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SHELF STRUCTURE

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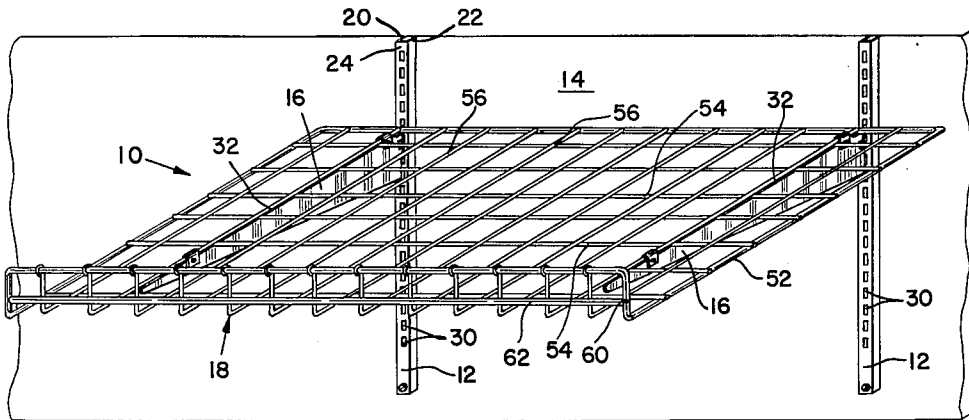


FIG. 1

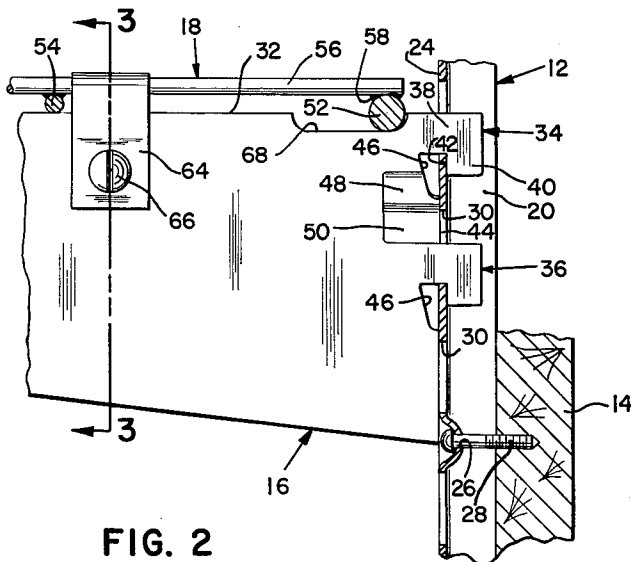


FIG. 2

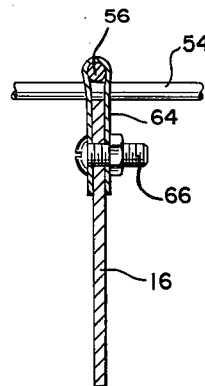


FIG. 3

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SHELF STRUCTURE

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2 Claims. (Cl. 108—137)

This invention relates to a shelf structure, and more particularly to a shelf structure for displaying retail merchandise which may be readily installed on a supporting wall surface with various arrangements of the component parts to accommodate different loading conditions and which when installed forms a rigid secure structure.

It is an object of the invention to provide a shelf structure for the display of retail merchandise.

Another object of the invention is to provide a shelf structure having a knock-down construction which may be readily mounted or removed from a supporting wall.

A further object of the invention is to provide a shelf structure in which the shelf may be positioned at different vertical levels as desired.

Another object of the invention is to provide a shelf-supporting bracket which permits forward and backward adjustment of the shelf with respect to the supporting wall.

A still further object of the invention is to provide detachable fastening means for securement of the shelf to the shelf-supporting bracket.

Other objects of this invention will appear in the following description and appended claims, reference being had to the accompanying drawings forming a part of this specification wherein like reference characters designate corresponding parts in the several views.

In the drawings:

FIGURE 1 is a view in perspective of one embodiment of the shelf structure of the present invention;

FIGURE 2 is a side elevational view of the rear portion of the shelf-supporting bracket illustrating the means for attaching the bracket to the supporting walls and the means for attaching the shelf to the bracket; and

FIGURE 3 is a sectional view of the bracket shown in FIGURE 2 taken substantially along the line 3—3 of FIGURE 2 looking in the direction of the arrows.

Before explaining the present invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and arrangement of parts illustrated in the accompanying drawings, since the invention is capable of other embodiments and of being practiced or carried out in various ways. Also, it is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation.

Referring to the drawings it will be seen that the shelf structure 10 comprises uprights 12 secured to a supporting wall 14. Each upright carries a horizontally extending shelf-supporting bracket 16. A wire shelf 18 is supported in a substantially horizontal plane on the bracket 16.

As will be noted in FIGURES 1 and 2, the uprights 12 are channel sections having legs 20, 22 joined together by a web 24. The uprights are positioned with the legs 20, 22 abutting against the wall 14. Recessed openings 26 are provided to receive screws 28 which threadingly engage the wall to secure the uprights in place. As shown, two uprights are provided. However, more may be utilized if desired.

