June 19, 1934. H. V. BURT 1,963,544

DISPLAY RACK

Filed May 9, 1931 3 Sheets-Sheet 1

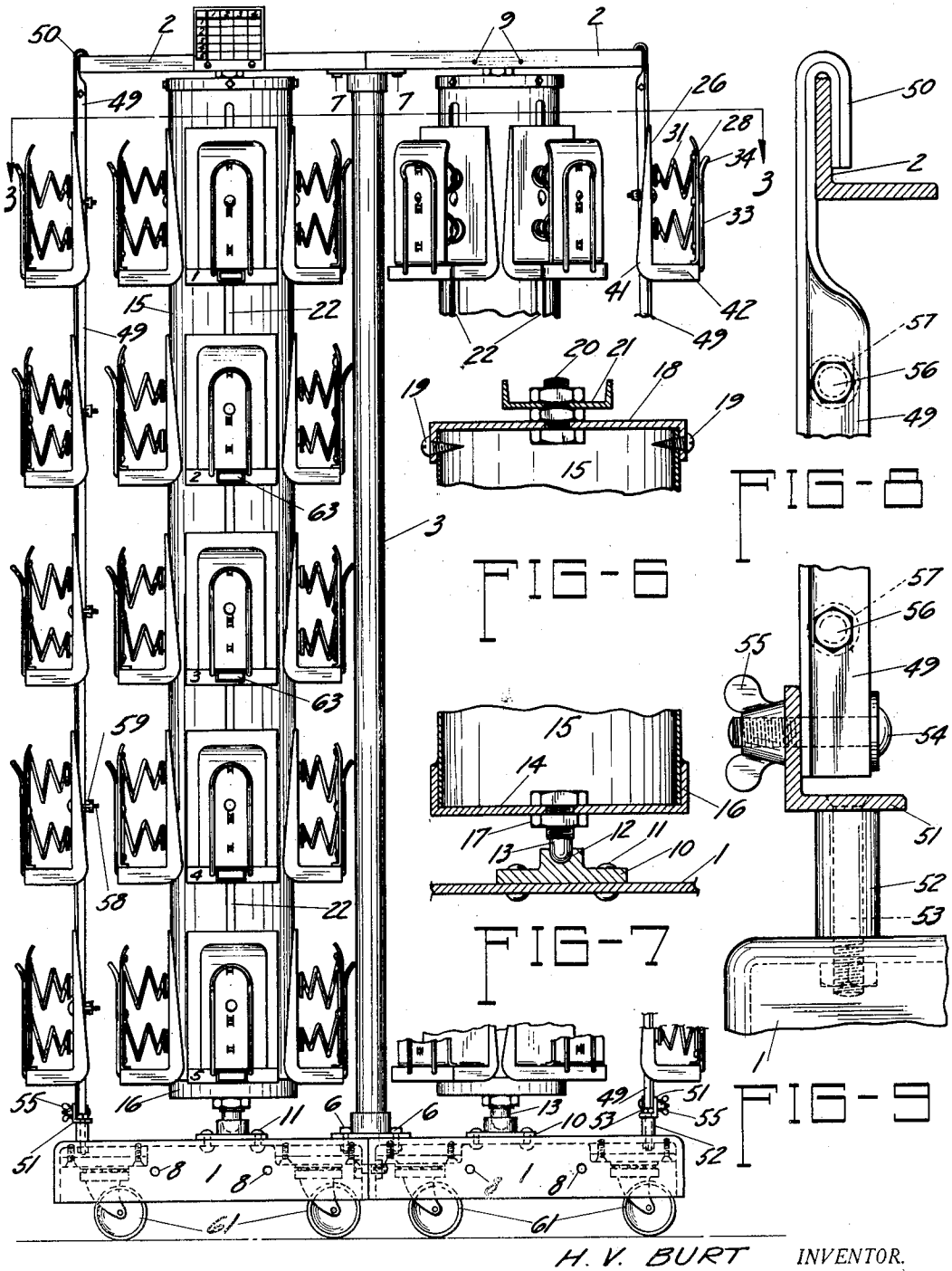

FIG-1

FIG-8

FIG-6

FIG-7

FIG-9

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DISPLAY RACK

Filed May 9, 1931 3 Sheets-Sheet 2

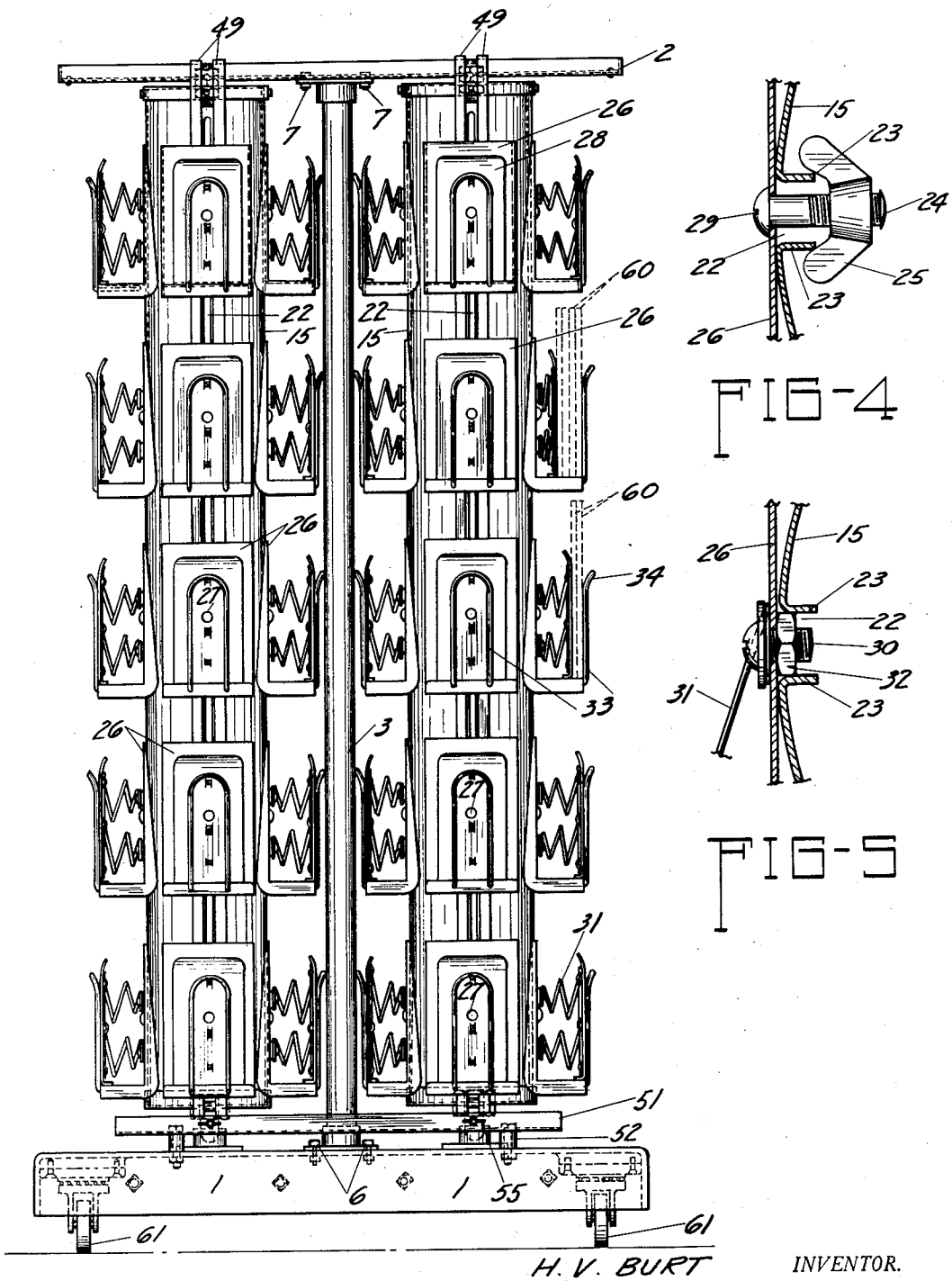

FIG-2

FIG-4

FIG-5

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DISPLAY RACK

Filed May 9, 1931 3 Sheets-Sheet 3

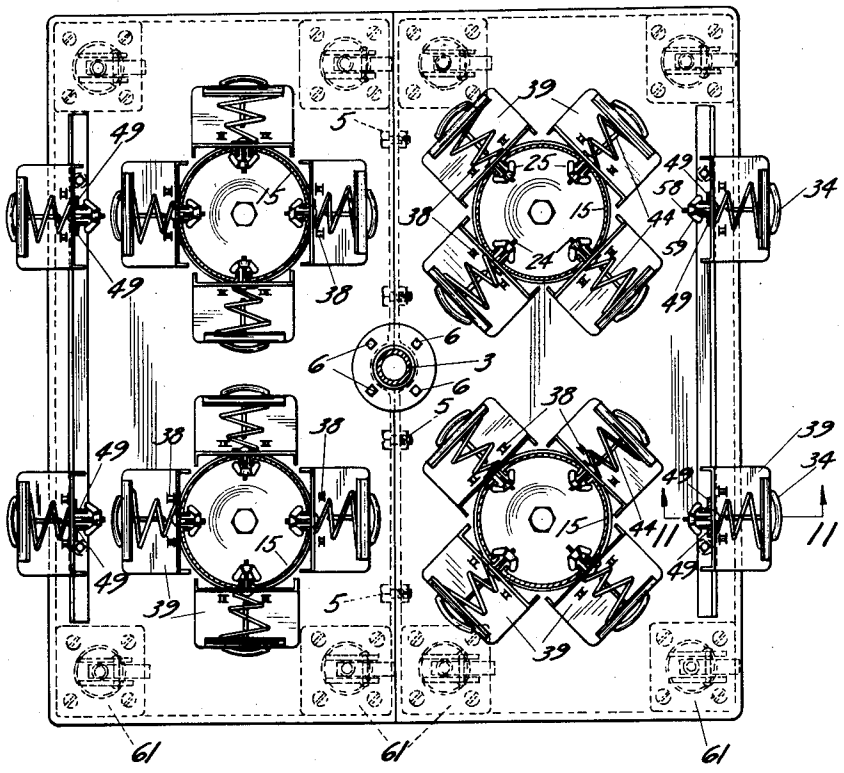

