United States Patent

Sagers

[15] 3,637,183

[45] Jan. 25, 1972

[54] SUPPORTS FOR DETACHABLE SHELVING

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[22] Filed: **Nov. 17, 1970**

[21] Appl. No.: **90,367**

[52] **U.S. Cl.**.....**248/235**, 108/107, 211/148

[51] **Int. Cl.**.....**A47g 29/02**

[58] **Field of Search**.....248/235, 239, 241, 243, 250, 248/251, 264; 211/134, 148, 149; 108/107, 110

[56] **References Cited**

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[57] **ABSTRACT**

A support assembly secured to opposite parallel sidewalls for detachably securing a pair of each opposite end portions of horizontal end rods in vertical spaced relation for a detachable shelf.

5 Claims, 4 Drawing Figures

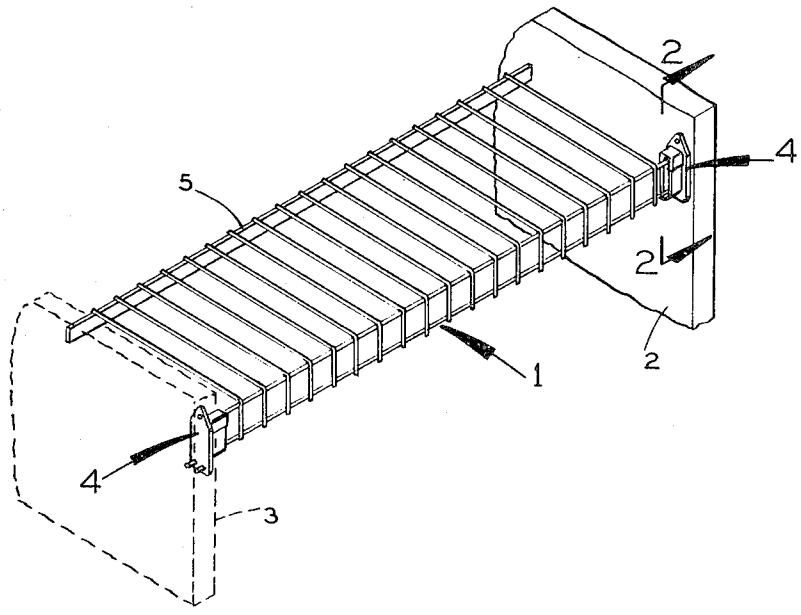


FIG. 1

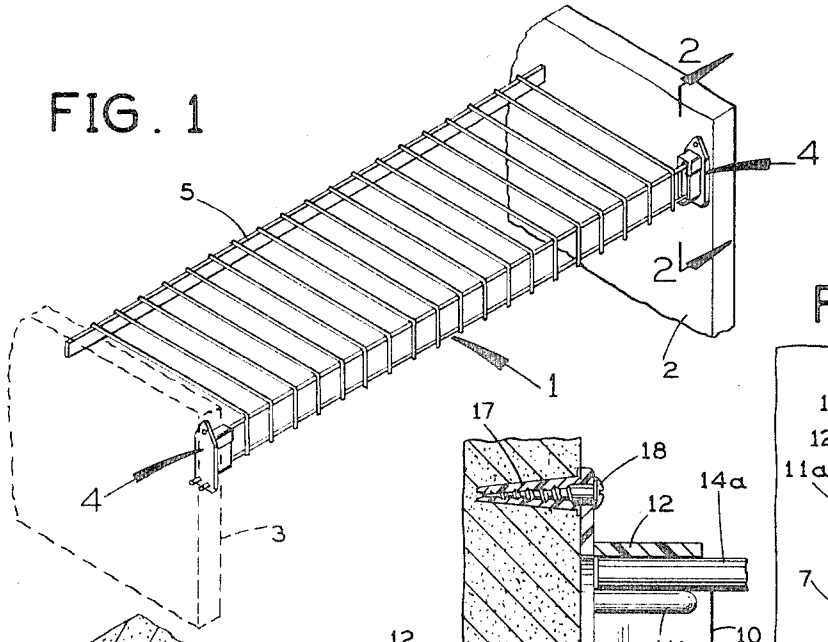
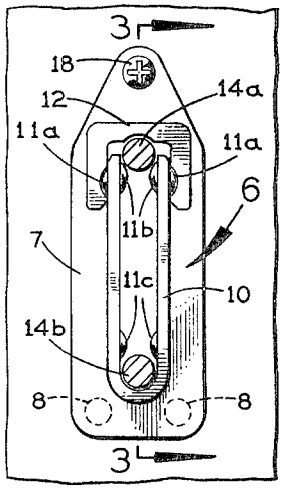


