July 14, 1953 A. VANDERVELD 2,645,444

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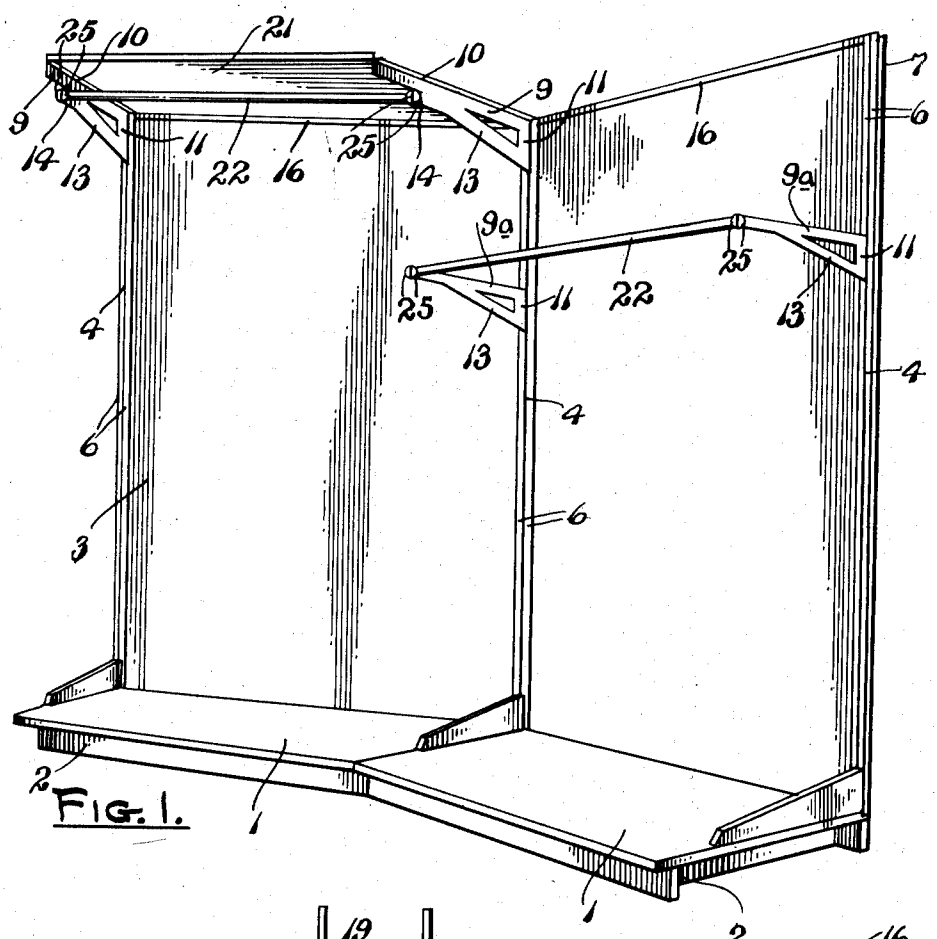


FIG. 1.

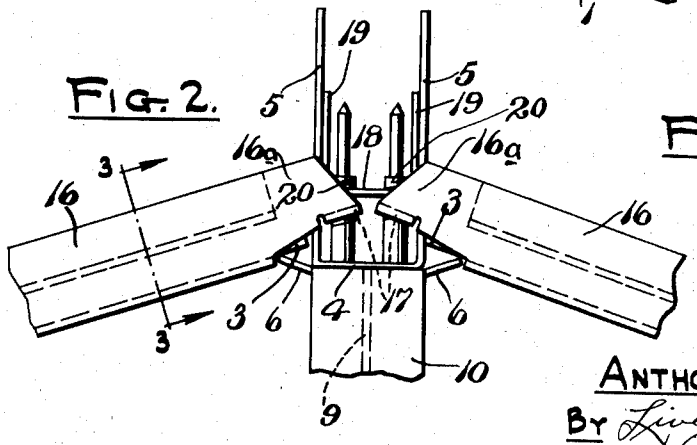


FIG. 2.

