

Nov. 17, 1959

W. P. MILNER

2,913,128

KNOCK-DOWN DISPLAY RACK

Filed March 27, 1957

FIG. 1

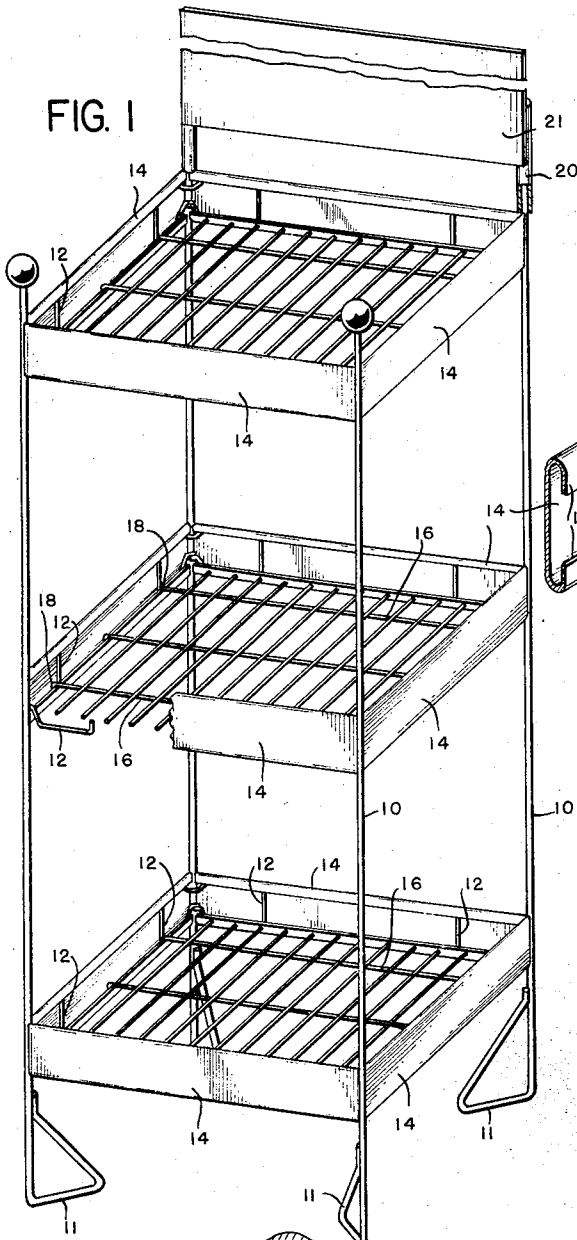


FIG. 2

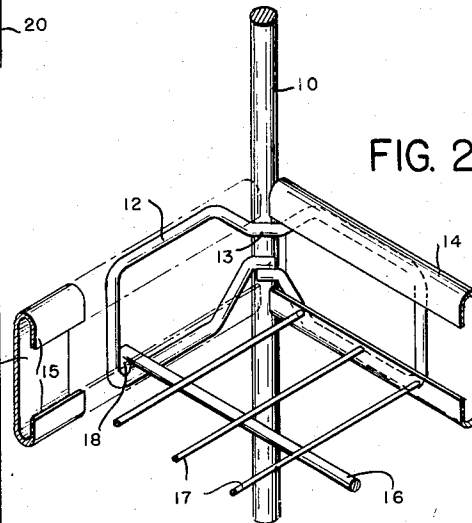


FIG. 3

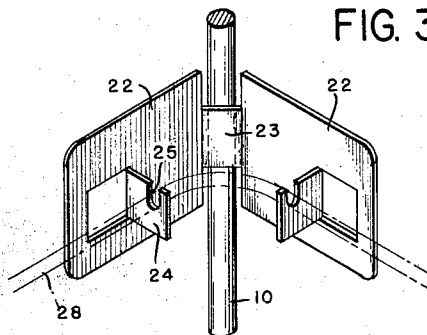


FIG. 5

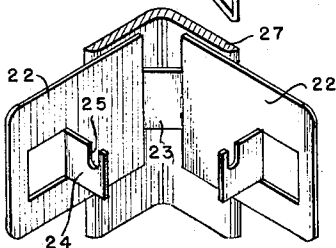


FIG. 4

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KNOCK-DOWN DISPLAY RACK

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Application March 27, 1957, Serial No. 648,942

7 Claims. (Cl. 211-148)

This invention relates to the advertising and selling of merchandise, to the nature and character of such advertising and selling, and to the equipment employed in order to obtain the most effective display and with consummation of the sales of products resulting therefrom.

The invention relates more particularly to equipment employed in the containing and display of merchandise and designed to attract attention, to stimulate interest and to impress the public sufficient to cause the purchase of a product in large volume.

In the sale of goods, wares and merchandise, attention has been given to the manner of display in order to draw attention and promote sales. This has resulted in the creation of display stands racks and other equipment of various kinds for advantageously displaying the merchandise in a manner intended to attract and retain the attention and to cause the purchase of the merchandise. Display stands or racks have been used for bottled beverages and the like and many have been made of wire or rod stock.

