

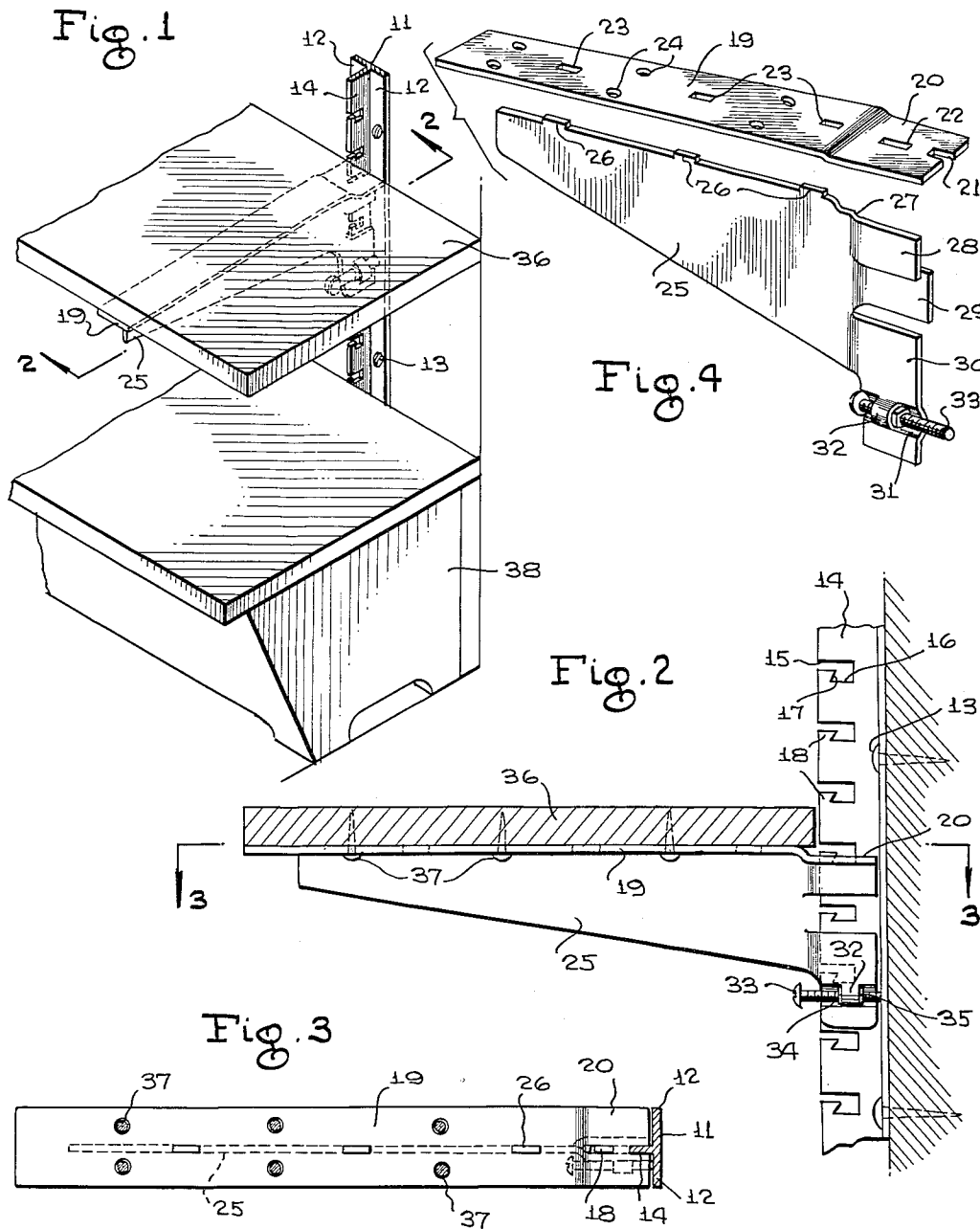
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ADJUSTABLE SHELVING UPRIGHT AND BRACKET

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1

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ADJUSTABLE SHELVING UPRIGHT AND BRACKET

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2

This invention relates to adjustable shelves, and more particularly to improved bracket structure for adjustable shelves.

The main object of the invention is to provide a novel and improved bracket structure for adjustable shelves, said bracket structure involving simple components, being easy to mount, and being neat in appearance.

A further object of the invention is to provide an improved adjustable bracket for shelving and the like, said bracket involving inexpensive components, being sturdy in construction, being easy to assemble, and being adjustable to provide a true horizontal supporting surface for a shelf to be sustained by the bracket.

Further objects and advantages of the invention will become apparent from the following description and claims, and from the accompanying drawings, wherein:

Figure 1 is a perspective view of a portion of an improved shelf structure employing bracket means according to the present invention.

Figure 2 is an enlarged vertical cross sectional detail view taken on the line 2-2 of Figure 1.

Figure 3 is a horizontal cross sectional view taken on the line 3-3 of Figure 2.

Figure 4 is a perspective view showing the separated components of the improved bracket structure employed in Figures 1 to 3.