FIG-3

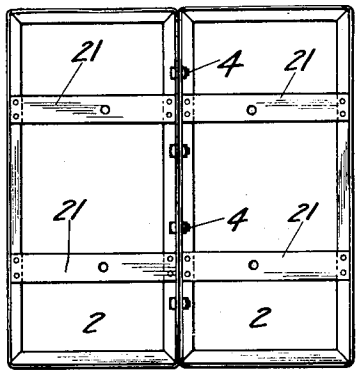

FIG-10

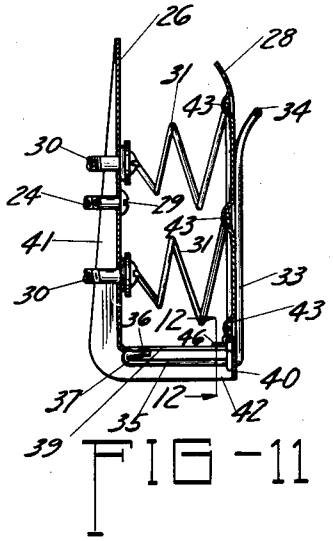

FIG-11

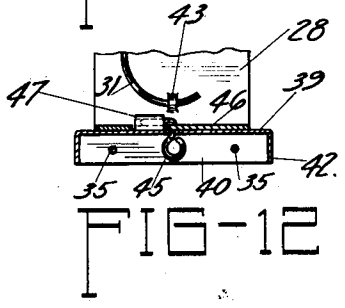

FIG-12

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Patented June 19, 1934 1,963,544

UNITED STATES PATENT OFFICE

1,963,544

DISPLAY RACK

Hugh V. Burt, Rock Island, Ill.

Application May 9, 1931, Serial No. 536,139

6 Claims. (Cl. 211—53)

The present invention pertains to a rack for displaying merchandise, more especially books, magazines, and the like. While this structure is primarily intended for the display of such merchandise for sale, it will be understood that it could also be used in libraries in place of the fixed racks which are now quite commonly used. This construction may have various other uses than those referred to above and it will therefore be understood that no limitation as to use is intended by references herein made to any particular use.

