April 6, 1948. J. S. LESKO 2,439,049

DISPLAY RACK

Filed Aug. 4, 1944

Fig. 2

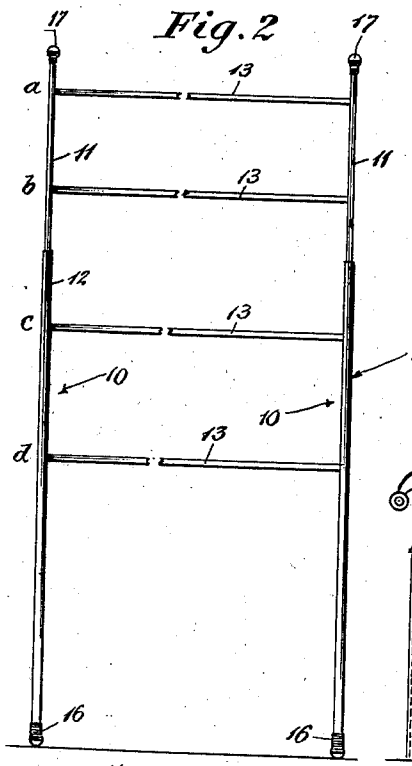


Fig. 1

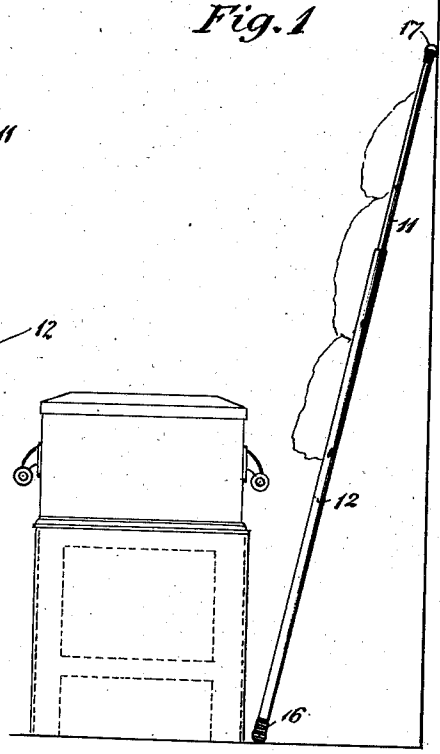


Fig. 3

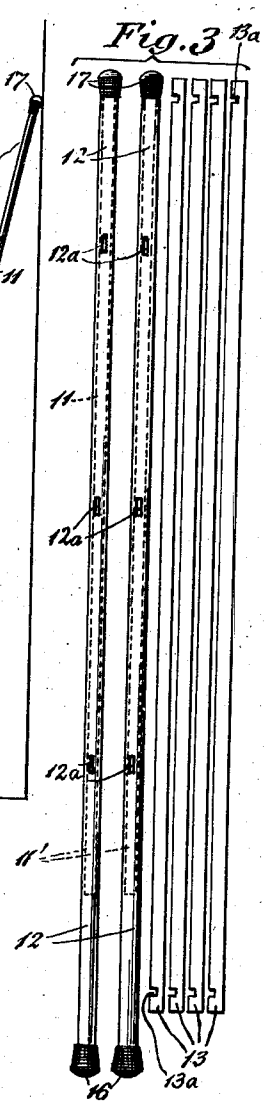


Fig. 4

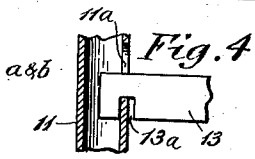


Fig. 5

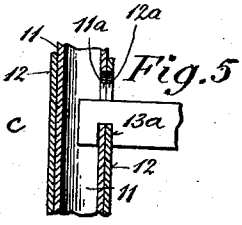


Fig. 6

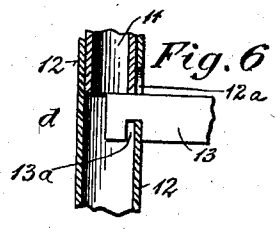


Fig. 7

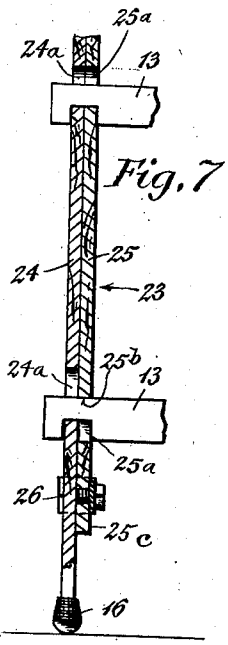


Fig. 8

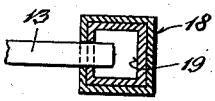
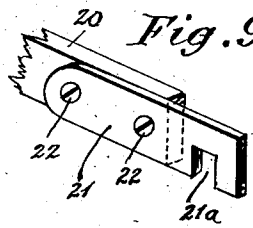


Fig. 9



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DISPLAY RACK

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19 Claims. (Cl. 211—182)

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This invention relates to article-supporting racks, and more particularly to a display rack such as may be used for holding floral decorations in churches, funeral parlors, etc.

An object of the invention is to provide an extremely simple collapsible rack of very few easily-fabricated parts, which is economical to manufacture and which may be quickly and conveniently assembled and dismantled, yet which is strong and rigid for the purpose intended, and when dismantled occupies but little space.

This is accomplished by an organization of substantially rigid structural parts which may be made from standard or stock supplies and which are shaped to interfit with each other without requiring additional fastenings and in a novel manner such that a sturdy racking and supporting structure is obtained.

In the form of the invention at present preferred the rack is made without a supporting base and is intended to be supported by being leaned against a wall at any desired or practical angle.

In one exemplification of the invention, a rack is provided having a pair of extendible uprights each consisting of two telescoping metal tubular members, and having a plurality of cross-bars formed of metal strip, connected to the members. The members are apertured at longitudinally spaced intervals to receive the ends of the cross-bars, which are notched, the apertures being located so that the lowermost cross-bar may be held by the weight of the upper tubular members in hooked engagement with the lower tubular members against accidental dislodgement therefrom, and so that