FIG. 2



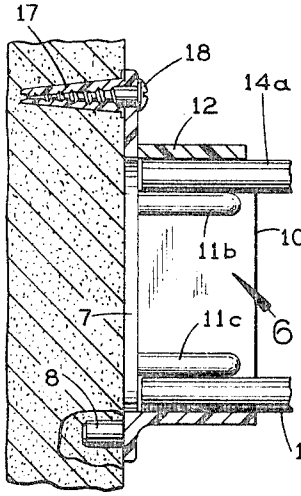


FIG. 3

FIG. 4

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SUPPORTS FOR DETACHABLE SHELVING

This invention relates in general to shelf supports and more particularly to a support assembly for simple installation on opposite sidewalls for detachably supporting the opposite front ends of a shelf for storing articles.

Prior shelf brackets are usually made in the form of angles requiring several screws for securing the bracket to a side or rear wall and were space consuming, relatively difficult to install and relatively unsightly.

The present invention overcomes the above objections and disadvantages by the provision of a two-piece support for a welded wire shelf or solid planar-type shelf requiring the use of a single screw for the installation thereof.

Another object of the invention is the provision of a low-cost molded plastic shelf support of sufficient strength to support reasonable loads on a removable welded wire shelf and does not have the disadvantage of installation problems and unsightly appearance, as compared with conventional angle brackets.

These and other objects and advantages in one embodiment of the invention are described and shown in the following specification and drawing, in which:

FIG. 1 is a perspective view in reduced scale of a conventional welded wire shelf supported by a pair of quick detachable supports, in reduced scale.

FIG. 2 is a front elevation in normal scale taken through section line 2—2, FIG. 1.

FIG. 3 is a fragmentary side elevation taken through section line 3—3, FIG. 2.

FIG. 4 is a fragmentary exploded perspective view of all elements related to the shelf, as illustrated in FIG. 1.

Referring to FIG. 1, a typical welded wire shelf 1 is supported between a pair of parallel spaced vertical walls 2 and 3 by means of support assemblies 4—4, each of which are mounted facing sides of each wall and in symmetrical facing relation. The rear member 5 of the welded wire shelf is self-supporting for shallow depths or light loads or otherwise resting on screw means or other simple means, not shown.

Referring to FIGS. 2–4, the main support member 6, preferably molded from plastic material such as polystyrene, includes a back plates 7 having a pair of integral dowels 8 extending normal from the lower rear surface thereof and a mounting screw hole 9 through the plate in the upper end portion thereof, best shown in FIG. 4. An elongated U-shaped member 10 is integral with the front side of plate 7 and intended to be vertically positioned. Each side of the upper portion of member 10 has a pair of integral transverse upper projections 11*a* and 11*b*, respectively, of linear arcuate shape in mating relation on each side thereof and a second lower pair of like inner projections 11*c*. The pair of projections 11*a* and 11*b* are positioned a predetermined distance from the lower end of member 10. An inverted U-shaped clamp 12, molded from plastic material such as polystyrene, is provided with lateral transverse recesses 13 in opposite inner sides thereof.

