

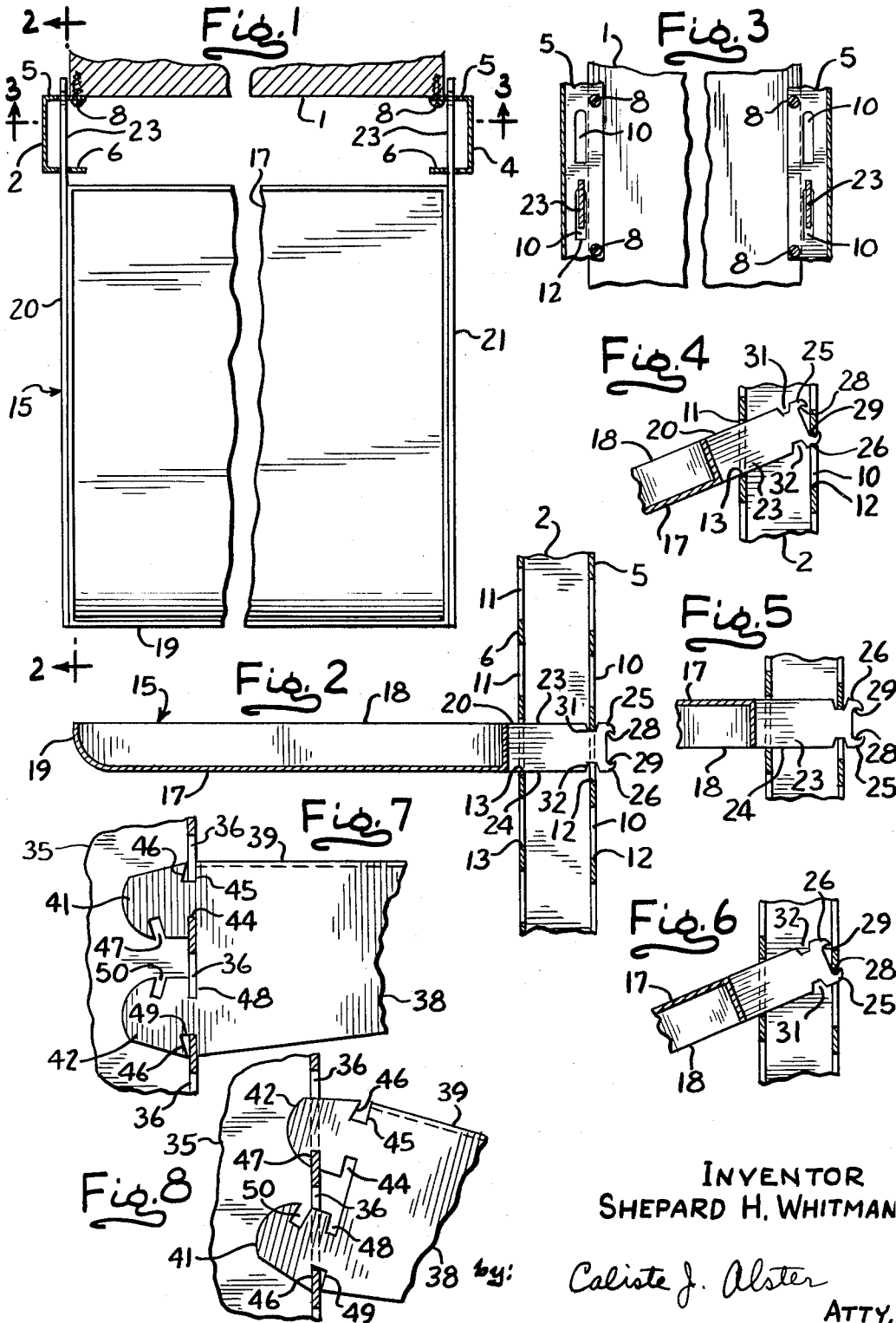
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ADJUSTABLE SHELF BRACKET

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ADJUSTABLE SHELF BRACKET
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This invention relates to adjustable brackets of the type used for supporting shelves.

One type of shelving used for merchandise display consists of a tray-like member of sheet metal or the like having a marginal outwardly extending flange. For various reasons the user of the shelf sometimes prefers to have the shelf positioned with the flange generally upstanding while at other times it is preferred that the shelf be mounted in the inverted position so that the flange projects generally downwardly. Furthermore, in merchandising displays there is frequently the need for adjustably positioning the shelf at various angles. For instance, for one display it may be preferred to have the shelf horizontal while for another display an inclined shelf is desired.