A plurality of vertically spaced generally rectangular openings 30 are provided in the web 24. The openings 30 permit mounting of the bracket 16 at different vertical positions whereby the shelf 12 may be located at any desired vertical level.

The brackets 16 are of generally triangular shape and are positioned with the upper shelf supporting edges 32

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in the same horizontal plane. As illustrated in FIGURE 2, the inner end of each bracket is provided with a pair of lugs 34, 36. Each lug has an inwardly projecting portion 38 and a downwardly projecting portion 40 to form an L-shape. The edge 42 of portion 40 is spaced from the edge 44 of the bracket a distance approximately equal to the thickness of the web 24. The lugs 34, 36 are vertically spaced from each other a distance approximately equal to the distance between two of the openings 30 in the uprights. The bracket 16 is formed with relief slots 46 adjacent the lugs to permit easy insertion of the lugs into the upright openings.

In operation, the brackets are mounted on the uprights by inserting the lugs 34, 36 through a pair of openings 30. Upon insertion of the lugs through the openings, the bracket is forced downwardly whereby the lug edges 42 will engage the inner surface of the web and the bracket edge 44 will engage the outer surface of the web to lock the bracket securely in place. The bracket is also provided with a pair of tabs 48, 50 at its inner end which are bent outwardly in opposite directions for abutment against the upright web 24 to provide lateral support for the bracket.

As previously mentioned, the wire shelf 18 is supported on the upper edges 32 of the bracket. The shelf 18 comprises a generally rectangular outer frame 52 fabricated from relatively heavy gage wire. A grill-work of lighter gage wire is secured within the frame 52. The grill-work consists of a plurality of elements 54 which extend transversely of the bracket 16 and a plurality of elements 56 which extend in directions substantially parallel to the edge 32 of the bracket. The various wire elements of the shelf are secured together by welding as shown at 58 in FIGURE 2.

The forward marginal portion 60 of the shelf is bent upwardly to form a retainer for articles positioned on the shelf. A wire element 62 of relatively heavy gage is provided on the retainer 60 to act as a reinforcement.

The shelf 18 is secured to the bracket 16 by means of straps 64. The shelf is positioned on the bracket with a wire element 56 overlying the bracket edge 32. The strap 64 is then looped around the wire and secured to the bracket by a bolt structure 66 as shown in FIGURE 3. This detachable fastening prevents the shelf from shifting after it has been positioned on the bracket.

As will be noted in FIGURE 2, an elongated notch 68 is provided in the upper edge of the bracket adjacent the inner end thereof. The notch 68 receives the large diameter frame wire 52 to compensate for the smaller diameter wire elements 54 and avoid canting of the shelf. The shelf may be adjusted forwardly or rearwardly a distance equal to the length of the notch 68. This adjustment feature permits varying the effective depth of the shelf to accommodate articles of different sizes.

Having thus described my invention, I claim:

1. A shelf structure comprising a plurality of uprights securable to a wall; a shelf-support bracket detachably secured to each upright; each of said brackets having a substantially horizontal upper support edge with an elongated notch therein adjacent the uprights; said upper support edges lying in the same horizontal plane; a shelf including a generally rectangular wire-rod frame; a grill-work of angularly related spaced apart wire elements of smaller diameter than the frame wire-rod secured within said frame; said shelf being supported on the upper support edges of the shelf-support brackets with the frame wire-rod seated in said elongated notch to position the shelf surface in substantially parallel relationship with the upper bracket support edges; some of the wire elements of the grill-work extending in directions substantially parallel to said upper support edges; one of said

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last-mentioned wire elements overlying the upper support edge of each bracket; and detachable fastening means secured to the brackets and engaging said wire elements overlying the bracket edges to fasten the shelf to the bracket; said frame-rod seated in the bracket notch being shiftable along the length of the notch to permit shifting of the shelf to different positions along the bracket.

2. A shelf structure comprising a plurality of uprights securable to a wall; each of said uprights including a wall portion having a plurality of vertically spaced openings therein; a shelf-support bracket for each upright having lug means at one end; said lug means extending through selected adjacent openings in the uprights into engagement with said upright wall portion to detachably secure the brackets to the uprights at selected vertical levels; each of said brackets having substantially horizontal upper support edges; said upper support edges lying in the same horizontal plane; a shelf comprising a grill-work of angularly related spaced apart wire elements mounted on the upper support edges of the shelf-support brackets;

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some of the wire elements in the shelf extending in directions substantially parallel to said upper support edges; one of said last-mentioned wire elements overlying the upper support edge of each bracket; and a plurality of detachable fastening means secured to the bracket and engaging said wire elements overlying the bracket edges to fasten the shelf to the brackets; each of said detachable fastening means comprising a strap looped around one of said wire elements, and threaded fastening means securing the ends of the strap to the respective bracket.

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