Display stands or racks have been subject to criticism for various reasons including the fact that they were unattractive, unsightly, cumbersome, complicated, expensive, and contained exposed portions likely to cause damage to the wares and injury to the person. Also they were limited in use, difficult to assemble, bulky to ship and consequently took a higher shipping rate and they were relatively weak and permitted breakage when subjected to a heavy load.

It is an object of the invention to overcome the difficulties and objections enumerated, and to provide a simple and inexpensive stand or rack of pleasing appearance, of few and inexpensive parts, accessible from all four sides, which will attract attention and when filled will appear to offer the merchandise to the public as well as a stand or rack which can be easily assembled or taken down without the use of nuts, bolts, screws or other fasteners, and without special tools or skill, and one in which the parts are interchangeable, none being solely either for right or left hand use.

Another object of the invention is to provide a rack of wire or rod stock which can be shipped compactly at the lowest possible freight rate in its class, and which consists primarily of identical multiples of each of three parts, thereby simplifying and reducing the time ease and expense of manufacture and assembly.

A further and important object of the invention is to provide a stand or rack having multiple identical corner posts, side bars and shelves, which is without exposed wire ends or projections and otherwise is of maximum safety construction, which can be readily assembled and the parts interlocked without screws or fasteners and with the parts providing mutual support one for the other and so that they form a solid support for goods to be held.

Other objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawing, wherein:

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Fig. 1 is a perspective illustrating one application of the invention;

Fig. 2, an enlarged fragmentary perspective of one of the corners;

5 Figs. 3 and 5, similar views of different types of corners.

Fig. 4, a plane view of Fig. 3, showing a reinforcing bracket utilized therewith.

Briefly stated, the invention comprises a stand or rack composed of corner posts having brackets or supports fixed thereto for the mounting of side bars having parallel edges bent over to provide opposed channels, and a series of shelves or trays. Each of the posts with its brackets or supports is identical with every other, and the same is also true of the side bars and shelves.

15 In assembling, the corner posts are connected by the side bars which telescope over such brackets so that the smooth faces of the side bars face outwardly and channels are at the top and bottom on the interior of such side bars. The shelves are applied and have right angular depending portions or hooks which extend into the lower channels at opposite sides of the rack and between the innermost portions of each pair of brackets on the posts at spaced corners of the rack to lock the parts in assembled relation against separation and making it possible to set up and take down the stand or rack without fasteners, special tools, or skill.

20 With continued reference to the drawing the knock-down stand or rack of the present invention is of multiple shelf or tier construction and comprises corner posts 10 having feet 11. Each corner post is provided along its length with a series of spaced supporting brackets which may be of wire or rod stock or other construction and each having a pair of rectangular loop portions 12 and with connecting reduced necks 13 by which each is welded or otherwise fixed to the post on which it is mounted.

25 The posts 10 are joined together by means of side bars 14 each formed from a strip of sheet metal with the opposed edges of the strip bent laterally and downwardly toward each other to provide channels 15, the spacing of the interior of the channels being such as to snugly receive the bracket loops 12. The posts with the supporting loops 12 will be connected by four side bars 14 at each level, three levels or tiers being illustrated, although 30 two or more may be used, as desired. When the parts are assembled the posts 10 will have their feet 11 disposed midway between the supporting loops 12 of each bracket so that such feet will be along substantially diagonal lines bisecting the angles at the corners of the structure.

35 Shelves are provided each having three main supports 16 and a series, for example, thirteen rods or bars 17 at right angles thereto with the parts welded together. The three main supports 16 have ends or extremities turned downwardly at right angles to provide hooks 18.

40 When the parts are assembled the posts with the brackets thereon having the rectangular loop portions 12 will be connected by the side bars 14 which receive such loops in the channels 15. The shelves will be supported by the side bars 14 and the hook ends 18 of the shelves will be located in the lower channel 15 of the side bars, thus holding the side bars against separation. The depending hook forming ends 18 of the two outermost side bars 16 also will be disposed within the lower portion of the loops 12 so that such loops and the posts on which 45 they are supported will be maintained against separation in a similar manner.

50 Thus the stand or rack may be assembled or taken down merely by the placing of the parts in their cooperative relation in which position maximum safety is provided since there are no wire or rod ends exposed which could cause injury to the person or damage to property. Further, due to the fact that the multiple parts of a kind 55

are all identical, there can be no mixup in assembling.

In the fabrication of the stand or rack of the present invention the parts may be finished in any desired manner; for example they may be plated or painted, the latter permitting variation in color and decorative effect. Also, the upper ends of the posts may have finishing knobs 19 applied thereto, or, if desired, extension sleeves 20 may be applied to two of them and a sign 21 supported thereby.