another cross-bar may be removably hooked to both members to form a connection which braces the rack against sidesway. Other cross-bars may be hooked in other apertured portions of the members and some of these bars may serve as tie rods which also support floral pieces and the like, while others in addition to these function to further brace the rack against sidesway.

The hook-like connections between the vertical tubular members and the cross-bars permit quick and convenient assembling and dismantling of the rack without the necessity of using small additional parts such as screws and the like which may become lost or stripped, yet these connections combine to provide a strong and sturdy structure rigid for the purpose intended.

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In another form of the invention all the structural members may be of flat non-tubular stock, of material such as wood, in which case several rigidly fastened fittings are provided to furnish the organization with the necessary rigidity at vital points, while still retaining the simplified assembly, and the other advantages provided by the invention.

Other features and advantages will hereinafter appear.

In the accompanying drawings—

Figure 1 is a side elevation of an assembled rack exemplifying the invention, supported against a wall, as in a funeral parlor.

Fig. 2 is a front elevation of the rack of Fig. 1.

Fig. 3 is a view of the rack disassembled.

Fig. 4 is a fragmentary vertical section taken at the points *a* or *b* of Fig. 2.

Fig. 5 is a fragmentary vertical section taken at the point *c* of Fig. 2.

Fig. 6 is a fragmentary vertical section taken at the point *d* of Fig. 2.

Fig. 7 is a fragmentary longitudinal sectional view of a modified form of upright for the rack.

Fig. 8 is a transverse sectional view of another modified form of upright, and

Fig. 9 is a fragmentary perspective view of a modified form of cross-bar.

The display rack of Figs. 1 and 2 comprises a pair of uprights 10, which may be of steel tubing, each consisting of a tubular cylindrical upper structural member 11 and a similarly shaped lower structural member 12 telescopically engaging each other. The upper members 11 are slidable in the members 12 so that the uprights are extendible to different heights.