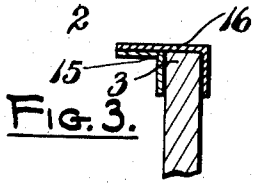


FIG. 3.

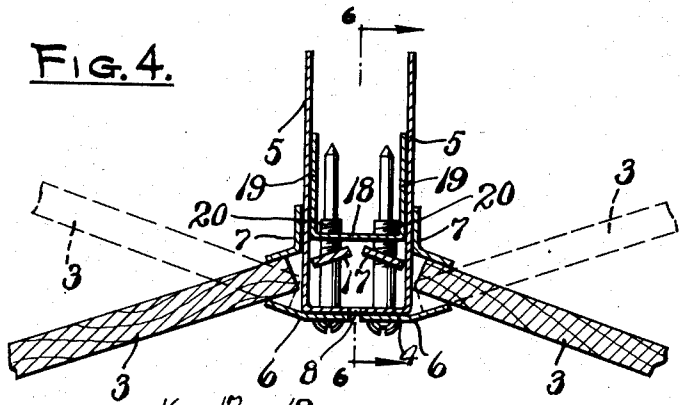
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FIG. 4.



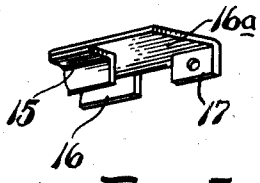


FIG. 5.

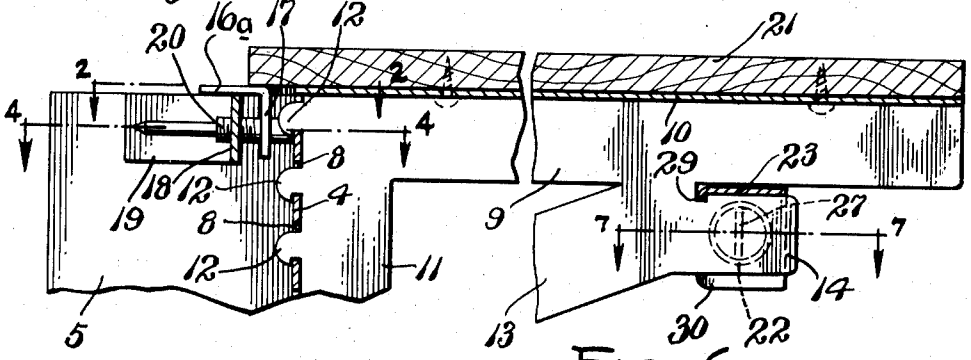


FIG. 6.

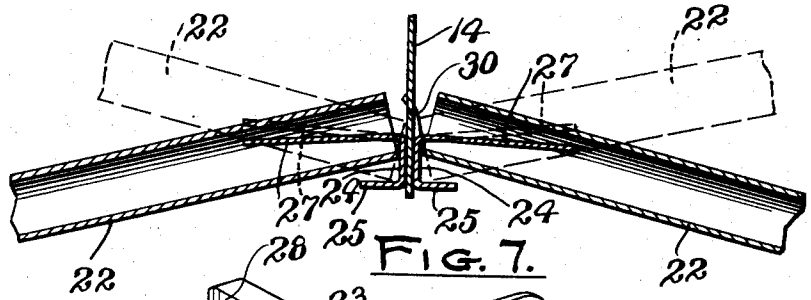


FIG. 7.

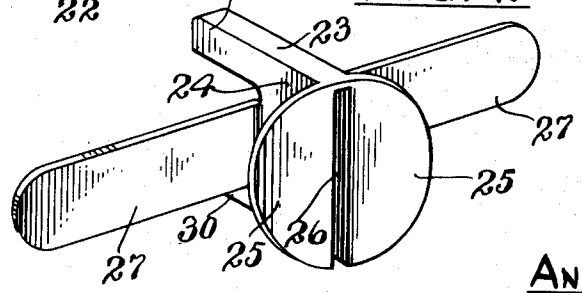


FIG. 8.

