

Sept. 23, 1969

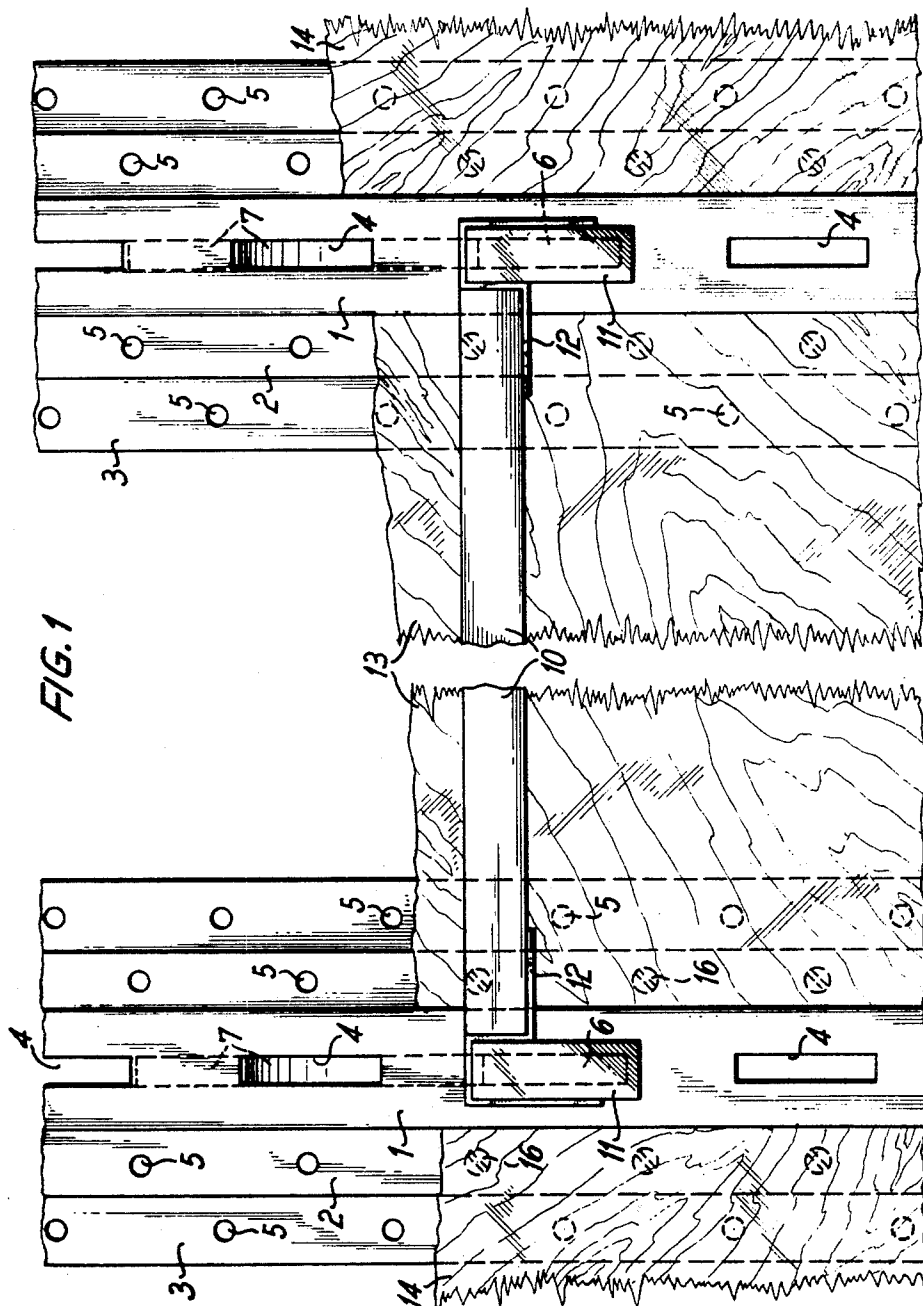
S. K. GERDMAN

3,468,507

UPRIGHT FOR SHELVES

Filed Dec. 9, 1966

3 Sheets-Sheet 1



INVENTOR:
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