FIG. 4 also shows the wire shelf provided with a pair of vertically positioned horizontal rods 14*a* and 14*b* projecting from each end of the shelf 1, which rods are adapted to be forcefully lowered into each member 10 of each support member 6.

In operation, a well-known anchor 17 is positioned in hole 16 in each sidewall when required for security and the plate 7 of each support member 6 placed on the surface of the opposite walls 2 and 3 with dowels 8—8 engaged in a pair of holes 15. Then a screw 18 is driven through each hole 9 into each anchor 17 or an equivalent holding surface in wall 2 and 3. Then with the shelf cut to proper length, the opposite ends of rods 14*b* are forced downward into the member 10 to rest on the bottom of the U-shaped member 10 with the upper rod 14*a* resting against projections 11*b*. The clamp 12 is pushed over the upper end portion of each member 10 with opposite projections 11*a* engaged in opposite recesses 13 in the clamp 12. Thus the rods 14*a* and 14*b* will be retained at opposite ends of the shelf, which is removably secured in proper position, accomplished by removing the clamps 12 and forcing the shelf upward. The rear member of the shelf is supported by screws or other well-known support means, not shown.

It is now apparent that any type of shelf, such as wood or sheet metal, may be removably supported by the provision of a pair of rods horizontally positioned in vertical relation and extending from each end of the shelf.

Certain modifications in construction are intended to come within the teachings and scope of the above specification.

Having described my invention, I claim:

1. A support for opposite ends of a detachable shelf comprising a pair of vertically spaced horizontal rods extending from each opposite end of the front portion of said shelf for retaining said shelf by opposite ends thereof on opposite parallel facing walls,

a shelf support base plate having planar front and rear sides and a pair of spaced integral projections extending a predetermined distance normal from the lower portion of said rear side of said plate and a hole through the upper portion of said plate for receiving a mounting screw for holding said plate against said wall,

a vertical U-shaped socket integral with the front side of said plate having an open upper end for receiving said horizontal rods,

a first integral arcuate projection extending a predetermined spaced mating relation from each inner side of said socket and normal to said plate,

a second integral arcuate projection extending in predetermined spaced mating relation from each opposite inner sides of said socket and a predetermined distance from said first-mentioned projections,

a third integral arcuate projection extending from each outer side of said socket normal to said plate and a predetermined distance from the upper ends of said socket,

an inverted U-shaped lock means in clamping position over the upper end portions of said socket engaged at each opposite side thereof with a mating said third projection for retaining the end portions of said shelf rods with the lower one thereof positioned in said socket below said first projections and the upper said rod resting on said second projections with said lock means straddling said third projections for holding said rods from upward movement.

2. The construction recited in claim 1 wherein the said inverted U-shaped lock means is molded from plastic material of predetermined flexibility for ease of manual placement and holding properties.

3. The construction recited in claim 1 whereby the said support is molded from plastic material of predetermined flexibility for permitting the said rods to flex the U-shaped member from the upper open end thereof when manually entered from the open upper side of said member.

4. A support for the opposite ends of a detachable shelf comprising a pair of vertical spaced horizontal rods extending a predetermined distance from each opposite end of the front portion of said shelf for retaining said shelf by said rods on opposite parallel spacing walls,

a shelf support base plate of uniform thickness including at least one integral projection extending a predetermined distance normal from the lower portion of the rear side of said plate and a hole through the upper portion of said plate for receiving a mounting screw for holding said plate against each one of said walls,

a vertical U-shaped socket integral with the front side of said plate having an open upper and front end for receiving said end portions of said horizontal rods,

a projection extending from each outer side of the upper portion of said U-shaped member,

an inverted U-shaped lock means for a clamping position over the open upper end portions of said socket engaged with each said projection for retaining the end portions of the upper one of said rods within said U-shaped member for removably securing the front portion of said shelf to said wall.

5. The construction recited in claim 4 including a pair of oppositely positioned projections in said U-shaped member for the positioning of the upper one of said rods in the upper space within said U-shaped member.