According to this invention the members 11 and 12 are provided with predeterminately located apertures, and hooked cross-bars, which may be of structural steel strip, are provided for connecting the members at the apertures in such a manner that the rack may be quickly and conveniently assembled or dismantled without extra parts, and so that when assembled, and leaning against a wall, for instance, it will be strong and sturdy for supporting decorations such as floral pieces and the like, also to the extent of being

movable from one place to another without danger of collapse.

Accordingly, as shown in Figs. 3, 5 and 6, the lower members 12 of the uprights are provided with elongate apertures 12a in their walls, preferably uniformly spaced longitudinally, and a plurality of cross-bars 13 are provided, the ends of the bars being of a size and shape enabling them to fit into the apertures 12a and having notches 13a forming hooks. By this construction the cross-bars 13 may be hooked into the lower members 12 of the uprights, as shown in Figs. 2, 5 and 6, to connect the latter together in their assembled positions. As shown in Figs. 2 and 4, the upper members 11 of the uprights are also provided with apertures, designated 11a, for receiving other cross-bars 13. However, the apertures 11a which are in the lower portions of the members 11 have definite predetermined positions with respect to the apertures 12a located in the upper portions of the members 12. Referring to Fig. 5, an aperture 11a is provided in the lower portion of one of the members 11 in such a location that it aligns with that aperture 12a of the enclosing member 12 which is located immediately above the lowermost cross-bar 13 when the lower end of the member 11 is in position to rest on the end portion of this cross-bar, as shown in Fig. 6. Both uprights 10 are constructed in this manner. By this arrangement, referring to Figs. 2 and 5, the second lowest cross-bar 13 may securely hook into both the members 11 and 12, and by virtue of the close clearances provided, may prevent sideway of the rack. Yet the bar 13 may be easily removed at any time by merely lifting it at both ends, and shifting it one way or the other to move one end first out of the aligned apertures 11a and 12a. As shown in Fig. 4, the cross-bars 13 connecting together solely the upper members 11 may be also conveniently removed in the same manner. Since, however, the weight of the members 11 are carried by the ends of the lowermost cross-bar 13, the latter is to this extent locked in its hooked position against accidental removal. By this construction there is avoided the use of small parts such as clamping screws and the like, which may become lost, or stripped after prolonged use, yet the assembled structure is sturdy and rigid for the purpose intended.

Referring again to Fig. 2, only two cross-bars 13 are shown connected solely with the upper members 11 of the uprights. However, by locating the cross-bars in other apertures the device may be assembled so that three cross-bars connect solely with the members 11 and only one cross-bar connects with the members 12, in which event the rack would be extended to a higher position, or the rack may be assembled in a lower position wherein one cross-bar may connect solely with the members 11, and three cross-bars connect with the members 12. In either case, the connection of the lowermost cross-bar 13 will be as illustrated in Fig. 6, wherein the members 11 rest on the end portions of the cross-bar to hold these in place, and the connections, if any, of the higher cross-bars to the members 12 will be as shown in Fig. 5 wherein the apertures 11a and 12a of the respective members are aligned.

A convenient way of assembling the rack is to insert the lowermost cross-bar 13 in the lower members 12, insert the uppermost cross-bar 13 in the upper members 11, and then bring the members 12 and 11 together until the lower end of the latter members rest on the lowermost cross-bar 13. The holes 11a and 12a will now be in alignment to receive the next lowest cross-bar 13, which may be inserted. Finally, the next highest cross-bar 13 may be attached to the members 11.

Preferably, the lower ends of the members 12 are provided with feet 16 which may be of rubber or other suitable material and the upper ends of the members 11 provided with ornamental knobs 17 which may be of metal.

In a modification of the invention, shown in Fig. 8, the telescopic members of the uprights may be of square cross-section, the lower member 18 being larger to receive the smaller upper member 19. The members 18 and 19 may be formed of sheet metal with a welded dressed seam, or may be drawn in tubular form. The advantage of this construction is that if the members 18 and 19 are initially telescoped with their apertured walls adjacent each other, the apertures intended to align with each other to receive the ends of the next lowest cross-bar will be caused to align or register automatically when the lower ends of the inner members rest on the lowermost cross-bar, since the inner members cannot turn with respect to the outer members.