Among the objects of this invention are to provide a display rack which is capable of displaying a maximum amount of merchandise in a minimum amount of space; to provide a rack of the character indicated which may be used so as to be exposed upon all sides or may be quickly converted so as to be used against a wall, as a wall rack; to provide a rack of the character indicated which is capable of displaying magazines, books, and the like, and is also capable of displaying newspapers and similar articles to advantage; and such further objects, advantages and capabilities as will hereafter appear and as are inherent in the construction disclosed herein. My invention further resides in the combination, construction and arrangement of parts illustrated in the accompanying drawings and, while I have shown therein what is now considered the preferred embodiment of this invention, I desire the same to be understood as illustrative only and not to be interpreted in a limiting sense.

In the drawings annexed hereto and forming a part hereof,

Fig. 1 is a broken elevation of a construction embodying my present invention;

Fig. 2 is an elevation at a right angle to the construction shown in Fig. 1;

Fig. 3 is a horizontal section through the structure shown in Figs. 1 and 2;

Fig. 4 is a broken horizontal section through one side of one of the rack supporting tubular members;

Fig. 5 is a similar section taken a little above or a little below the plane of the section of Fig. 4;

Fig. 6 is a vertical section through the upper portion of one of the tubular rack supporting elements;

Fig. 7 is a corresponding section through the lower end thereof;

Fig. 8 is an enlarged vertical section through a portion of the top of the rack;

Fig. 9 is a corresponding section through the lower part of the rack;

Fig. 10 is a plan view looking down on the top of the rack;

Fig. 11 is a vertical section taken substantially along the plane indicated by the line 11—11, Fig. 3;

Fig. 12 is a fragmentary vertical section taken substantially along the plane indicated by the line 12—12, Fig. 11.

While there are many racks for displaying magazines and similar articles, it is not believed that there is any having the capability of displaying so many in such a small space. This capability comes about from the arrangement of my new construction which I will now describe in greater detail in connection with the accompanying drawings.

The present construction comprises a pair of flanged bottom members 1, a pair of angle iron top members 2 and a supporting post 3 connecting the top and bottom members. As indicated most clearly in Figs. 10 and 3, the top members 2 are secured together by means of bolts 4 and the bottom members by means of bolts 5. In this way there is formed a square rack which can be taken apart by taking out the bolts 4 and 5 holding the top and bottom elements together and the bolts 6 and 7 securing these elements to the post 3. The lower frame members 1 are provided with openings 8 and the upper members 2 with openings 9 whereby the frame sections may be bolted together to construct an elongated, narrow rack which may be placed against a wall or other flat surface, where plenty of wall space is available and the amount of floor space is limited. Of course it will be understood that with this construction the post 3 is omitted.

Secured to the bottom members 1 are socket members 10 which are fastened in place in any suitable manner as by means of rivets 11, through other modes of fastening same in place will be obvious. Sockets 12 are provided in these members 10 for the reception of the rounded lower ends of the bearing members 13 which pass through the axial center, or approximately therethrough, of the lower ends 14 of cylinders 15. The ends 14 are illustrated as being each provided with an upstanding circular flange 16 inside of which the lower end of the cylindrical member 15 is placed and to which it is secured. Nuts 17 serve to clamp the bearing members 13 in place in the ends 14 of these cylinders. A similar top 18 is provided for each cylinder 15 and is secured in place on the upper end of the cylinder in any suitable manner. In Fig. 6 are shown sheet metal screws 19 by means of which these parts

are attached. A bolt or similar member 20 extends through the upper end 18 and is secured thereto in any desired way. This member also passes through the channel 21 extending across the upper frame members 2 and secured thereto as indicated in Fig. 10. These parts are not secured together so tightly but what the cylinders are readily rotatable, the same being laterally supported by the bearing members 13 and the stay members 20.

As will be apparent from the drawings, longitudinal slots 22 are formed in the cylindrical walls of the rotatable supporting elements, the edge of the metal being bent inwardly as indicated at 23 to form flanges along the slots 22 in the cylinders 15. The slots 22 and flanges 23 are very useful in supporting the individual rack elements on the cylinders.