Accordingly, it is an object of the present invention to provide an adjustable bracket which cooperates with an upright or other support to mount a shelf selectively at either of two angular positions relative to the standard or a support, and also selectively at those same two positions with the shelf inverted, that is, turned one hundred and eighty degrees.

It is a further object of the present invention to provide an adjustable shelf bracket of the type stated which cooperates with the upright or support to mount the shelf in any one of the aforesaid positions without the use of adjusting screws, articulated brackets, or other construction utilizing relatively movable brackets or bracket support parts to effect shelf adjustment.

It is also an object of the present invention to provide an adjustable shelf bracket of the type stated which is of relatively inexpensive construction and wherein the position of the shelf supported by the bracket or a pair of brackets may be adjusted quickly and easily without the use of tools.

It is an additional object of the present invention to provide an adjustable shelf bracket of the type stated which is capable of being mounted in any of the aforesaid positions on existing types of channel members or other bracket supports which are in common use.

In accordance with the preferred embodiment of the present invention, the bracket is capable of being adjustably mounted on a suitable upright by first cooperating means on the bracket and support for securing the bracket thereto in a first position in which the bracket is at one angle to the support, for example at the horizontal. There are second cooperating means on the bracket and support for securing the bracket thereto in a second position in which the bracket is at another angle to the support, for example, downwardly inclined therefrom. The bracket and support also have third and fourth cooperating means which secure the bracket to the support selectively in third and fourth positions which are the same as the aforesaid first and second positions but are, respectively, inverted from those positions. Typically, the brackets are used in pairs with the brackets secured to the shelf and adapted for supporting engagement with a pair of uprights whereby the shelf may selectively assume two different angular positions with respect to the upright and also the same two angular positions but inverted one hundred eighty degrees. The aforesaid cooperating means includes a novel design and location of notches or recesses on the end portion of the bracket, which notches receives a slotted part of the upright.

The attainment of the above and further objects of the

present invention will be apparent from the following specification taken in conjunction with the accompanying drawing and forming a part thereof.

In the drawing:

FIGURE 1 is a top plan view, partly in section, of a shelf supported by brackets and uprights constructed in accordance with and embodying the present invention;

FIGURES 2 and 3 are fragmentary sectional views taken along lines 2-2 and 3-3, respectively, of FIGURE 1;

FIGURE 4 is a fragmentary sectional view of a portion of FIGURE 2 and showing the bracket and shelf in an inclined position;

FIGURE 5 is a fragmentary sectional view similar to FIGURE 4 and showing the shelf and bracket inverted one hundred eighty degrees from the position shown in FIGURE 2;

FIGURE 6 is a fragmentary sectional view similar to FIGURE 4 and showing the bracket and shelf inverted one hundred eighty degrees from the position shown in FIGURE 4;

FIGURE 7 is a fragmentary vertical sectional view of a bracket and upright in accordance with the modified form of the present invention; and

FIGURE 8 is a fragmentary sectional view similar to FIGURE 7 and showing the bracket thereof in an alternate or inclined position.

Referring now in more detail and by reference characters to the drawing, which illustrates the preferred embodiment of the present invention, 1 designates a wall or other upstanding surface to which is secured a pair of channel-shaped uprights 2, 4. The uprights 2, 4 each have parallel flanges 5, 6 with one of the flanges 5, 6 on each upright having vertically spaced holes for receiving screws 8 by which the uprights 2, 4 may be secured to the wall 1. The flanges 5 on each upright have a series of vertically aligned, elongated slots 10, and the flanges 6 on each upright have a similar series of slots 11. The bottom edge 12 of each slot 10 is vertically offset from the bottom edge 13 of the adjacent slot 11, and the uprights 2, 4 are mounted on the wall 1 such that there is clearance behind the flanges 5 that are secured to the wall 1, all for purposes presently more fully appearing. While the form of the invention herein shown and described shows the flanges 5 secured to a wall 1 by the screws 8, it should be understood that the uprights may form part of a frame or otherwise be supported in any suitable manner which will provide clearance behind the flanges 5.

Mounted on the uprights 2, 4 is a bracket and shelf assembly, generally designated at 15. This assembly comprises a rectangular shelf 17 of sheet metal or the like having a peripheral flange 18 bent upwardly from the base of the shelf and surrounding same. The front section 19 of the flange 18 may curve arcuately upwardly as shown in FIGURE 2. The form of shelf herein shown is a typical construction in accordance with the invention, but it will be apparent that the shelf 17 may have configurations other than that shown.