Another modification of the invention is shown in Fig. 9, wherein the cross-member 20 may be made of a material such as wood, and provided with hooks 21 of metal. These hooks may be attached to the ends of the bars 20 by screws 22, and may be formed of metal plates having notches 21a, the plates being of a size and shape to fit into the apertures of the upright members.

Another modification of the invention is shown in Fig. 7, which illustrates an upright 23 comprising a lower member 24 and an upper member 25, each of rectangular section, the members being made of wood or other similar material. In this form of the invention the upright members 24 and 25 are provided with apertures 24a and 25a respectively which pass entirely through the members, the apertures being spaced so that the lowermost cross-bar 13 is engaged by the upper wall 25b of the aperture 25a when the upper apertures 24a and 25a are in alignment. Thus the end portion of the cross-bar 13 supports the weight of the upper member 25 and is locked thereby in the position shown.

The lower end portion 25c of the member 25 is provided with a strap clamp 26 which may embrace the member 24 to prevent lateral separation of the members while at the same time permitting longitudinal adjustment.

By using the construction of Figs. 7 and 9, a rack may be made in accordance with the invention using all wooden structural members, as may be readily understood.

When the cross-bars are made of wood as in the form of the invention illustrated in Fig. 9 or of other nonrusting material, the rack may be used as a drying rack for clothes, etc. Being collapsible it may thus be advantageously used in small apartments or where space is limited.

Variations and modifications may be made within the scope of this invention and portions of the improvements may be used without others.

I claim:

1. A collapsible display rack consisting of a pair of vertical end members comprising ver-

tically adjustable sections disposed in overlapped relation and movable relatively to one another to various adjusted positions and a plurality of cross members each having at each end disconnectable interlocking connections directly with the end members and constituting means for securing the end members together and in adjusted position and also supports for articles to be displayed, the lower ends of said vertical members constituting feet upon which the rack may be supported in an inclined position and the upper ends of the vertical members constituting abutments for engagement with a wall against which the rack is inclined, said feet and abutments constituting the means whereby the rack is supported.

2. A collapsible rack consisting of a pair of tubular vertical end members comprising vertically adjustable sections disposed in overlapped relation and movable relatively to one another to various adjusted positions and a plurality of article-supporting cross members, the sections of said end members having spaced apertures for removably and interlockingly receiving hooked ends on said cross members to secure the sections in adjusted position and the end members together, the lower ends of said vertical members constituting feet upon which the rack may be supported for inclining movement and the upper ends of the vertical members constituting abutments for engagement with a wall against which the rack is inclined, said feet and abutments constituting the sole means whereby the rack is supported.

3. A collapsible vertical rack having a pair of elongate vertical upper members and a pair of elongate vertical lower members respectively slidable on each other, said members having overlapping portions and means for preventing lateral separation of said portions, the members of one pair having apertures intermediate their ends; a crossbar having hooks at its ends extending into said apertures and hooking on the said one pair of members; and a second crossbar connected to the other pair of members, portions of said other pair, by virtue of the weight of one pair of members, engaging the hooks of the first-mentioned crossbar under pressure to maintain same in hooked position against accidental dislodgement.

4. A collapsible vertical display rack having a pair of uprights each comprising upper and lower relatively slidable elongate members having overlapping portions and means for preventing lateral separation of said portions, the lower members each having a pair of apertures longitudinally spaced from each other; a crossbar having hooks at its ends extending into the lower apertures of each lower member, and hooking on the latter; and a second crossbar having hooked ends extending into the upper apertures of the lower members, said upper members resting at their lower ends on the hooks of the first-mentioned crossbar to maintain same in position against accidental dislodgement, and said upper members having apertures aligned with the upper apertures of the lower member so that the ends of the second-mentioned crossbar may hook into the upper and lower members simultaneously.