As illustrated in Fig. 4, a bolt 24 has a wingnut 25 mounted thereon in reverse position, with the wings spanning the slot and bridging the flanges 23. This bolt 24 passes through the normally fixed but vertically adjustable back member 26 of the individual rack elements shown in detail longitudinal section in Fig. 11. Perforations 27 are made through the movable follower plates 28 so that a screw driver may be passed therethrough to engage the slot 29 in the bolt 24. By turning this bolt, the grip of the wings of the wingnut 25 on the flanges 23 may be increased or decreased, thus making it possible to slide the individual rack members vertically on the cylinders, so as to adjust their respective heights. Bolts 30 secure one end of each spring 31 to the back plate 26, as illustrated in Fig. 11, and are fastened in place by means of nuts 32, as illustrated in Fig. 5. These nuts 32 just fit inside of the slots 22 and therefore serve as guides for the individual rack elements as they are moved up and down on the cylinders 15. These nuts 32 serve the dual purpose of fastening the springs to the back plate 26 and of preventing rotational movement of these back plates about the bolts 24. The other ends of the springs 31 are fastened to the movable pressure plate 28 as illustrated in Figs. 11 and 12. A stiff wire is bent into a vertical loop 33 having its upper end 34 turned outwardly and having the two extremities thereof turned backwardly at a right angle to the upright part of the loop. These extremities 35 pass beneath the bottom 39 of the individual supporting members and have their extreme ends turned backwardly upon themselves as indicated at 36, being engaged with the eyes 37 punched downwardly from the bottom of the supporting member. As illustrated in Fig. 3, openings 38 are formed in the bottoms 39 of these supporting members, when the eyes 37 are formed. Downwardly extending flanges 40 at the forward edges of the bottoms 39 are perforated for the reception of the arms 35 of the loop 33. These flanges therefore serve to support the loop with considerable rigidity and, in combination with hooks 36 and the eyes 37, keep the loops in proper position. The lateral edges of the back plate 26 are bent backwardly to form tapering flanges 41 and bent downwardly to form the flanges 42. These serve to make the structure more rigid than it would otherwise be, as well as rendering it less liable to injure a person's hands when filling the rack with magazines, etc., or removing same therefrom. Eyes 43 are punched backwardly from the metal of the follower plate 28, as indicated in Figs. 1, 2 and 11, for the reception of the ends of the follower springs 31 which press the plates 28 forwardly to hold the magazines in upright position.

Slots 44 are formed in the bottoms 39 of the individual racks for the reception of guide members 45 which extend through the backwardly turned flanges 46 of the follower plates 28. These guide members are turned laterally and extend into loops or eyes 47 forming parts of plates 28 and flanges 46. It will thus be apparent that these guide members 45 cooperate with the slots 44 in preventing the plates 28 from swinging laterally when magazines are being inserted or withdrawn from the racks.

Reference will now be made more particularly to Figs. 1, 2, 3, 8 and 9 for the description of the auxiliary, non-rotatable racks located at opposite sides of the construction. Angle irons 49, each having a hook 50 formed at its upper end, are arranged in pairs, as illustrated in Fig. 3, and are suspended from the upper frame members 2, as shown in Figs. 1 and 8. Angle iron bars 51 are spaced from the frame members 1 by means of spacers 52 but are secured thereto by means of bolts 53. The lower ends of the angle irons 49 are secured to the angle irons 51 by means of bolts 54 provided with suitable securing means 55, illustrated as being wingnuts. These bars can be made adjustable laterally by having holes spaced along the angle irons 51 and the magazine holders may thus be spaced for holding small or medium sized magazines or books or may be brought close enough together so that large magazines or newspapers will extend across between two holders and thus be held by the two operating in conjunction. These angle irons 49 may be held in proper relation by means of bolts 56 and spacers surrounding the bolts and located between the angle irons, as indicated in Figs. 8 and 9 by the dotted circles 57. Bolts 58 and wingnuts 59 hold these individual racks in vertically adjusted positions in the same manner that the bolts 24 and wingnuts 25 hold the individual racks and the cylinders 15. Magazines or the like are denoted in Figure 2 by the numeral 60.

