

[54] **ADJUSTABLE SHELF BRACKET**

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[56] **References Cited**

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Primary Examiner—J. Franklin Foss

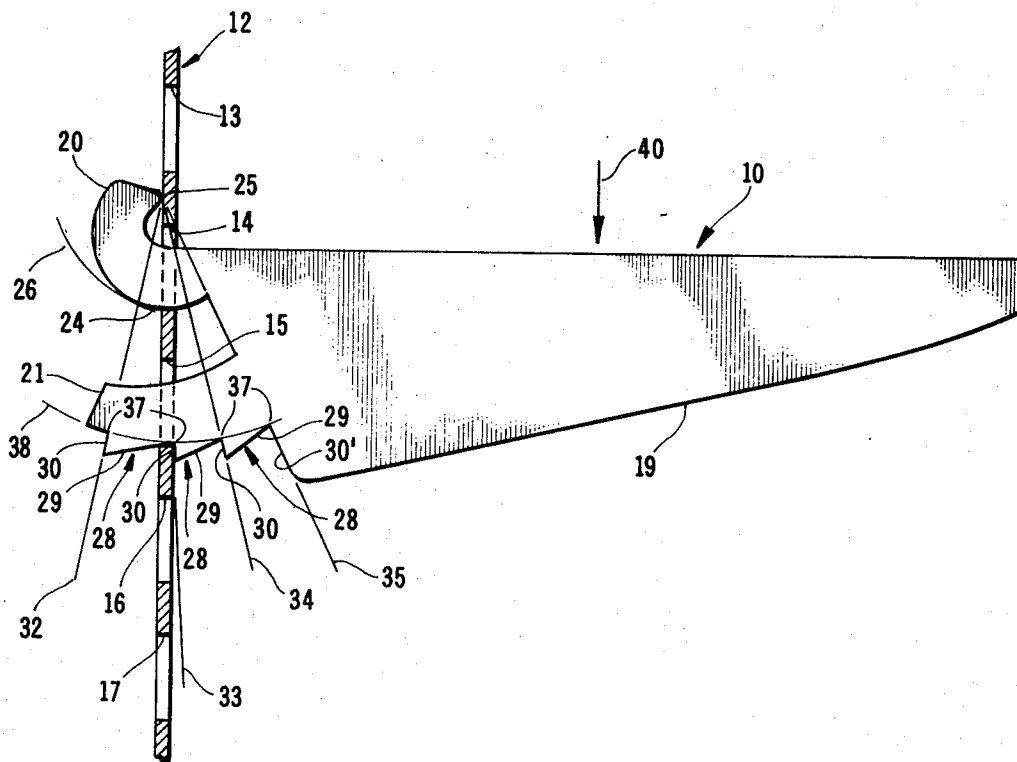
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[57]

ABSTRACT

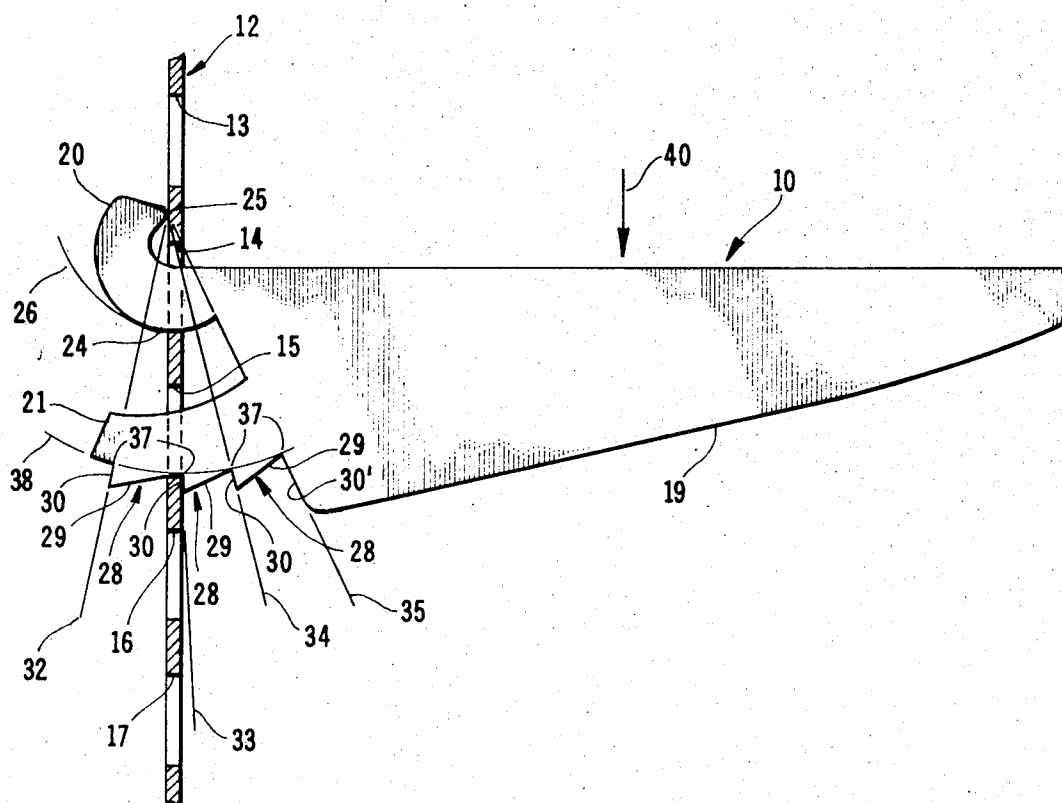
A one piece adjustable shelf bracket having two hooks or lugs which hook into slots in a vertical post. The bracket is angularly adjustable in a vertical plane and the hooks are designed to vectorize loads applied to the shelf so that forces are applied from the hooks to the slotted post in three or four different places. This provides for an even and efficient distribution of the shelf load.

