

June 17, 1969

A. E. BROWN

3,450,270

SUPPORT STANDARD

Filed Oct. 24, 1966

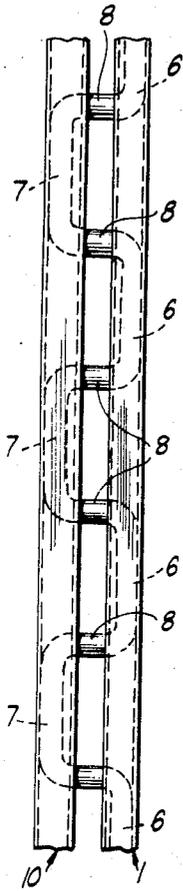


Fig. 1.

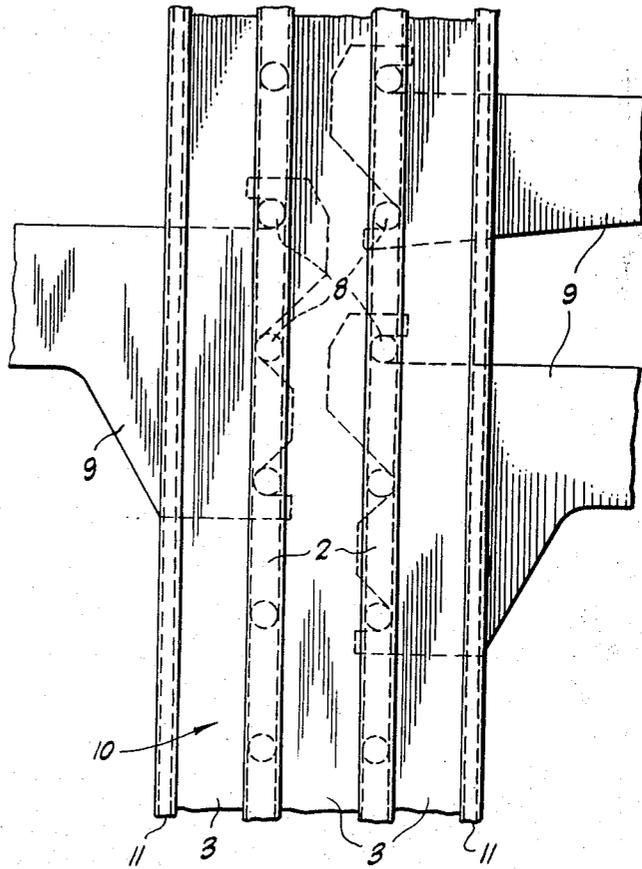


Fig. 2.

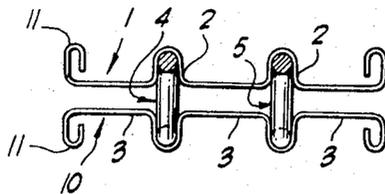


Fig. 3.

INVENTOR  
ALAN E. BROWN

By: *Smart & Biggs*  
ATTORNEYS

1

2

3,450,270

**SUPPORT STANDARD**

Alan E. Brown, London, Ontario, Canada, assignor to E. J. Wright Central Limited, Strathroy, Ontario, Canada

Filed Oct. 24, 1966, Ser. No. 588,828

Claims priority, application Canada, Dec. 10, 1965,

947,542

Int. Cl. A47f 5/10

U.S. Cl. 211-176

2 Claims

**ABSTRACT OF THE DISCLOSURE**

A shelving standard formed of two elongated sheets of metal in spaced parallel relationship connected by two metal rods bent into a series of square-wave configurations and extending along the length of the elongated sheet metal members, whereby shelf support brackets may be inserted between the elongated sheet metal members and interlockingly engage the bent rod members.

This invention relates to support standards for supporting shelves, brackets, drawers and the like.

It is common in supporting devices to use an upright standard that will receive and hold brackets and shelves while allowing adjustable mounting of the shelf or bracket on the standard. A typical example of this type of support is disclosed in United States Patent 2,263,282, Welch et al., issued Nov. 18, 1941, wherein the standard may be constructed from two elongated strips having a plurality of opposed, longitudinally spaced holes that are adapted to receive supporting lugs. The construction of this standard is analogous to that of a conventional ladder, and of course the manufacture thereof necessitates the two time consuming steps of (a) drilling the holes and (b) placing and welding or crimping the lugs onto the strips. As a further modification, the patentee also discloses strips that have a plurality of inwardly extending protuberances or nodes that are adapted to bear against one another in the assembled position, thereby producing the desired bracket supporting cross-pieces. As an alternative, Welch et al. discloses a plurality of vertically spaced tongues struck inwardly from each of the two parallel strips, the tongues of the second strip being adapted to overlap the tongues of the first strip. In both of these latter two modifications, the strips are welded together at their contacting surfaces; namely at the nodes or tongues.

In United States Patent 2,684,224, Waltz, issued July 20, 1954, the support disclosed comprises two vertical channels each having at spaced intervals, inwardly spaced stirrups, so located and disposed with respect to each other that when the two channel sections are brought together the stirrups nest one against the other thereby providing a series of vertically spaced slots. The vertical portions of the stirrups are welded to the web of the corresponding other channel member.

In United States Patent 3,182,812, which issued May 11, 1965, to J. G. Fenwick, a support standard is disclosed wherein the upright post is formed from extruded aluminum, having longitudinal grooves therein adapted to receive elongated flat bracket support strips inserted therein and having vertically spaced bracket-receiving openings.

It is an object of the present invention to provide a shelving standard which is more rugged in construction than those used hitherto, and yet is of simple manufacture.

