Sept. 18, 1934. E. F. TOBOLD 1,973,829

HINGED BRACKET

Filed Dec. 22, 1932

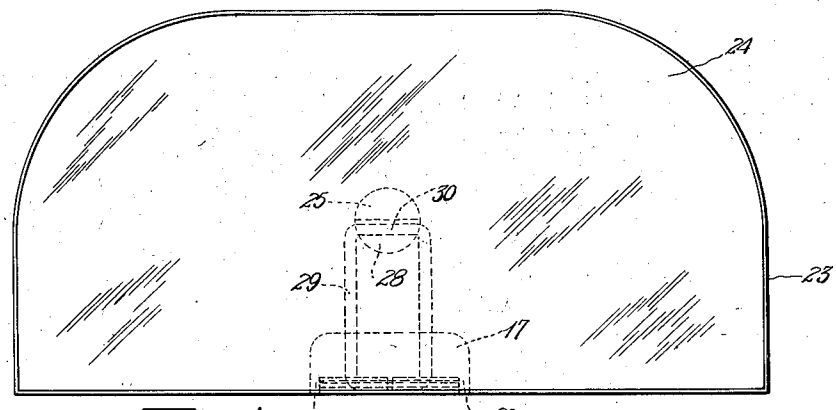


FIG. 1

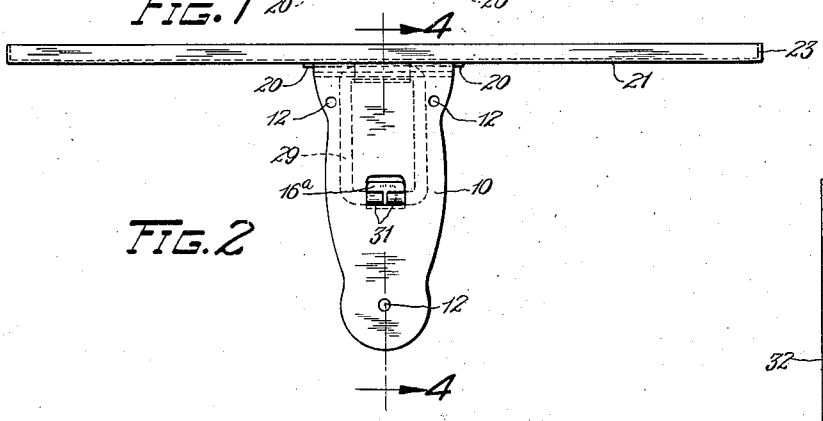


FIG. 2

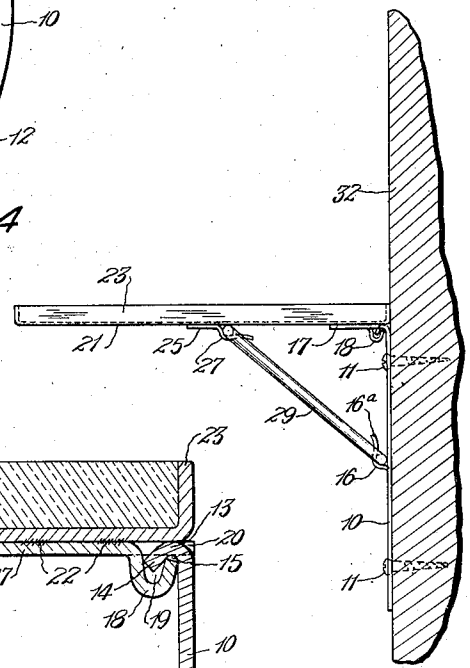


FIG. 3

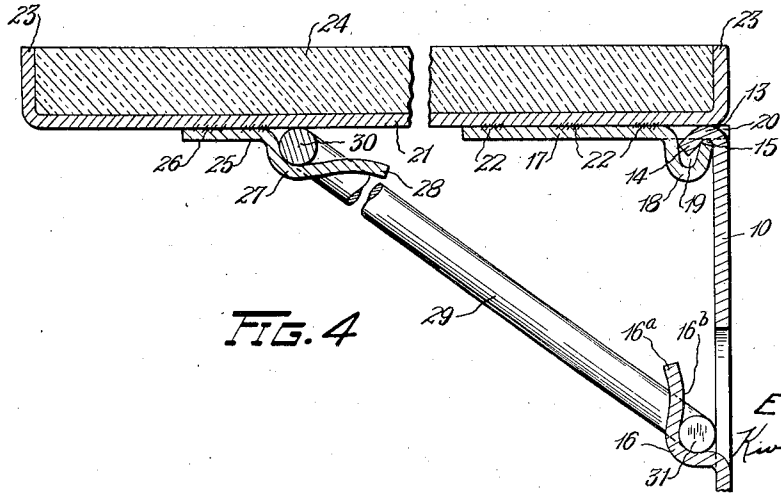


FIG. 4

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Patented Sept. 18, 1934

1,973,829

UNITED STATES PATENT OFFICE

1,973,829

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Application December 22, 1932, Serial No. 648,343

6 Claims. (Cl. 248—18)

This invention relates to a hinged bracket especially adapted for use as a shelf bracket, although, of course, susceptible of other advantageous uses.

An object of the invention is to provide a hinged bracket of simple construction that may be formed substantially entirely of sheet metal stampings and can, therefore, be economically manufactured and cheaply sold.

Another object is to provide a hinged bracket that is easy to assemble; and once a shelf, with the bracket attached thereto, is secured to a wall, the hinged members of the bracket will not come apart.

Additional objects and advantages will become apparent hereinafter during the following description of an embodiment of the invention which is illustrated in the accompanying drawing, wherein:

Fig. 1 is a top plan view of a shelf with the hinged bracket attached thereto, the rear edge of the shelf being located toward the bottom of the sheet;

Fig. 2 is a rear elevational view of the shelf with the hinged bracket attached thereto, that is, this view is an elevational view looking toward the bottom of Fig. 1;

Fig. 3 is a side elevational view of the shelf and hinged bracket when attached to a wall or other fixed support, such support being shown in section; and

