Dec. 16, 1952 H. O. NEUBAUER 2,621,800

SHELVING CONSTRUCTION

Filed Jan. 6, 1949

Fig. 1

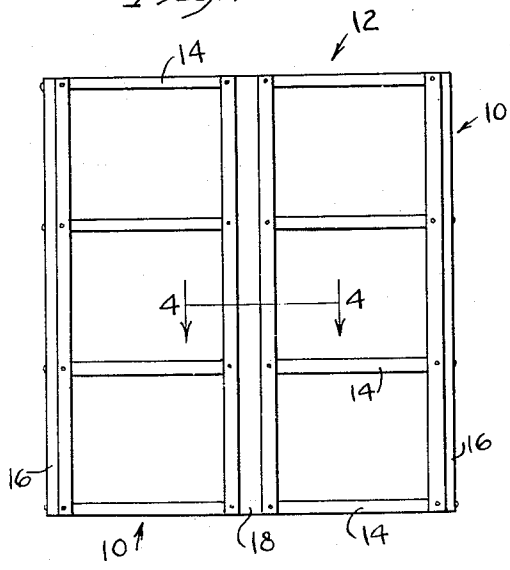


Fig. 2

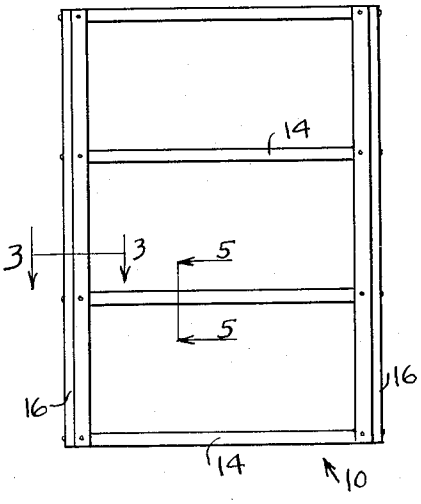


Fig. 4

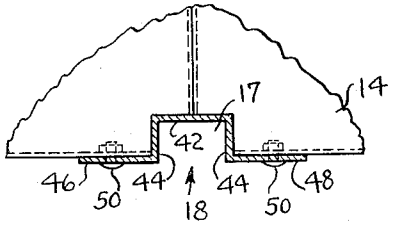


Fig. 3

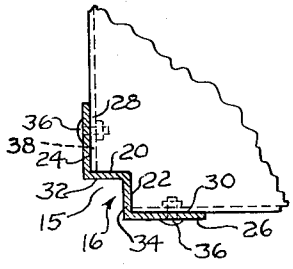


Fig. 5

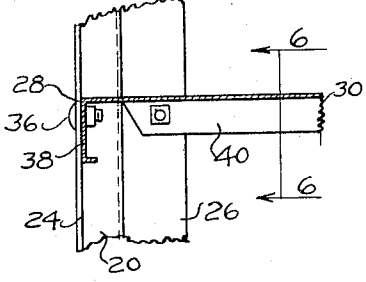
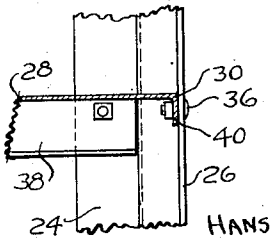


Fig 6



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SHELVING CONSTRUCTION

Hans O. Neubauer, Minneapolis, Minn.

Application January 6, 1949, Serial No. 69,475

1 Claim. (Cl. 211—135)

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This invention relates to shelving construction.

It is an object of my invention to provide posts for shelving which insure greater rigidity in the shelving than in the prior structures yet the shelving presents trim modern lines.

It is another object of my invention to provide in shelving a corner post of W-construction which cooperates with the shelves of the shelving to provide strong construction which eliminates the necessity for the use of sway braces.

It is a further object of my invention to provide in shelving construction, easy assembly and disassembly of the shelving.

Other and further objects will appear from the detailed description of the shelving and the appended claim.

In order that the invention may be more thoroughly understood, reference will now be made to the drawings wherein:

Figure 1 is an elevational view of two sections of the shelving united together.

Figure 2 is an end view of a single section of the shelving.

Figure 3 is a sectional view taken on line 3—3 of Figure 2.

Figure 4 is a sectional view taken on line 4—4 of Figure 1.

Figure 5 is a sectional view taken on line 5—5 of Figure 2.