2 Claims, 1 Drawing Figure



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ADJUSTABLE SHELF BRACKET

The invention relates to a new and improved adjustable shelf bracket of the type which can be mounted to occupy several angular positions.

Shelving plays an important role in the modern merchandising of various products of the type sold in department stores, hardware stores and drug stores. The fixed horizontal shelf is of course very useful but the flexibility afforded by angularly adjustable shelves in making display arrangements is very desirable. Although one-piece adjustable shelf brackets are found in the prior art there are still improvements to be made with regard to designing the hooks so that the shelf loads to be accommodated are vectorized in a manner such that reaction forces are more evenly and efficiently distributed. The bracket of the present invention has a hook design wherein forces from the hooks are applied to the vertical, slotted pilaster or standard in three or four different places and this allows the bracket to be of less rugged construction so as to be more inexpensive or, if the bracket is made with a heavier construction, allows greater shelf loading.

A main object of the invention, therefore, is to provide a new and improved adjustable shelf bracket which provides a novel distribution of the shelf loads which gives the advantages referred to above. Another object of the invention is to provide a new and improved adjustable shelf bracket assembly which is readily adjustable, is inexpensive to manufacture and has great utility.

Other objects and advantages of the invention will become apparent from the following specification, the drawing and appended claims.

The drawing is a side elevational view, partly in section, of a shelf bracket made in accordance with the invention and shown mounted in conventional slotted pilaster.

In the drawing a shelf bracket 10 made of sheet metal or some other suitable material is attachable to a conventional vertically extending pilaster 12. Pilaster 12 has vertically arranged, uniformly spaced slots of which slots 13 to 17 are illustrated.

Bracket 10 comprises an arm 19 and rearwardly extending upper and lower lugs 20 and 21 which are insertable into and cooperable with a pair of pilaster slots which normally would be adjacent slots. Upper lug 20, which is shown inserted in slot 14, is generally hook shaped with a curved surface portion 24 and an end point 25 which is the center of the curved surface portion 24. The curved surface portion 24, to the extent that it is of interest herein, merges with the arc line 26 for which the end point 25 is the center.

Lower lug 21, which is shown inserted in slot 15, has a plurality of ratchet-like teeth 28 with each tooth being formed with an inclined edge 29 and a step edge 30. The adjacent end of the arm 19 is formed with an edge 30' which for practical purposes is of the same character with regard to function as the tooth edges 30.

The step edges 30 and 30' are each on a radial line relative to the end point 25 of the upper lug 20, this being indicated by the radial construction lines 32 to 35 which are uniformly angularly spaced. The respective points of intersection 37 between the inclined edges 29 and the step edges 30 are on a circular arc 38 of which the upper lug end point 25 is the center thereof. At this point it may be mentioned that the surface portion 24 of upper lug 20 that is of special interest herein is only the portion between the radial construction lines 32 and 35.

With the construction described and illustrated the bracket 10 has four angular positions which are the level position shown in the drawing, one angular position above the level position and two angular positions below the level position. In each of the four angular positions the end point 25 of the upper lug 20 maintains the same point of contact with the pilaster 12. The upper lug surface portion 24 has contact with the lower edge of slot 14 for each of the four angular positions. The lower lug 21 has contact with the lower edge of slot 15 for each of the angular positions with an inclined edge 29 bearing downwardly and a step edge 30 bearing rearwardly.

The bracket 10 thus has four points of contact with the pilaster 12 and this has the effect of providing four reaction forces for the single applied force 40 to which the arm 10 would be subjected by a loaded shelf. This provides a good distribution of forces with regard to the ability of lugs 20 and 21 to accommodate them such that, relatively speaking, a greater applied force 40 is withstandable. Also, with this construction the ratchet type teeth 28 are short and stubby such that they are relatively very strong for this application. In addition, angular adjustments are easily made by reason of the lugs 20 and 21 occupying only about two-thirds the heights of the slots 14 and 15. It is thus a simple matter to lift the arm 10 vertically in connection with rotating it to move it to a new angular position.

I claim:

1. A one-piece multiple angle shelf bracket for use with a pair of upper and lower slots of a pilaster having a column of uniformly spaced slots, comprising, an arm adapted to support a shelf, a hook shaped upper lug attached to said arm having a curved surface portion and an end point which is the center of said curved surface portion, said upper lug being cooperable with said upper slot, said curved surface portion engaging the lower side of said upper slot for all positions of said bracket, a lower lug having a plurality of teeth and being attached to said arm, said lower lug being cooperable with said lower slot, said teeth being ratchet type teeth which intersect on a circular arc of which said upper lug end point is the center thereof.

2. A shelf bracket according to claim 1 wherein each of said teeth has the form of a ramp with an inclined edge and a step edge, each said step edge being on a radial line relative to said end point of said upper lug.

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