Fig. 4 is a vertical sectional view through the shelf and hinged bracket and is taken substantially on line 4—4 of Fig. 2, looking in the direction of the arrows.

In the drawing there is illustrated a shelf of such size that a single hinged bracket is sufficient to support the same, but it will be understood, of course, that a plurality of the hinged brackets may be employed, if desired, or if the shelf is of such size as to require the use of a number of the brackets.

The hinged bracket comprises a plate 10, preferably but not necessarily formed of a sheet metal stamping and adapted to serve as an attaching plate for the bracket and shelf, since it may be secured to a wall or other fixed support by means of screws 11, or other suitable securing members, passing through openings 12 in the plate. The upper edge of the plate is provided with a laterally turned portion 13 and a downwardly turned portion 14, such portions forming together with the plate a downwardly facing channel or groove 15. The downwardly turned portion 14 is disposed preferably at an angle to the plate of approximately 45° to facilitate the assembly of the butt of the hinged bracket with the plate, as will later be described.

The plate 10, intermediate its ends and at its longitudinal center, is provided with an outwardly curved and upwardly extending tab or lug 16 having adjacent its upper end a portion 16a extending angularly outwardly from an inwardly curved portion 16b, the latter portion acting as a retaining means for the lower end of the bracket brace, later to be referred to, which is positioned between the plate 10 and the tab or lug 16. The tab 16 in the preferred form of the invention is integral with the plate 10, being cut and stamped outwardly therefrom, but it should be understood that said tab could be separate from the plate and secured thereto by some suitable securing means.