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Application January 31, 1949, Serial No. 73,772

3 Claims. (Cl. 248—251)

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This invention relates to a store furniture construction. It is directed to a store furniture unit which in itself is complete but also, a plurality of the units may be located in a generally end to end relation, either in direct alignment or at an indefinite number of angles other than a straight angle to each other, between preselected extreme angles at either side of a straight angle. Such units may have applied thereto various additions or accessories for the holding, storage and display of many kinds of merchandise. With the various differing angular positions of the units with respect to each other, bases and tops only need to be specially constructed, and such special construction of the bases or tops requires only building them with the proper dimensions in length at front and back and the angles at which the ends lie with respect to such fronts and backs for the particular circumstances to be met.

It is a primary object and purpose of the invention to provide a store furniture structure which may be generally designated as wall furniture, though not in any sense limited to location against a wall, in which many and different angles may be turned in conforming the furniture to a wall or, in some cases conforming it to aisles which are not straight but change direction one or more times between their opposite ends. It is a further object to provide furniture of the type noted in a form which can be economically produced and shipped disassembled, very easily assembled in a sturdy and durable form when its place of use is reached, and which may be as easily knocked down and disassembled, either for removal to another part of a store or to a different store. These units are complete without a top, but a top may be provided if desired.

With my invention including the rear supporting posts of the store furniture structure, the brackets attached thereto extend outward for use as supporting means for shelves or other accessories of the unit, the uppermost brackets also serve as supports for the top of the unit, and are provided with a novel and very useful attachment with which an end of a garment hanger rod is detachably connected. Or the adjacent ends of two hanger rods in adjacent units may connect therewith, the opposite ends of said rod or rods having a similar connection with a like carrying and supporting device therefor, the hanger rod being disposed parallel to the vertical back of the unit and consisting of a plain tubular rod obtained by merely sawing tubular stock across to a prescribed length, and with such length

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subject to a relatively wide tolerance and not restricted to approaching close accuracy in length.

An understanding of the invention may be had from the following description, taken in connection with the accompanying drawings, in which:

Fig. 1 is a perspective view showing two of the units located end to end and at an obtuse angle to each other, one supplied with a top and the other complete without a top.

Fig. 2 is a fragmentary enlarged sectioned plan view at the back where two of the units come together, with the tops of the units removed, the plane of the section being at line 2—2 of Fig. 6.

Fig. 3 is a transverse vertical section on the plane of line 3—3 of Fig. 2.

Fig. 4 is a fragmentary horizontal section through the structure shown in Fig. 2, on a plane as indicated by line 4—4 of Fig. 6.

Fig. 5 is a fragmentary perspective view of one of the ends of one of the upper bar structure at the upper end of the back panel of a unit.

Fig. 6 is a vertical section, from front to rear, substantially on the plane of line 6—6 of Fig. 4.

Fig. 7 is a fragmentary horizontal section, substantially on the plane of line 7—7 of Fig. 6.

Fig. 8 is a perspective view of the garment rod support.

Like reference characters refer to like parts in the different figures of the drawing.

In the structure of a unit of store furniture, a base 1 with a suitable under frame, generally indicated at 2, is used. Such base may have a rectangular form for example as when a single unit is used, or when a number of them are located end to end in straight alignment. But when the units are positioned with relation to each other at either an obtuse or a reflex angle, the base will be of a trapezoidal outline, with parallel front and back edges, and ends angularly disposed to such edges at acute and obtuse angles. The back 3 of each unit is a vertically positioned panel. At the back and at each end of a base a vertical post of channel form is located and detachably secured, having a front face or web 4, and rearwardly extending parallel legs or flanges 5, spaced from each other. One of such posts may be located at each end of the base at the back thereof, and extend the selected height of the unit.