Welded or otherwise rigidly secured to the shelf 17, for example at the side portions of the flange 18, are identical rigid brackets 20, 21 which may be fabricated of heavy gauge metal stock, and which may extend to about the forward edge of the shelf 17. Each bracket 20, 21 has an end portion 23 which is somewhat narrower than the slots 10, 11 and is adapted to project through one pair of slots 10, 11. The slots selected will depend upon how high above the floor it is desired to mount the shelf 17. Each end portion 23 has a pair of substantially identical hooks 25, 26 which are at the extreme end of the portion 23 and which are inwardly turned to provide recesses or notches 28, 29 constituting the hook openings. Spaced from the hooks 25, 26 the longitudinal

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edges of the end portion 23 are formed with substantially identical recesses or notches 31, 32 which, like the hooks 25, 26 are symmetrical with respect to the longitudinal center line at the end portion 23.

When the shelf 17 is in the position shown in FIGURE 2, it is approximately horizontal and the flange 18 is upstanding. The notch 31 receives the part of the flange 5 that is at the upper end of the selected slot 10 while the lower longitudinal edge 24 of the end portion 23 rests on the flange 16 at the bottom 13 of the slot 11. Thus each bracket 20, 21 is supported at two places, one on each flange 5, 6 and is restrained against any significant longitudinal movement.

If it is desired to incline the shelf 17, the forward end of the assembly 15 may be tilted upwardly so that the flange 5 clears the notch 31. The assembly then may be repositioned with the bracket end portion 23 as shown in FIGURE 4 in which the portion of the flange 5 at the upper end of the slot 10 receives the notch or hook opening 29, and the lower longitudinal edge 24 of the end portion 23 rests at the bottom 13 of the slot 11 at a region on said longitudinal edge which is offset from the place of support when the assembly is in the position shown in FIGURE 2. The hook 25 clears the flange 5 so that the hook 25 does not interfere with proper grasping of the flange 5 by the hook 26. Furthermore, the slot 11 is sufficiently long to provide clearance for the end portion 23 when the assembly 15 is in the inclined position, as shown in FIGURE 4.

FIGURE 5 shows the assembly mounted one hundred eighty degrees inverted from that shown in FIGURE 2 while FIGURE 6 shows the assembly inverted one hundred eighty degrees from that shown in FIGURE 4. In the positions shown in FIGURES 5 and 6, the flange 18 projects downwardly so that the reverse side of the shelf 17 is utilized and the shelf is, in effect, free of the upstanding flange 18. Mounting the assembly 15 in the position shown in either FIGURES 5 or 6 is made possible because of the symmetrical arrangements of the notches 31, 32 and hooks 25, 26.

In the present invention the shelf is shown as being horizontal in FIGURES 2 and 4, but it will be apparent that the bottom edges 12, 13 of the notches 10, 11 could be located so that the shelf in those two positions is other than horizontal.

FIGURES 7 and 8 show a modified form of the invention in which an upright, such as channel 35, has in its web or in one of its flanges vertically aligned elongated slots 36 of equal length. A pair of identical brackets 38 (one being shown) may be used to support a shelf 39 extending therebetween with the brackets being supported on two channels of the type shown at 35 and with the shelf being permanently secured to these brackets. Such shelf 39 may have a marginal flange similar to the flange 18 previously described.

The end portion of the bracket 38 has a pair of tongues 41, 42 which project through two slots which are preferably, though not necessarily, next to each other. The tongue 41 forms with the adjacent part of the bracket two notches 44, 45, the latter of which has one side wall 46 which is at an acute angle to the longitudinal center line of the bracket. The tongue 41 also has a notch 47 that is spaced from the notch 44 but with the sides of the notch being at an acute angle to the sides of the notch 44. Similarly, the tongue 42 has notches 48, 49, 50 which are symmetrical with and correspond as to size and shape, respectively, with the notches 44, 45, 46. Thus, the notch 49 is in alignment with the notch 44 and the notch 47 is also in alignment with the notch 49 with the angled side wall 46 of the notch 49 being at the same angle to the center line of the bracket 38 at its end as are the sides of the notch 47. Similarly, the notches 45, 48 are in alignment and the notch 45 is in alignment with the notch 50, the side 46 of the notch 45 being at the same angle to the center line of the bracket at its end as are the sides of the notch 50.