The butt 17 of the hinged bracket is also a plate-like member and is preferably but not necessarily formed of a sheet metal stamping. The butt is of a length slightly greater than the width of the upper end of the plate 10 and is provided along one of its longitudinal edges with a downwardly and upwardly extending reversely bent portion 18 forming an upwardly facing channel or trough 19 the outer edge of which terminates slightly below the under surface of the butt. The reversely bent portion 18 is of a length substantially equal to the length of the channel 15 and there are provided at the opposite ends of the trough 19 lugs 20 projecting past the opposite edges of the plate 10 when the butt and plate are in assembled relationship and serving to limit sidewise displacement of the butt with respect to the plate.

The butt 17 is secured to the under side of a shelf 21 and adjacent the rear edge thereof by some suitable securing means, depending upon the character of the shelf. In the present illustration, the shelf is shown as formed of a metal stamping and a desirable way in which to secure the butt 17 thereto would be by spot-welding, as indicated at 22. Of course, if the shelf were a wooden one, the butt 17 could be provided with openings through which would extend securing screws or other suitable means.

As previously stated, the shelf 21 is shown as formed of a metal stamping and is provided around its peripheral edge with an upstanding flange 23 serving as a retaining ledge on the shelf. In case the shelf were to be used for a bathroom shelf, or for other similar purposes, a glass plate 24 cut to fit within the shelf could be used, if desired. A retaining plate 25 for the brace is secured to the under side of the shelf outwardly of the butt 17 by suitable securing means, such as

by spot-welding, as indicated at 26, or by screws if desired, as mentioned in connection with the butt. The retaining member is also preferably a sheet metal stamping and, as illustrated herein, is substantially circular in shape and is provided with a downwardly and rearwardly extending portion 27 having at its outer end an upwardly and downwardly curved portion 28 forming a retaining means for the outer end of the brace now to be described.

Although the brace may take various forms, a preferred and simple form is illustrated herein and comprises a wire bail 29 adapted to have its loop portion 30 pressed past the portion 28 of the retaining member 25 and into position between the portion 27 and the bottom of the shelf, while the inturned ends 31 of the bail are pressed past the portion 16b of the tab 16 and rest in the outwardly curved part of the tab.

When the hinged bracket is employed with a metal shelf, the butt 17, the retaining member 25, and the shelf 21 are spot-welded together, as previously mentioned and constitute one unit of the assembly, the plate 10 and the bail or brace 29 forming the other units thereof.

In assembling the units, the butt 17 with its associated parts and the plate 10 are disposed at the proper angle to enable the downwardly turned portion 14 on the plate 10 to pass between the lugs 20 of the butt 17 and into the upwardly facing groove 19, whereupon the butt and shelf may be swung to a position substantially at right angles to the plate 10 with the shelf fulcruming on the top of the plate and extending over the same to retain the butt and plate in assembled relationship. With the parts held in this position either by means of the brace 29 or otherwise, the plate 10 is secured to the fixed support 32, it being remembered that the loop and the inturned ends of the bail or brace are pressed past the restricting portion of the tab 16 and the retaining member 17, as previously set forth, and since the tab and member are formed preferably of sheet metal, they will have an inherent resilience such that the assembly of the loop and ends of the bail therein may be accomplished by a snap spring action.

Although a preferred form of the invention has been illustrated and described herein, it will be understood that the invention is susceptible of various modifications and adaptations within the scope of the appended claims.

Having thus described my invention, I claim:

1. A hinged shelf bracket comprising, a plate adapted to be secured to a fixed support and formed of a sheet metal stamping having its upper edge turned outwardly and downwardly to form a downwardly facing channel and provided intermediate its upper and lower edges with an outwardly and upwardly extending tab cut and stamped from said plate, a butt member adapted to be secured to the under side of a shelf and formed of a sheet metal stamping having a reverse bend along one of its edges forming an upwardly facing channel, the outer walls of both channels being adapted to overlap and extend into the other channel when the bracket is assembled with said shelf adapted to overlie both channels and to bear upon the upper edge of said plate, a retaining member formed from a sheet metal stamping adapted to be secured to the under side of the shelf outwardly of said butt member and having a downwardly and rearwardly extending portion, and a substantially U-shaped bail adapted to have its opposite ends cooperate with said retaining member and said tab to maintain said plate and said shelf and butt substantially perpendicular to each other when the bracket is assembled on a shelf and fixed support.