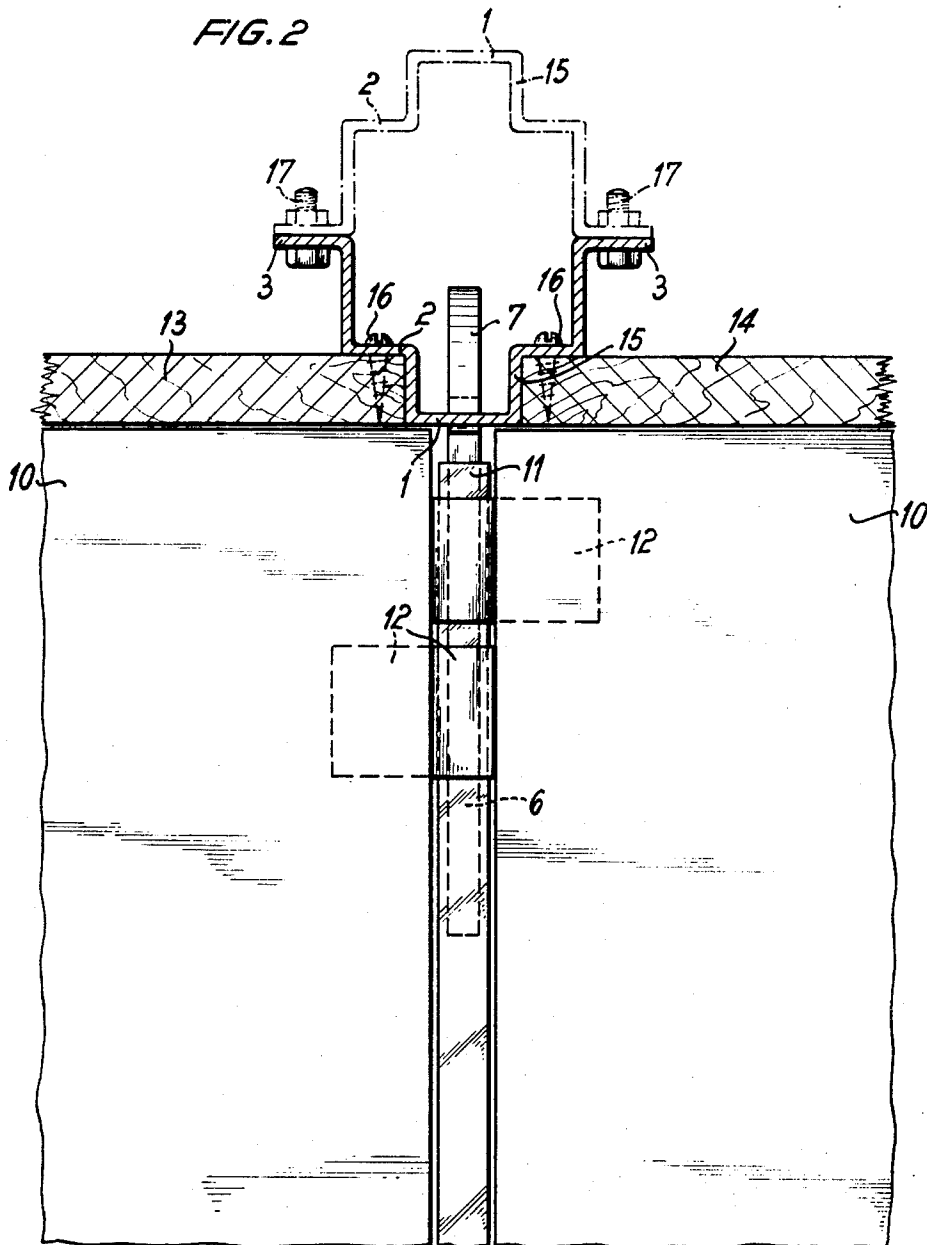
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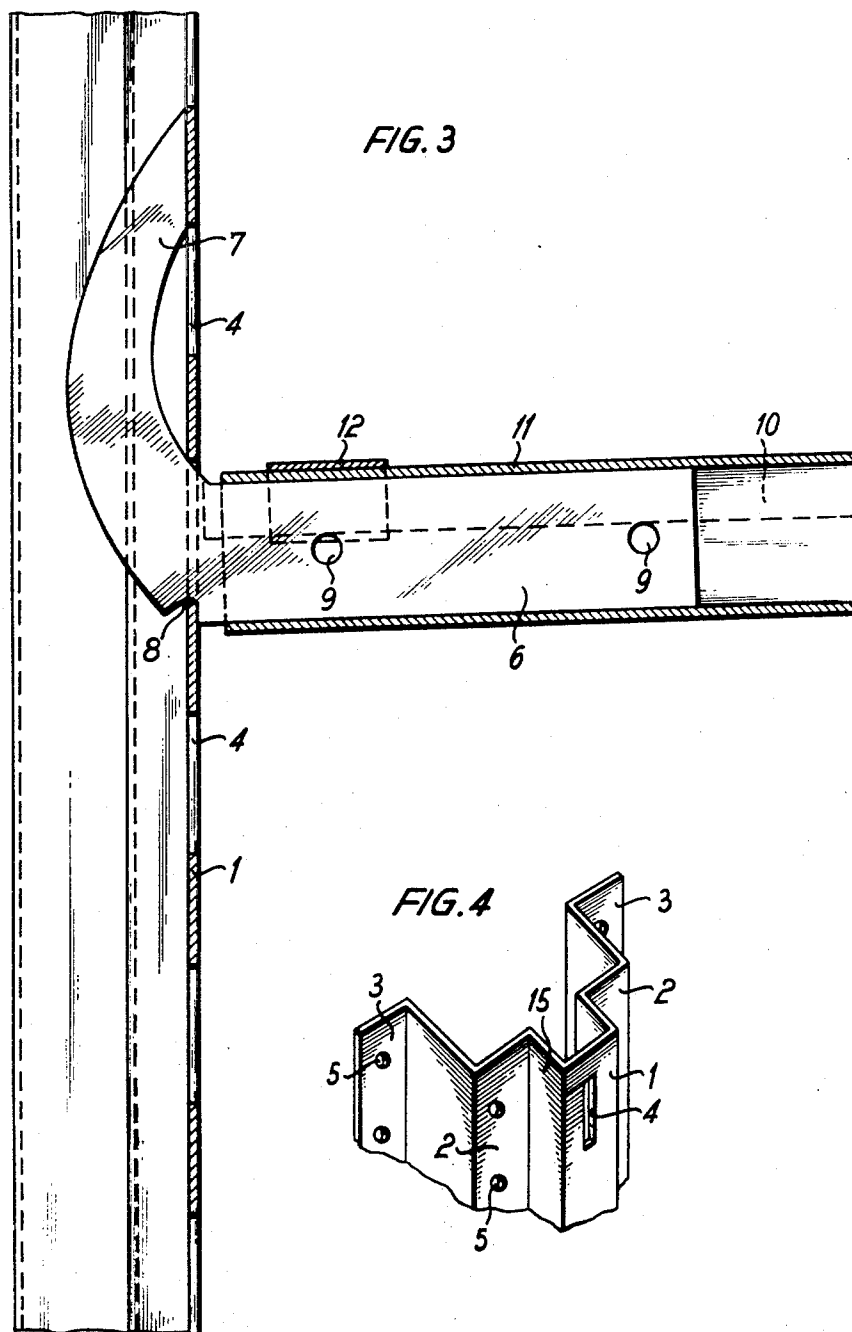
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UPRIGHT FOR SHELVES