Instead of supporting loops 12, other types of supporting structure may be employed, as, for example, sheet metal supporting members 22 having reduced center portions 23 and struck out portions 24 with receiving notches 25 in which a shelf 28 may be received. The frame of the shelf will fit into the notches 25 and hold the posts in assembled relation. Additionally, it will be understood that the size of the bars will be dependent upon the use to which they are to be subjected. If desired, an angular reinforcing bracket 26 may be added for strength as shown in Fig. 4.

Instead of round corner posts, posts of other configuration may be employed, such as for example a post 27 of angle iron and the brackets 26 and 27 may be welded or otherwise secured to the supporting brackets 22.

It will be apparent from the foregoing that a practical stand or rack is provided which has been engineered against the public by the absence of rough projections, wire ends, or the like, which might cause damage to property or injury to the person; that the rack of the present invention involves the fewest number of parts, namely posts connected side bars and supporting shelves and when assembled the shelves lock the parts in assembled relation so that a sturdy structure is provided and that, due to the fact that the posts are identical, the connecting side bars are identical and the shelves are identical, there can be no mixup or difficulty in assembling.

It will be obvious to those skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the invention is not limited by that which is illustrated in the drawing and described in the specification, but only as indicated in the accompanying claims.

What is claimed is:

1. A knock down display rack comprising identical corner posts of rod stock having lower end foot forming portions bent inwardly at right angles and angularly upward into contact with and secured to said posts, a series of identical wire shelves supported at different levels between said posts, pairs of opposed identical side bars located between said posts and supporting said shelves, said side bars having upper and lower edges bent reversely upon themselves to provide upper and lower channels, identical brackets fixed to said posts and having diverging portions detachably supporting said side bars, said shelves having connecting end portions at opposite sides and engageable in the lower channels of an opposed pair of said side bars and extending through opposed diverging portions of the brackets supporting said opposed pair of side bars for locking the parts in assembled relation.

2. A knock down display rack comprising corner posts of rod stock having lower end foot forming portions bent inwardly at right angles and angularly upward into contact with and secured to said posts, a series of wire shelves supported at different levels between said posts, pairs of opposed identical side bars located between said posts and supporting said shelves, said side bars having upper and lower edges bent reversely upon themselves to provide upper and lower channels, brackets fixed to said posts and having diverging portions detachably supporting said side bars, said shelves having connecting end portions at opposite sides and engageable in the lower channels of an opposed pair of said side bars and ex-

tending through opposed diverging portions of the brackets supporting said opposed pair of side bars for locking the parts in assembled relation.

3. A knock down display rack comprising identical corner posts of rod stock having lower end foot forming portions, a series of identical wire shelves supported at different levels between said posts, pairs of opposed identical side bars located between said posts and supporting said shelves, said side bars having upper and lower edges bent reversely upon themselves to provide upper and lower channels, identical brackets fixed to said posts and having diverging portions detachably supporting said side bars, said shelves having connecting end portions at opposite sides and engageable in the lower channels of an opposed pair of said side bars and extending through opposed diverging portions brackets supporting said opposed pair of side bars for locking the parts in assembled relation.

4. A knock down display rack comprising identical corner posts of rod stock having lower end foot forming portions bent inwardly at right angles and angularly upward into contact with and secured to said posts, a series of identical wire shelves supported at different levels between said posts, pairs of opposed identical side bars located between said posts and supporting said shelves, said side bars having upper and lower channels, identical brackets fixed to said posts and having diverging portions detachably supporting said side bars, said shelves having connecting end portions at opposite sides and engageable in the lower channels of an opposed pair of said side bars and extending through opposed diverging portions of the brackets supporting said opposed pair of side bars for locking the parts in assembled relation.

5. A display rack comprising corner posts, spaced diverging ended brackets attached to said corner posts, pairs of opposite side bar members having opposed channels removably receiving an end of one of said brackets therein, and shelves having hook portions detachably engaging a pair of said opposite cross members and preventing separation thereof said shelves including portions detachably engaging opposed diverging ends of said brackets supporting the pair of said opposite side bars and holding them against separation, whereby the parts may be held in assembled relation without auxiliary fasteners.

6. A display rack comprising corner posts, spaced diverging ended brackets attached to said corner posts, pairs of opposite side bar members having opposed channels removably receiving an end of one of said brackets therein, and shelves having hook portions detachably engaging a pair of said opposite cross members and preventing separation thereof said shelves including portions detachably engaging opposed diverging ends of said brackets supporting the pair of said opposite side bars and holding them against separation, whereby the parts may be held in assembled relation without auxiliary fasteners, said corner posts, brackets, side bars and shelves being identical.

7. A knock down display rack comprising corner posts integral with supporting members including portions diverging laterally from said posts, opposed side bars each removably receiving one of said diverging portions of said supporting members within each end thereof, and vertically spaced shelves supported by said supporting members, said shelves having connecting portions detachably engaging said supporting members holding the side bars in assembled relation with said posts in the absence of auxiliary fasteners.

References Cited in the file of this patent

UNITED STATES PATENTS

1,386,878	Lamp	Aug. 9, 1921
2,315,595	Chappory	Apr. 6, 1943