For the connection of the back panels 3 to a post, flange members 6 and 7 are secured to the post, extending the length thereof, either at one or both sides thereof. The front flanges 6 extend partly over the face 4 of a post, and have rear-

wardly side extensions (Fig. 4). The back retaining flanges or members 7 are of an angle form in cross section, having legs against and welded, preferably, to the outer sides of the post flanges 5, and outwardly extending laterally legs spaced from and back of the rear bent portions of the retaining flanges 6. The two outwardly extending portions of the retaining flange members 6 and 7 converge toward each other outwardly away from the post, so that a panel 3 having a vertical edge between them may occupy any position between that shown in full lines in Fig. 4, and that in dash lines. When, as may be done at times, two back posts on adjacent units are located alongside each other at the ends of units, the retaining flanges will not be used on side by side flanges 5 of the two posts. But, with a single back post between the backs 3 of two units, as in Fig. 4, retaining flanges at both sides will be used.

Each post at its front face in the length thereof vertically is provided with consecutive series of spaced short vertical slots 8. Brackets may be detachably and adjustably connected with a post by means of hooks inserted through and located in the slots 8. In the unit structure, upper brackets are used each having an upper side 9 at the upper edge of which a horizontal plate 10 is secured, either connected integrally or otherwise. A vertical leg 11 extends downwardly from the inner end of the upper bar 9, from which hooks 12 extend to enter slots 8, and in practice a diagonal brace 13 extends upwardly and outwardly from the lower end of leg 11 to and joins with the upper member 9 at a distance back of its outer end. Such upper brackets, one at each end of a unit have a forward extension 14 at the front end of the diagonal brace 13 lying beneath the upper member 9 paralleling it, and spaced at its upper edge a short distance from the lower edge of part 9 (Fig. 6).

Between the upper ends of opposite posts at the vertical edges of a back panel 3, angle bars 15 and 16 (Fig. 3) are located having downwardly extending legs spaced from each other and rearwardly extending overlapping horizontal legs permanently secured together. The upper horizontal leg of the bar 16 has a terminal portion 16*a* at each end which extends beyond the adjacent end of the bar 15 and is provided with a downwardly bent tongue 17 (Figs. 1 and 5). The tongue 17 has an opening through it. When the connected angle bars 15 and 16 are placed in position above the upper ends of the spaced back posts, the tongues 17 extend downwardly at the inner sides of rearwardly extending flanges 5 of the posts, and the extensions 16*a* rest upon the upper ends of the flanges 5 (Fig. 2). The back panel 3 at its upper edge is inserted between the spaced downwardly extending legs of bars 15 and 16.

A channel member having a web 18 and rearwardly extending legs 19 is located in the upper end portion of each back post with the web 18 back of the front 4 of its post, a distance far enough that the tongues 17 of the panel holding upper edge structuers are between such face 4 and web 18. The flanges 19 have a permanent welded connection to the rear flanges 5' of the post. Screws 20 pass through the face member or web 4 of the post, through the openings in the tongues 17, and are threaded through the web 18, each screw, as shown in Fig. 4, having a pilot extension for guidance of the screws through openings in tongues 17 and the threaded openings in web 18. When such screws are driven to place, the angle bar structure for holding the upper edges of panels 3 are locked against removal, and the upper sides of the horizontal legs of the angle bars 16 are flush with the upper sides of the horizontal plates 10 carried by the brackets 9, so that a top 21 may lie on the bar 16 and the parts 10 of the brackets, one at the upper end of each back panel 3. Screws, as in Fig. 6, are used to secure the top in place, connecting with parts 10 of the brackets.

Garment hanger rods 22 in many instances are to be supported by and extend between the upper brackets which are connected with the back posts, such rods shown at 22 being each spaced from and parallel to the back of the unit in which it is installed. The rods are of tubular form open at each end for the reception into such open ends of insertable parts of supporting fixtures for the ends of the rods which, preferably, are connected to the previously described extensions 14 provided on said upper brackets.