Casters 61 are provided so as to enable the rack to be readily moved from one place to another, four casters being provided for each half of the rack so that, in event the sections are placed end to end and fastened together by means of bolts passed through the openings 8, there will still be properly arranged casters so that the construction may be moved from place to place without danger of tipping over. In the left half of Fig. 1, it will be noted that the individual racks are numbered from one to five, beginning at the top and that upon the top frame member 2 there is fastened a plate carrying a card having correspondingly numbered horizontal spaces and having the numerals 1, 2, 3 and 4 across the top thereof to denote the particular individual rack around the periphery of the cylinder 15. In the blank spaces on this card may be filled in the names of the magazines which will be found in the particular racks below the chart. In connection with each individual rack there is mounted upon the base thereof a label holder which carries the name of the magazine which is supposed to be in that particular rack. This label holder is designated in Fig. 1 by the numeral 63 but is not shown in any of the other figures, it being understood that it is optional whether this is provided or not, though it is believed advisable to use the same.

In this specification and the appended claims,

the term "merchandise" is used in a broad sense and is intended to cover magazines, books, package goods, and other articles being displayed, whether for sale or not. It is of course understood that the specific description of structure set forth above may be departed from without departing from the spirit of my invention as set forth in this specification and the appended claims.

Having now described my invention, I claim:

1. A display unit for a display rack of the character indicated comprising an elongated substantially cylindrical member having bearing elements at the two ends of its axis to support the same in a frame, said substantially cylindrical member having longitudinal slots arranged around the periphery thereof and extending substantially from one end to the other, said slots having flanges formed along their edges, said flanges being turned inwardly, into the hollow of said member, said substantially cylindrical member having holder units mounted thereon by means of bolts passing through a part of the holder unit, said bolts having wingnuts thereon with the wings turned toward to the bolt heads to engage the flanges along the longitudinal slots of the cylindrical member.

2. In a display rack, a merchandise holder having integral back and bottom parts provided with downwardly and backwardly extending flanges, a front member for the holder unit comprising a wire bent into general U-shape, with the ends of the arms of the U bent at a right angle to the body thereof and passing through a downwardly extending flange of the holder to be attached to the back part of said holder, a follower member mounted between the back and front parts of the holder member, said follower member being spring actuated to be movable backward and forward between the back and front of said holder member, and resilient means between said back and said follower member to force the latter away from the former and toward the U-shaped member.

3. In a display rack, a display unit comprising an elongated sheet metal member having an axis to support the same in a frame, said axis having bearing elements at its two ends, said sheet metal member having longitudinal slots arranged around the periphery thereof and extending approximately from one end to the other, the edges of the metal adjacent the slots being turned inwardly to form inwardly projecting flanges, said metal member having holder units mounted thereon by means of securing means passing through a part of the holder unit and the slots of the metal member, said securing means comprising means engaging said flanges, the same being arranged to be drawn into holding engagement with said flanges to fasten the holder units in adjusted positions along said metal member.

4. In a display rack, a merchandise holder having integral back and bottom parts, the bottom part being provided with a downwardly extending projection adjacent its forward edge, a front member for the holder unit comprising an upwardly extending member having a rearwardly extending arm or arms extending through the downwardly extending projection to be attached to the back part of said holder, a follower member mounted on the bottom part and slidable backwardly and forwardly thereon, and resilient means pressing against the rear side of said follower member to force the latter toward the front member.

5. A display rack for the purpose indicated comprising top and bottom members, a substantially central support connecting said top and bottom members and supporting the top member at a fixed distance above the bottom member, angle-shaped members arranged in pairs and connecting the top and bottom members at their lateral edges, the angle-shaped members being spaced slightly from each other to permit insertion of supporting means for merchandise holders, and holder units mounted on said pairs of angle-shaped members and having holding and guiding means connected thereto and slidable between said angle-shaped members, said holding means having clamping means connected thereto and connecting the holder units to the angle members in adjustable relation.

6. A display rack of the nature indicated comprising top and bottom members connected upon opposite sides by pairs of supporting bars arranged in slightly spaced relation, merchandise supporting racks slidably mounted on said pairs of bars and rigidly held thereon but capable of being moved vertically along said pairs of bars, said merchandise supporting racks having means extending through the space between the bars of said pairs to maintain the racks in upright position, to permit them to slide when desired and to hold them in adjusted position when adjustment is completed, and rotatable merchandise supporting means within the figure defined by said pairs of bars.

HUGH V. BURT.