2. A hinged shelf bracket comprising, a plate adapted to be secured to a fixed support and having its upper edge turned outwardly and downwardly to form a downwardly facing channel, a butt member adapted to be secured to the under side of a shelf and having a reverse bend along one of its edges forming an upwardly facing channel, said butt member also having lug portions extending past the opposite ends of said channel, the outer walls of both channels overlapping and extending into the other channel when the bracket is assembled with the lug portions of the butt member extending past the opposite ends of the channel on said plate and with said shelf being adapted to overlie both channels and to bear upon the upper edge of said plate, and means for maintaining said plate and butt member substantially perpendicular to each other when the bracket is assembled on a shelf and fixed support.

3. In combination, a metal shelf support and a hinged bracket therefor, said bracket comprising a plate adapted to be secured to a fixed support and formed of a sheet metal stamping having its upper edge turned outwardly and downwardly to form a downwardly facing channel and provided intermediate its upper and lower edges with an outwardly and upwardly extending tab cut and stamped from said plate, a butt member welded to the under side of said shelf support and formed of a sheet metal stamping having a reverse bend along one of its edges forming an upwardly facing channel, the outer walls of both channels being adapted to overlap and extend into the other channel with said shelf support overlying both channels and bearing upon the upper edge of said plate, a retaining member formed from a sheet metal stamping welded to the under side of the shelf support outwardly of said butt member and having a downwardly and rearwardly extending portion, and a brace having its opposite end portions engaging said retaining member and said tab and adapted to maintain said plate and said shelf support and butt substantially perpendicular to each other.

4. A hinged shelf bracket comprising a plate adapted to be secured to a fixed support and formed of a sheet metal stamping having its upper edge turned outwardly and downwardly to form a downwardly facing channel and provided intermediate its upper and lower edges with an outwardly and upwardly extending tab, a butt member adapted to be secured to the under side of a shelf and formed of a sheet metal stamping having a reverse bend along its inner edge forming an upwardly facing channel, the outer walls of both channels being adapted to overlap and extend into the other channel when the bracket is assembled with said shelf adapted to overlie both channels and to bear upon the upper edge of said plate, a retaining member formed from a sheet metal stamping adapted to be secured to the under side of the shelf outwardly of said butt member and having a downwardly and rearwardly extending portion, and means adapted to cooperate with said retaining member and said tab to maintain said plate and said shelf and butt substantially perpendicular to each other when the bracket is assembled on a shelf and fixed support.

5. A hinged shelf bracket comprising a plate adapted to be secured to a fixed support and provided on its outer side at its upper edge with a downwardly facing channel, a butt member adapted to be secured to the under side of a shelf and provided along its inner edge with an upwardly facing channel and with lugs extending across the opposite ends of said channel, the outer walls of both channels being adapted to overlap and extend into the other channel when the bracket is assembled with the lugs extending past the opposite ends of the channel on said plate and with said shelf being adapted to overlie both channels and to bear upon the upper edge of said plate, and means for maintaining said plate and butt member substantially perpendicular to each other when the bracket is assembled on a shelf and fixed support.

6. In combination, a shelf support and a hinged bracket therefor, said bracket comprising a plate adapted to be secured to a fixed support and provided on its outer side and adjacent its upper edge with a downwardly facing channel and intermediate its upper and lower edges with an outwardly and upwardly extending tab, a butt member secured to the under side of said shelf support and provided along its inner edge with an upwardly facing channel, the outer walls of both channels being adapted to overlap and extend into the other channel with said shelf support overlying both channels and bearing upon the upper edge of said plate, a retaining member secured to the under side of the shelf support outwardly of said butt member and having a downwardly and rearwardly extending portion, and a brace having its opposite end portions engaging said retaining member and said tab and adapted to maintain said plate and said shelf support and butt substantially perpendicular to each other.

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