The rod carrying fixture which is mounted on an extension 14 (Fig. 8) is formed from flat metal, with an upper horizontal web member 23, from the longitudinal edges of which spaced flanges 24 extend downwardly, parallel to each other. Each flange 24 at its front end has an outturned lip 25, shown as of semi-circular form, with an entrance slot 26 between them, which is the open outer end of the space between the spaced flanges 24. From each of the flanges 24, when the described fixture is to support one end of each of two rods, a long finger 27 is bent outwardly at right angles to its connected flange 24. This leaves an upper arm extension 28 of an inverted channel form at the inner end portion of the fixture, the upper web 23 of which, at its rear end, is downwardly turned to provide a short projection 29 to seat in a notch to receive it in the upper edge of a projection 14. At the lower side and rear portion of one side flange 24 a flat finger 30 extends rearwardly, which after the fixture has been put in place on a projection 14, may be bent underneath the projection 14, thus locking the fixture in place. The projection 14 is located between the sides 24 and extends at its free front end a short distance beyond the entrance slot 26. The fingers 27 enter the open ends of the rods 22, mounting such rods in a manner such that they may be swung to different positions, one of which is shown in full lines Fig. 7, and the other in dash lines; and, of course, the rods may occupy any position between the two extreme angular positions to which they may be moved. The fingers 27 are bendable if necessary instead of remaining straight.

It is apparent of course that other supporting brackets for shelves or the like may be detachably connected to the back posts below upper position as at the right in Fig. 1, and that such lower brackets may have the outer end portions of part 9 cut away, or otherwise removed leaving a bracket upper shorter arm 9*a* at the front end of which the rod carrying fixture is placed.

The rods are cut from a length of tubular material by merely sawing across such material to a fairly close approximation of a length wanted. The extension of the fingers 27 into the ends of the rods permits a considerable tolerance in a rod length. One only of said rod fingers 27 may be provided in such rod carrying fixtures for a single unit, or at the outer ends of the end units of an assembly of such units.

The construction is economically produced,

readily and easily assembled and disassembled, is of a sturdy and durable character and may serve as a foundation or chassis, which may be completed into display cases, with suitable end panels vertically at the end of a unit, or connected at the ends of a series of dissassembled units, utilizing the several accessories common in the field and which appear in part in my previously filed application, Ser. No. 55,138, now Patent No. 2,580,334 filed October 18, 1948.

The invention is defined in the appended claims, and is to be considered comprehensive of all forms of structure coming within their scope.

I claim:

1. In a store display device, a bracket having means at one end for attachment to a vertical post and a flat vertical outer extremity, a rod supporting fixture for association with said flat vertical extremity, said fixture including a medially positioned downwardly facing channel, the web of which overlies said flat extremity and the flanges of which embrace the sides of said bracket extremity, said flanges being defined in part by vertical inner edges and outer edges, one of said flanges extending below said flat extremity and including a laterally bendable projection, and elongated fingers projecting laterally from the vertical inner edges of the flanges each of said fingers being adapted for insertion into the end of a rod, said fingers being bendable at their connection with said flanges to permit their association with rods arranged at varying angles.

2. The structure of claim 1 characterized in that the upper face of the flat vertical extremity is formed with a shoulder, and the inner end of the web of the channel includes a downturned portion to engage said shoulder to prevent endwise displacement of the fixture.

3. The structure of claim 1 characterized in that the outer edges of the flanges are bent laterally to provide outturned lips normally lying parallel to said fingers.

ANTHONY VANDERVELD.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
850,497	Schuchart	Apr. 16, 1907
923,721	Smith	June 1, 1909
1,021,432	Smith	Mar. 26, 1912
1,315,524	Mittleburg	Sept. 9, 1919
2,036,184	Armstrong	Apr. 7, 1936
2,136,109	Kress	Nov. 8, 1938
2,457,536	Doggett et al.	Dec. 28, 1948
2,464,470	Vanderveld	Mar. 15, 1949
2,522,288	Light	Sept. 12, 1950
2,590,446	Murphy	Mar. 25, 1952

FOREIGN PATENTS

Number	Country	Date
594,252	Great Britain	Apr. 21, 1939