Referring to the drawings, 11 designates an upstanding vertical bar member which is T-shaped in cross section and whose head flanges 12, 12 are adapted to be secured in a wall, by any suitable securing means, such as the fasteners 13, as shown in Figure 2. The web of the bar member 11, as designated at 14, is formed with uniformly spaced horizontal notches 15, each notch having a downwardly enlarged rear portion 16 with an undercut front edge 17 defining an upstanding lug 18 at the forward end of the notch 15. As shown in Figure 2, the upstanding lugs 18 are generally of dovetail shape and have the undercut rear edges 17.

Each individual shelf bracket comprises a horizontal supporting plate 19 formed with a downwardly offset rear portion 20, said rear portion being formed with a longitudinal notch 21 and with a slot 22 spaced rearwardly from and aligned with the notch 21. The main portion of the plate member 19 is formed with the longitudinally spaced, centrally located slots 23 and with a plurality of apertures 24 disposed adjacent the longitudinal margins of the plate 19. Designated at 25 is a generally triangular brace member which is formed at its top edge with the spaced lugs 26 adapted to engage in the slots 23 and to be deformed whereby the plate member 19 is rigidly secured to the top edge of the brace element 25, as by peening over the top ends of the lugs 26. The rear portion of the top edge of the brace member 25 is cut away to receive the downwardly offset rear portion 20 of plate 19, as shown at 27, and the rear marginal portion of the brace member 25 is formed with the rearwardly extending spaced finger elements 28, 29 and 30. The finger elements 28 and 30 are laterally offset on one side of the

plane of the brace member 25 and the finger member 29 is laterally offset on the other side of said plane, whereby the finger members 28, 30 and 29 are adapted to extend on opposite sides of the web 14 of the supporting bar 11 when the bracket member has been mounted on said supporting bar, as will be presently explained.

The lower finger element 30 is formed with a channeled portion 31 and with an outwardly struck sleeve element 32 intermediate said channel portion 31 to define a sleeve for receiving an adjusting bolt 33, said adjusting bolt extending parallel to the plate member 19, as shown in Figure 4. Threaded elements or nuts 34 and 35 are carried by the opposite sides of the outwardly struck sleeve element 32 and threadedly engage the bolt 33 to retain the bolt against endwise movement in the groove 31.

During the fabrication of the bracket structure, the plate member 19 is rigidly secured to the brace element 25 in the manner above described, the lugs 26 being received in the slots 23 and being rigidly secured thereto in any suitable manner. In using the bracket structure, the slot 22 is engaged over a selected lug 18 with the notch 21 thereof receiving the web 14 at the inner end of the slot 15, the web 14 below the plate member 19 of the bracket structure being received between the fingers 29 and 28, 30, the fingers 28, 30 extending at one side of said web, and the finger 29 on the other side of said web. The plate member 19 may be adjusted to a true horizontal position by means of the bolt member 33 whose end abuts the flange 12 of supporting bar 11, and the bolt member may be locked in position by means of its associated nuts 34, 35 which engage the sleeve element 32.

The shelf, shown at 36, is disposed on the plate member 19 and is secured thereto by suitable fasteners 37 engaging upwardly through the apertures 24 in the plate member 19.

Any desired number of vertical supporting bars 11 and adjustable brackets associated therewith may be provided for supporting the shelves 36 at suitably spaced locations longitudinally along the shelves. A suitable base 37 may be bolted to the lower ends of the vertical supporting bars 11, as shown in Figure 1.

As above explained, the supporting brackets may be adjusted to locate the plate elements 19 thereof in true horizontal positions by means of the adjusting bolts 33, whereby the shelves will be firmly supported by all of the adjusting brackets employed therewith and will not be twisted or warped because of uneven support by the brackets.

While a specific embodiment of an improved support for shelves and the like has been disclosed in the foregoing description, it will be understood that various modifications within the spirit of the invention may occur to those skilled in the art. Therefore, it is intended that no limitations be placed on the invention except as defined by the scope of the appended claims.

What is claimed is:

1. A support for shelves and the like comprising a vertical bar member having a forwardly projecting flange, said flange being formed with a horizontal notch having a downwardly flaring rear portion defining an upstanding dovetail lug at the forward end of the notch, a horizontal supporting plate formed at its rear end with a notch engaging said flange at the rear end of said first named notch and formed with a slot longitudinally aligned with said second named notch and lockingly receiving said upstanding lug, a depending abutment member secured to said plate forwardly of said slot, said depending abutment member extending below said plate and being aligned with the plane of said slot, said abutment member being engaged with said flange below said first named notch, and rearwardly extending spaced finger elements on

3

said abutment member, said finger elements being laterally offset from the plane of the respective sides of said abutment member and extending on opposite sides of said flange, and means on one of said fingers and engaging said bar member for adjusting said plate member angularly.