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In one position the bracket 38 and shelf 39 may be mounted at a predetermined angle to the horizontal or may be horizontal, as shown in FIGURE 7. To mount the bracket in this position the tongues 41, 42 are inserted into the slots 36 and then pushed downwardly, causing the channel 35 to fit into the two aligned notches 44, 49. If it is desired to mount the bracket so that the shelf 39 is inclined, as shown in FIGURE 8, the tongues 41, 42 are inserted into the slots 36 so that the channel 35 is received in the notches 47, 49. The desired angle of inclination of the shelf in FIGURE 8 is preset in the fabrication of the bracket 38 and will depend upon the angle of the sides of the notch 47 with respect to the center line of the bracket at its end.

The bracket 38 may be mounted on the channel 35 one hundred eighty degrees from either of the positions shown in FIGURES 7 or 8 so that the reverse side of the shelf 39 is used. When inverted from the position of FIGURE 7, the notches 45, 48 are received by the channel 35, and when inverted from the position shown in FIGURE 8, the notches 45, 50 are received by the channel 35.

In compliance with the requirements of the patent statutes I have herein shown and described a preferred embodiment of the invention. It is, however, to be understood that the invention is not limited to the precise construction herein shown, the same being merely illustrative of the principles of the invention. What is considered new and sought to be secured by Letters Patent is:

I claim:

1. In combination, a bracket, an upright support for the bracket, first cooperating means on the bracket and support for securing the bracket to the support in a first position in which the bracket is at one angle to the support, second cooperating means on the bracket and support for securing the bracket to the support in a second position in which the bracket is at another angle to the support, third cooperating means on the bracket and support for securing the bracket to the support in a third position in which the bracket is inverted from the first position but is at substantially the same angle to and extends in the same direction from the support as in the first position, and fourth cooperating means on the bracket and support for securing the bracket to the support in a fourth position in which the bracket is inverted from the second position but is at substantially the same angle to and extends in the same direction from the support as in the second position, the means on said bracket all being at the same end of the bracket so that said same end of the bracket is secured to the upright in each of the four positions.

2. In combination, a bracket, an upright support for the bracket, first cooperating means on the bracket and support for securing the bracket to the support in a first position in which the bracket is at one angle to the support, a second cooperating means on the bracket and support for securing the bracket to the support in a second position in which the bracket is at another angle to the support, third cooperating means on the bracket and support for securing the bracket to the support in a third position in which the bracket is inverted from the first position but is at substantially the same angle to and extends in the same direction from the support as in the first position, and fourth cooperating means on the bracket and support for securing the bracket to the support in a fourth position in which the bracket is inverted from the second position but is at substantially the same angle to and extends in the same direction from the support as in the second position, the bracket including four notch means that form part of the four cooperating means and receive the support in each of the four positions respectively, the first and third notch means being symmetrically disposed with respect to the end portion of the bracket and the second and fourth notch means being disposed symmetrically with respect to the end portion of the bracket, all of said notch means being at the same end of

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the bracket so that said same end of the bracket is secured to the upright in each of the four positions.

3. A combination according to claim 1 further including an additional upright support, an additional bracket, cooperating means on said additional bracket and additional upright for securing said additional bracket in each of said four positions, a shelf secured to said brackets and having a marginal flange, the marginal flange in two of said positions that are at different angles to the uprights being generally upwardly presented and the marginal flange in the other two positions being generally downwardly presented.

4. A combination according to claim 1 in which the upright support includes a slot and the cooperating means in each position includes a notch in said end of the bracket for receiving a part of said upright support adjacent to the slot.

5. A combination according to claim 1 in which the upright support has spaced apart upstanding flanges, each of said flanges having a slot for receiving said bracket, said cooperating means in each position including a part of said upright support at the bottom of the slot in one of said flanges for supporting the bracket and means on said end of the bracket that engages said other flange at the top of the slot therein.

6. A combination according to claim 1 in which the cooperating means on the end of the bracket includes in

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each position two bracket parts that engage the upright at spaced regions thereon, there being a different two parts of the bracket for each of the four positions.

7. A combination according to claim 1 in which the upright support has longitudinally spaced slots and the cooperating means on the end of the bracket includes notches for receiving parts of the upright adjacent to the slots, there being a different set of notches for each of the four positions and the notches in each set being in substantial alignment.

References Cited by the Examiner

UNITED STATES PATENTS

291,030	1/1884	Clapper	108—1
1,805,989	5/1931	Levene	108—1
1,940,454	12/1933	Karnes	108—1 X
2,798,780	7/1957	Montorney	108—62 X
2,900,085	8/1959	Levy	108—1
3,044,631	7/1962	Greenman	108—1
3,101,923	8/1963	Streater	211—148 X

FOREIGN PATENTS

797,496 7/1958 Great Britain.

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