5. A collapsible vertical display rack having a pair of uprights each comprising upper and lower relatively slidable elongate members having overlapping portions and means for preventing lateral separation of said portions; apertures in the lower members located intermediate the ends thereof; a crossbar having hooks at its ends extending into said apertures and hooking on the

lower members; and a second crossbar connected to the uprights, said upper members having portions which rest, by virtue of the weight of the members, on the hooks of the first-mentioned crossbar to maintain same in position against accidental dislodgement.

6. A collapsible display rack having a pair of uprights, each comprising a pair of telescoping members, the outer members having apertures in their walls intermediate their ends; a crossbar having hooks at its ends extending into said apertures and hooking on said outer members; and a second crossbar connected to the uprights, said inner telescoping members resting at their lower ends on the hooks of the first-mentioned crossbar to maintain same in position against accidental dislodgement.

7. A collapsible display rack having a pair of uprights; a second pair of uprights respectively telescoping said first pair, the uprights of one pair having apertures in their walls intermediate their ends; a crossbar having hooks at its ends extending into said apertures and hooking on the uprights having same, said other pair of uprights at their ends engaging the hooks of the crossbar under pressure maintained by the weight of one of said pairs to maintain the crossbar in position against accidental dislodgement; and a second crossbar demountably carried by the uprights.

8. A collapsible display rack having a pair of uprights; a second pair of uprights respectively telescoping into said first pair, the uprights of one pair each having an aperture intermediate its ends; a crossbar having hooks at its ends extending into said apertures and hooking on the uprights having same, said other pair of uprights having end portions engaging the hooks of the crossbar under pressure maintained by the weight of one of said pairs to maintain the crossbar in position against accidental dislodgement; and a second crossbar demountably carried by the uprights.

9. A collapsible vertical display rack having a pair of uprights each comprising upper and lower telescoping members, the lower members each having a pair of apertures longitudinally spaced from each other; a crossbar having hooks at its ends extending into the lower apertures of each lower member and hooking on the latter; and a second crossbar having hooked ends extending into the upper apertures of the lower members, said upper members resting at their lower ends on the hooks of the first-mentioned crossbar to maintain same in position against accidental dislodgement, and said upper members having apertures aligned with the upper apertures of the lower members so that the ends of the second-mentioned crossbar may hook onto the upper and lower members simultaneously.

10. The invention as defined in claim 9, in which the upper members each having an aperture located above the telescoped portions thereof, and in which there is a third crossbar having hooked ends extending into said apertures and hooking on said members.

11. A collapsible vertical display rack having a pair of tubular uprights each comprising upper and lower telescoping members having non-circular cross-section to prevent relative turning movement, the lower members each having a pair of apertures in one wall longitudinally spaced from each other; a crossbar having hooks at its ends extending into the lower apertures of each lower member and hooking on the said wall of

the latter; and a second crossbar having hooked ends extending into the upper apertures of the lower members, said upper members resting at their lower ends on the hooks of the first-mentioned crossbar to maintain same in position against accidental dislodgement, and said upper members having apertures in one wall aligned with the upper apertures of the lower members so that the ends of the second-mentioned crossbar may hook onto the said walls of the upper and lower members simultaneously, the shape of the members providing for convenient registration of the said aligned apertures if the members are caused to telescope initially in correct rotative relation during assembly of the rack.

12. A collapsible vertical display rack having a pair of tubular uprights of square cross-section, each comprising upper and lower telescoping members, the lower members each having a pair of apertures in one wall longitudinally spaced from each other; a crossbar having hooks at its ends extending into the lower apertures of each lower member and hooking on the said wall of the latter; and a second crossbar having hooked ends extending into the upper apertures of the lower members, said upper members resting at their lower ends on the hooks of the first-mentioned crossbar to maintain same in position against accidental dislodgement, and said upper members having apertures in one wall aligned with the upper apertures of the lower members so that the ends of the second-mentioned crossbar may hook onto the said walls of the upper and lower members simultaneously, the square cross-section of the uprights providing for convenient registration of the said aligned apertures if the members are caused to telescope initially in correct rotative relation.