2. A support for shelves and the like comprising a vertical bar member having a forwardly projecting flange, said flange being formed with a horizontal notch having a downwardly flaring rear portion defining an upstanding dovetail lug at the forward end of the notch, a horizontal supporting plate formed at its rear end with a notch engaging said flange at the rear end of said first named notch and formed with a slot longitudinally aligned with said second named notch and lockingly receiving said upstanding lug, a depending abutment member secured to said plate forwardly of said slot, said depending abutment member extending below said plate and being aligned with the plane of said slot, said abutment member being engaged with said flange below said first named notch, rearwardly extending spaced finger elements on said abutment member, said finger elements being laterally offset from the plane of the respective sides of said abutment member and extending on opposite sides of said flange, and a horizontal adjusting screw carried by one of said finger elements and being engageable with said vertical bar member to angularly adjust the position of the supporting plate.

3. A support for shelves and the like comprising an elongated vertical bar member having a forwardly projecting flange extending longitudinally thereof intermediate the sides of said bar member, said flange having a plurality of vertically spaced notches formed therein with each of said notches having a downwardly flaring rear portion defining an upstanding dovetail lug at the forward ends of said notches, a horizontal elongated supporting plate having a depressed rear end portion provided with a substantially medially positioned notch extending inwardly therefrom, said rear end portion having a transversely extending slot formed therein intermediate the ends thereof and aligned with said notch, said slot being elongated in the direction of the longitudinal axis of said supporting plate, said notch engaging with said flange at the rear end of one of said first notches and said slot lockingly receiving therein the upstanding lug of said one of said first notches, said supporting plate at its forward end having a plurality of spaced apertures formed therein adjacent the marginal edges of its longitudinally extending sides and a plurality of spaced longitudinally elongated slots extending medially between the sides of said forward end of said supporting plate, said slots and said notch formed in said forward end of said supporting plate being aligned along the longitudinal axis thereof, a brace member for said supporting plate comprising a substantially flat vertical brace member having a forward portion including a plurality of longitudinally spaced lugs projecting substantially vertically from the upper edge thereof engaging within said plurality of aligned slots formed in the forward end of said supporting member and extending thereabove, the upper ends of said last-named lugs being peened over to rivet said supporting plate to said brace member, said brace member terminating in a rear end portion comprising a plurality of longitudinally extending vertically spaced fingers, said fingers extending below said depressed rear end portion of said supporting plate and being alternately offset on opposite sides of said first-named notch and slot and engaging opposite sides of said flange, the uppermost of said fingers having an upper edge depressed below the plane of said upper edge of said forward portion of said brace member and engaging against the lower side of said depressed rear end of said supporting plate, a sleeve integrally formed with the lowermost of said fingers, said sleeve having its longitudinal axis substantially parallel to the longitudinal axis

4

of the forward end of said brace member, a threaded element carried by said sleeve, a bolt member adjustably secured in said threaded element and having an end thereof engaging against said vertical bar member whereby adjustment of said bolt member linearly adjusts the position of said supporting plate and said brace member relative to said flange.

4. A support for shelves and the like comprising an elongated vertical bar member having a forwardly projecting flange extending longitudinally thereof intermediate the sides of said bar member, said flange having a plurality of vertically spaced notches formed therein with each of said notches having a downwardly flaring rear portion defining an upstanding dovetail lug at the forward ends of said notches, a horizontal elongated supporting plate having a depressed rear end portion provided with a substantially medially positioned notch extending inwardly therefrom, said rear end portion having a transversely extending slot formed therein intermediate the ends thereof and aligned with said notch, said slot being elongated in the direction of the longitudinal axis of said supporting plate, said notch engaging said flange at the rear end of one of said first notches and said slot lockingly receiving therein the upstanding lug of said one of said first notches, said supporting plate at its forward end having a plurality of spaced apertures formed therein adjacent the marginal edges of its longitudinally extending sides and a plurality of spaced longitudinally elongated slots extending medially between the sides of said forward end of said supporting plate, said slots and said notch formed in said forward end of said supporting plate being aligned along the longitudinal axis thereof, a brace member for said supporting plate comprising a substantially flat vertical brace member having a forward portion including a plurality of longitudinally spaced lugs projecting substantially vertically from the upper edge thereof and engaging within said plurality of aligned slots formed in the forward end of said supporting member and extending thereabove, the upper ends of said last-named lugs being peened over to rivet said supporting plate to said brace member, said brace member terminating in a rear end portion comprising a plurality of longitudinally extending vertically spaced fingers, said fingers extending below said depressed rear end portion of said supporting plate and being alternately offset on opposite sides of said first-named notch and slot and engaging opposite sides of said flange, the uppermost of said fingers having an upper edge depressed below the plane of said upper edge of said forward portion of said brace member and engaging against the lower side of said depressed rear end of said supporting plate, a sleeve integrally formed with the lowermost of said fingers, said sleeve having its longitudinal axis substantially parallel to the longitudinal axis of the forward end of said brace member, a threaded element carried by said sleeve, a bolt member adjustably secured in said threaded element and having an end thereof engaging against said vertical bar member whereby adjustment of said bolt member linearly adjusts the position of said supporting plate and said brace member relative to said flange, and means extending through said apertures formed and arranged to engage with a shelf to fixedly connect such shelf with said supporting plate.

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