward edge portions of said shelf means and intermediate the ends thereof, and means on the forward edge portions of said base member and said shelf means for releasably connecting said rod means thereto.

4. A rack as in claim 3 and further including an elongated reinforcing member for bracing said end wall members, and means on the opposite ends of said elongated reinforcing member for detachable connection to the forwardly disposed top corner portion of said end wall members.

5. A mobile display rack comprising a rectangular shelf forming base member, a back wall upstanding from the rear edge of said base member, end wall members, hinge means connecting the rear vertical edges of said end wall members to the vertical end edges of said back wall, means for releasably connecting lower end portions of said hinged end wall members to end edge portions of said base member, a plurality of vertically spaced shelf means located above said base member and extending at the opposite ends thereof to said end wall members, the forward longitudinal edge of said shelf means being located inwardly of the front vertical edges of said end wall members, means for hingedly and removably connecting the rear edges of said shelf means to said back wall, and means for releasably connecting the opposite ends of said shelf means to said end wall members.

6. A rack as in claim 5, wherein said end wall members comprise horizontally split sections, each end wall section being foldable toward said back wall.

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5

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