Figure 6 is a sectional view taken on line 6—6 of Figure 5 of a portion of a shelf secured to the inside of a W-shaped corner post.

Referring in detail to the drawings, Figure 1 discloses two identical shelving sections 10 secured in a unitary structure 12 and each section 10 comprises a plurality of spaced apart metal rectangular shelves 14. The sides of each section 10 are provided with a post or upright 16 of substantially W-shape in cross section at both corners. The shelves 14 of the two sections 10 are secured together by a center post 18 of substantially U-shaped construction at both sides of the unitary structure 12.

Each shelf 14 is provided with a rectangular cut-out or notched portion 15 at each of its four corners. Thus each cut-out 15 is provided with two sides 20 and 22 at right angles to each other. Each corner post 16 is provided with an outer leg 24 and 26 at its respective sides which are adapted to abut the two sides adjacent each notch of the shelves 14 at 28 and 30 respectively while the two intermediate legs 32 and 34 abut against the sides 20 and 22 of each notch 15. Nut and bolt means 36 are mounted in aligned apertures in the legs 24 and 26 and in the depending flanges

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38 and 40 on the sides 28 and 30 respectively of the shelves 14 to secure the corner posts 16 to the shelves 14. The nut and bolt means 36 securing the legs 24 and 26 respectively to the flanges 38 and 40 on the sides 28 and 30 of the shelves 14 and with the intermediate legs 32 and 34 abutting against the sides 20 and 22 respectively of the notch 15 in each corner of each shelf 14. Four bracing surfaces namely 38, 20, 22 and 40 are provided at each of the four corners of each shelf 14 so that a much lighter corner post is needed and also sway braces can be eliminated for bracing the shelving units 10.

Where only one unit 10 is employed, then a corner post 16 would be associated with each of the four corners of the shelving section 10. The shelves 14 are spaced apart for supporting books or other articles thereon. Where two shelving sections 10 are to be used, then the two sections 10 can be secured together into a unitary structure 12 by U-shaped center posts 18, with one post 18 at each side as shown in Figure 1 of the drawings. The ends of the shelves 14—14 of the two sections 10 abut each other forming a notch 17 into which fits the base 42 and right angular arms 44—44 of the U-post 18. The U-center posts 18 are each provided with a lateral leg 46 and 48 extending at right angles from each of the arms 44—44. The legs 46 and 48 respectively abut sides 28—28 of the abutting shelves 14—14 of the two sections 10—10 and bolt means 50 are mounted in aligned apertures in the legs 46 and 48 and the flanges 38—38 of each of the abutting shelves 14—14 of the two sections 10 for securing the center posts 18 to the shelves 14—14 of the two sections 10. The bolts 50 hold the legs 46 and 48 firmly against the flanges 38—38 of the shelves 14—14 and the U-shaped notch 17 formed by each two abutting notches 15—15 in each pair of abutting shelves 14 provide three surfaces for bracing the U-shaped posts 18.

The use of the W-shaped corner posts 16 which coact and cooperate with the cut-out 15 in the corners of the shelves 14 provide a very strong bracing structure which presents elements for bracing the posts 16 regardless of the direction of thrust against the posts 16. The posts 16 can be fabricated of metal of $\frac{1}{16}$ inch thickness and meet requirements satisfactorily but where the conventional angle iron posts are used in shelving construction a much heavier post would be required to support the shelving.

The employment of the W-shaped corner post presents a very neat appearing structure.

It is to be understood that any number of sections 10 can be secured together by center posts 18.

What I claim as new is:

In a shelving construction of the class described, a plurality of supporting posts, each of the posts consisting of only one length of material having two intermediate portions and two outer flanges extending from said portions, the two intermediate portions of the posts being angularly related and the same width, the two outer flanges having greater width than the width of the two intermediate portions to form posts of substantially W-shape, all the posts being interchangeable with each other, all of the posts having only small apertures therein to receive bolts for securing shelves thereto so that all of the posts substantially maintain the mechanical strength of a solid post, a plurality of spaced apart shelves secured to the posts, all of the shelves being inter-changeable with each other, each corner of all of the shelves provided with a notch having two edges corresponding in width and angularity to said intermediate portions, the two intermediate portions of the post abutting the two edges of the notch at each corner of all the shelves, the two outer flanges of the post at each corner of all shelves abutting two main edges of all of the shelves.

HANS O. NEUBAUER.

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