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1 Claim

ABSTRACT OF THE DISCLOSURE

The combination of an U-profile upright hollow bracket support bar and a bracket engaged in a slot in the web of said support, characterized in that each side portion of said support comprises two shoulders perpendicular to the web and two shoulders parallel with the web, each shoulder surface provided with plural attachment and support points; and said bracket comprising a first arm extending normal to the support and a second arm inserted within a slot in said support and extending upward over the adjacent slot along a convex curve and with its end abutting the inside of the web at a point above said adjacent slot.

The present invention relates to an upright for supporting shelf floors as well as to a new kind of bracket intended for the upright and serving for the suspension of a shelf floor. The purpose of the invention is to provide, particularly for shelves in shops and storerooms and at exhibitions, a new kind of upright constructed in such a manner that the supporting and reinforcing elements of the brackets bearing the shelf floors do not interfere with the free spaces between these latter. With shelves of this type as hitherto designed the over-all appearance of the shelf suffers considerable from the conspicuous supporting and stiffening devices, which constitute a hindrance, particularly when the shelf is affixed to a wall. A further purpose of the invention is to provide an upright which can be built into a stationary or transportable wall element or wall panel which can be erected wherever desired, e.g. in an exhibition room, in such a way that the upright itself does not project from the surface of the wall, that side of it which bears the brackets being situated in the same vertical plane as the smooth surface of the wall element or of the wall panel, thus forming a part of the said surface, whereby the over-all appearance of the equipment of the room is greatly improved.

The main characteristic of the invention resides in the fact that the upright is designed step-wise, having a central bar provided with slots for brackets intended to bear the shelf floors, and side bars which are situated on both sides of the central bar and situated in pairs in the same vertical planes, which are parallel with the central bar, the side bars being provided with holes for securing screws etc. The bracket intended for this upright consists, according to the invention of an angle piece with an approximately horizontal straight arm, with means of attachment for the shelf floor, and of a convexly curved ascending arm which can be inserted in the slots of the central bar in such a way that the free end of the curved arm of the bracket rests against the internal side of the central bar while the knee of the said arm rests against the lower edge of the slot.