13. A collapsible vertical display rack having a pair of uprights each comprising upper and lower telescoping members, the lower members each having a pair of apertures longitudinally spaced from each other; a crossbar having hooks at its ends extending into the lower apertures of each lower member and hooking on the latter; a second crossbar having hooked ends extending into the upper apertures of the lower members, said upper members resting at their lower ends on the hooks of the first-mentioned crossbar to maintain same in position against accidental dislodgement, and said upper members having apertures aligned with the upper apertures of the lower members so that the ends of the second-mentioned crossbar may hook onto the upper and lower members simultaneously; a third crossbar; and means for demountably connecting the third crossbar to the upper members to hold the latter in fixed predetermined relative positions whereby during assembly of the rack the said third crossbar may position the apertures of said members for alignment with the corresponding apertures of the lower members.

14. A collapsible display rack having a pair of tubular uprights of square cross-section; a second pair of tubular uprights of square cross-section respectively telescoping said first pair, the uprights of one pair each having an aperture in one wall intermediate its ends; a crossbar having hooks at its ends extending into said apertures and hooking around the said walls, said other pair of uprights each having a wall engaging a hook of the crossbar under pressure maintained by the weight of one of said pairs to maintain the crossbar in position against accidental dislodgement, and an aperture in said wall removed from the said one pair of uprights; and a second crossbar having hooked ends carried in the apertures of the said other pair of uprights.

15. A collapsible vertical display rack having a pair of uprights each comprising upper and lower relatively slidable elongate members having overlapping portions and means for preventing lateral separation of said portions, the lower members each having a pair of apertures longitudinally spaced from each other; a crossbar having hooks at its ends, each end extending into a corresponding aperture of the lower members and hooking on the latter; and a second crossbar having hooked ends extending into the remaining apertures of the lower members, said upper members having portions resting on the hooks of the first-mentioned crossbar to maintain same in position against accidental dislodgement, and said upper members having apertures adjacent those through which the hooked ends of the second-mentioned crossbar extend for receiving said hooked ends.

16. A collapsible vertical display rack having a pair of upper vertical flat wooden strips and a pair of lower vertical flat wooden strips respectively slidable on each other, said strips having overlapping portions; straps carried by the overlapping portions of one pair for slidably engaging the overlapping portions of the other pair to prevent lateral separation of said portions, the strips of one pair having apertures intermediate their ends; a crossbar having hooks at its ends extending into said apertures and hooking on the said one pair of strips; and a second crossbar connected to the other pair of strips, portions of said other pair by virtue of the weight of one pair of strips, engaging the hooks of the first-mentioned crossbar under pressure to maintain same in hooked position against accidental dislodgement.

17. A collapsible vertical display rack having a pair of upper vertical flat strips and a pair of lower vertical flat strips respectively slidable on each other, said strips having overlapping portions and guide means associated therewith for preventing lateral separation of said portions, the strips of one pair having apertures intermediate their ends; a crossbar having hooks at its ends extending into said apertures and hooking on the said one pair of strips; and a second crossbar connected to the other pair of strips, portions of said other pair by virtue of the weight of one pair of strips, engaging the hooks of the first-mentioned crossbar under pressure to maintain same in hooked position against accidental dislodgement.

18. A collapsible vertical display rack having a pair of uprights each comprising upper and lower relatively slidable elongate members having overlapping portions and means for preventing lateral separation of said portions, the overlapping portions of the lower members each having a pair of apertures longitudinally spaced from each other; a crossbar having hooks at its ends extending into the lower apertures of the lower members respectively and hooking on same; and a second crossbar having hooked ends extending into the remaining apertures of the lower members, said upper members in their overlapping portions having apertures aligned with said remaining apertures of the lower members and receiving the ends of the second-mentioned crossbar, and having apertures adjacent the lower apertures of the lower members, receiving the ends of the first-mentioned crossbar, the latter supporting the weight of the upper members and being thereby prevented from unhooking.

19. The invention as defined in claim 3, in which the crossbars comprise wooden strips having metal plates attached to their ends, said plates having notches adapting them for use as hooks.

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