Thus, according to the invention, there is provided a shelving standard which comprises two elongated sheet metal members in parallel and spaced relationship and

means interconnecting said sheet metal members, said means comprising a metal rod or bar having first portions thereof extending longitudinally adjacent one of said members, second portions thereof extending longitudinally adjacent the other of said members and staggered longitudinally with respect to said first portions, at least some of each of said first and second portions being secured to the adjacent member, and third portions each extending from an end of a first portion to an end of a second portion and substantially normal to said sheet metal members to establish the spacing between the latter and serve as bracket supporting cross pieces. The interconnecting means is preferably a continuous rod of square wave or castellated configuration and it may be attached to the sheet metal members at all or only at selected contact areas by means of resistance welding.

The sheet metal members preferably present confronting channels with the longitudinally extending rod portions seated in the channels. Such construction permits ease in fabrication and yet provides a strong and sturdy standard with manufacturing costs at a minimum.

In a preferred embodiment of my invention, two similar continuous rods of square wave configuration are located in spaced planar relationship intermediate and extending from top to bottom of the sheet metal members with bracket supporting rod portions of the two continuous rods positioned during fabrication so that they are in mutual horizontal planar relationship when the standard is in an upright position. This feature allows two brackets to be attached to the standard in opposed relationship at exactly the same height if desired.

The support standard of my invention may be used as a wall type shelf support or as an island type shelf support.

In the accompanying drawings, which illustrate a preferred embodiment of the invention,

FIGURE 1 is a front elevation of a shelving standard;

FIGURE 2 is a side elevation of the standard and shelf brackets in position thereon; and

FIGURE 3 is a sectional view on the line III-III of FIGURE 2.

The support illustrated comprises two vertical sheet metal members 1 and 10 in parallel and spaced relationship one to the other. Each vertical sheet metal member is provided with two longitudinal grooves or channels 2 and three webs 3. These grooves or channels are adapted to receive first portions 6 and second portions 7 of two metal rods 4 and 5, each rod having a square wave or castellated configuration and being in spaced planar relationship intermediate sheet metal members 1 and 10. The first portions 6 of the two metal rods extend longitudinally adjacent sheet metal member 1 and the second portions 7 of the two metal rods extend longitudinally adjacent sheet metal member 10 in staggered longitudinal relationship with respect to said first portions. At least some of the first and second portions of each rod 4 and 5 are secured to their adjacent sheet metal member. Third portions 8 each extend from an end of a first portion 6 to an end of a second portion 7, and are substantially normal to said sheet metal members to establish the spacing between the latter and serve as bracket-supporting cross-pieces.

Brackets 9 may be attached to the support in the manner illustrated or with the brackets on one side aligned with those on the other side if preferred.

In a specific embodiment, each of rods 4 and 5 is constructed from continuous 1/4 inch diameter wire, and the portions 8 thereof are spaced apart 1 1/2 inches between centers. The points of juncture of the first and second portions with the third portions of the rod are curved so that the axis of the rod in the curved portions forms part of a circle of .25 inch radius. The length of the portions

3

8 is .5625 inch and this permits two brackets to be supported side by side on the same cross-pieces, thus allowing use of shelves which have brackets attached thereto.

Reinforcing end flanges 11 may be formed at the sides of the sheet metal members 1, 10 by folding them back upon themselves, as shown.

One of the more advantageous features of the present invention is the continuous nature of the rods which provide the cross-pieces, this feature allowing for complete accuracy in the spacing of the cross-pieces and rendering the standard as a whole more rugged and durable than those used hitherto.

The construction shown in the drawing is particularly suitable for use in island type shelving and panels may be attached to two adjacent standards at both of their edges to form back walls for the shelving space between the standards. Any suitable means may be provided for attaching such panels either to the edges of the standards or to the centre thereof. It will be manifest that with centre attachment of the panels, more shelf space will be provided between the standards. Such panels may be plain or perforated and may be of any suitable material, such as hardboard or plastic or metal.

Suitable lugs may be provided on the standards to receive the ends of spacer bars for spacing the standards laterally of one another.

It will be appreciated, of course, that although a standard having two rods 4 and 5 has been illustrated, the present invention is not restricted to the presence of two rods. In fact, for wall type shelving, standards having one rod only are used.

The standards, of course, may be provided with any suitable type of base, if desired.

What I claim as my invention is:

1. A support standard comprising two elongated sheet metal members in parallel and spaced relation, each of said members having a groove in confronting relationship with a like groove in the other member, a continuous length of steel rod bent in a square-wave configuration along its entire length, having successive first portions

4

thereof extending longitudinally within the said groove of one of said members, successive second portions thereof extending longitudinally within the said groove of the other of said members and staggered longitudinally with respect to said first portions, at least some of each of first and second portions being secured within the corresponding groove, and third portions each extending from an end of a first portion to an end of a second portion and substantially normal to said sheet metal members, the edges of the grooves of said members being uniformly and closely spaced along their entire length, and having web portions adjacent thereto which extend outwardly and normal to said grooves to thereby act to give lateral support for brackets inserted between said webs and supported on said third portions of said rod.

2. A support standard as set forth in claim 1, wherein each of said members has an adjacent second groove disposed in confronting relation with a like second groove in the other member, said adjacent grooves connected by a central web portion, said second grooves having a second continuous length steel rod bent in a square-wave configuration along their entire length.

References Cited

UNITED STATES PATENTS

1,880,000	9/1932	Wallen	52-730 X
1,997,876	4/1935	Sheldon	52-731
2,936,147	5/1960	Stewart	248-243
3,025,971	3/1962	McLean	248-243 X
3,346,124	10/1967	Sobel	211-148

FOREIGN PATENTS

1,311,967 11/1962 France.

ROY D. FRAZIER, *Primary Examiner.*

J. FRANKLIN FOSS, *Assistant Examiner.*

U.S. Cl. X.R.

211-148; 248-243; 52-730