Owing to this construction of the upright and the bracket, the supporting and reinforcing element of the bracket, i.e. the curved arm, is situated entirely inside the upright, so that it is not visible from the outside. The only visible part of the bracket is the straight arm, which, however, comes to rest just underneath or just outside the shelf floor borne by it and is thus not conspicuous and likewise does not interfere with the space

between two adjacent shelf floors. Owing to the peculiar step-wise construction, moreover, the upright, particularly in the case of a wall, can easily be inserted, for example, between two wall elements or wall panels in such a way that it is only the central bar, bearing the brackets, that is visible from the outside, this bar being situated in the same vertical plane as the smooth surface of the wall elements, thus forming part of the total wall surface. Owing to the novel and peculiar construction of the curved arm, acting as an angle lever, the supporting capacity of the bracket is also considerably improved, since, on the one hand, the knee of the angle piece forming the bracket rests against the lower edge of the slot, while, on the other hand, its free end rests against the internal side of the central bar of the upright.

Other characteristics and advantages of the invention will emerge from the following description, attention being drawn to the accompanying drawings, providing schematic diagrams of an example for the construction of an upright and the bracket.

In these drawings:

FIG. 1 is a front view of two uprights built in between wall elements, of which only part is shown, and of a shelf floor suspended on brackets;

FIG. 2 is a horizontal section through an upright, with a plan view of the shelf floor;

FIG. 3 is a vertical section through the upright;

FIG. 4 is a view, in perspective, of the upper end of the upright.

The upright U is of a step-wise construction, with a central bar 1 and two side bars 2 and 3 on the two sides of the central bar, the side bars being situated in pairs in the same vertical planes, which are parallel to the central bar. The central bar 1 is provided with vertical slots 4 intended for the brackets, while the side bars 2 and 3 contain circular holes 5 for securing screws.

The bracket B consists of a straight arm 6 and of an ascending and convexly curved arm 7. The dimensions of the arm 7 are such that it can be introduced into the slots 4 of the central bar 1, until a notch 8 provided between the curved arm 7 and the straight arm 6 and situated in the lower edge of the bracket engages the lower end of the slot in question. In this position, the upper vertical terminal edge of the curved arm 7 rests against the vertical internal side of the central bar 1, and between two adjacent slots 4, as seen in FIG. 3, while at the same time the straight arm 6 projects from the central bar 1 in an approximately horizontal position. When the bracket is being mounted, the free end of the curved arm 7 is first of all introduced pointing obliquely downwards, into the slot 4, after which the bracket is pivoted in a clockwise direction until the notch 8 engages the lower end of the slot 4 and the arm 7 at the same time encountering the internal side of the central bar 1. To facilitate the introduction and extraction of the bracket, the side edges of the notch 8 are situated in planes which form an acute angle with each other (see FIG. 3), and the outer side edge of the notch is approximately perpendicular to the lower edge of the straight arm 6.

The straight arm 6 is provided with holes 9 to enable supporting devices to be affixed, on which the shelf floor 10 is suspended in the known manner. As may be seen from FIG. 3, however, the straight arm 6 can also be provided with a tubular or sleeve-shaped extension arm 11, which is mounted on the arm 6 and on which the shelf floor 10 is suspended by means of hooks 12 or similar devices.

As may be seen from FIGS. 1 and 2, the upright can be built in between two wall elements 13 and 14 of which

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the vertical lateral edges lie tightly against the sides 15 of the central bar 1 and are connected with the upright by means of screws inserted from the inside and through the holes 5 of the side bars 2. The wall elements 13 and 14 should preferably have a width corresponding to the sides 15 of the central bar 1, so that the surface of the built-on wall is entirely flat, the only parts projecting therefrom being the straight arms 6, which however, come to rest close beside or immediately underneath the suspended shelf floor 10 and are therefore not conspicuous.

As may be seen from FIG. 2, it is also possible for two uprights of the design described in the foregoing to be assembled thus forming a column with projecting bracket arms 6 on two opposite sides. In this case the side bars 3 of the two uprights are interconnected by means of screws 17, whereupon double wall elements 13 and 14 are affixed to the side bars 2.

A further possible method of erection is that in which a unit is constructed of wall elements and of uprights built in between them, whereupon this unit is inserted by its lower and upper edges in channel section on the floor and ceiling of the room.

I claim:

1. In the combination of an U-profile upright hollow bracket support bar and a bracket engaged in a slot in the web of said support, the improvement in which each side portion of said support comprises two shoulders

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perpendicular to the web and two shoulders parallel with the web, each of said shoulder surfaces parallel to said web being provided with plural attachment and support points; and points; and said bracket comprising a first arm extending normal to the support and a second arm inserted within a slot in said support and extending upward over the adjacent slot along a convex curve and with an end abutting the inside of the web at a point above said adjacent slot.

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