March 6, 1951 L. D. WATKINS 2,544,203

BRACKET SHELF

Filed Dec. 10, 1948 2 Sheets-Sheet 1

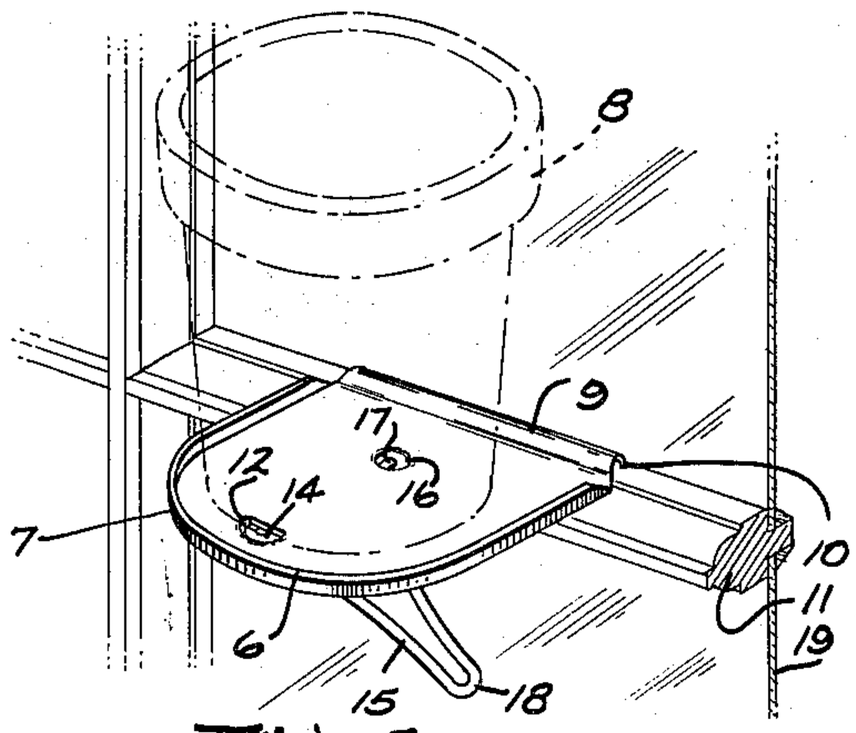

Fig. 1

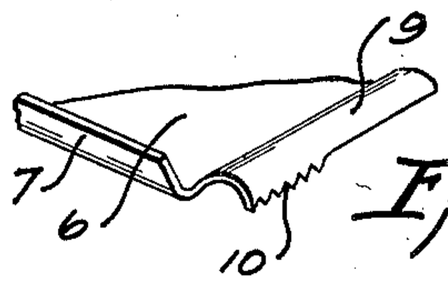

Fig. 4

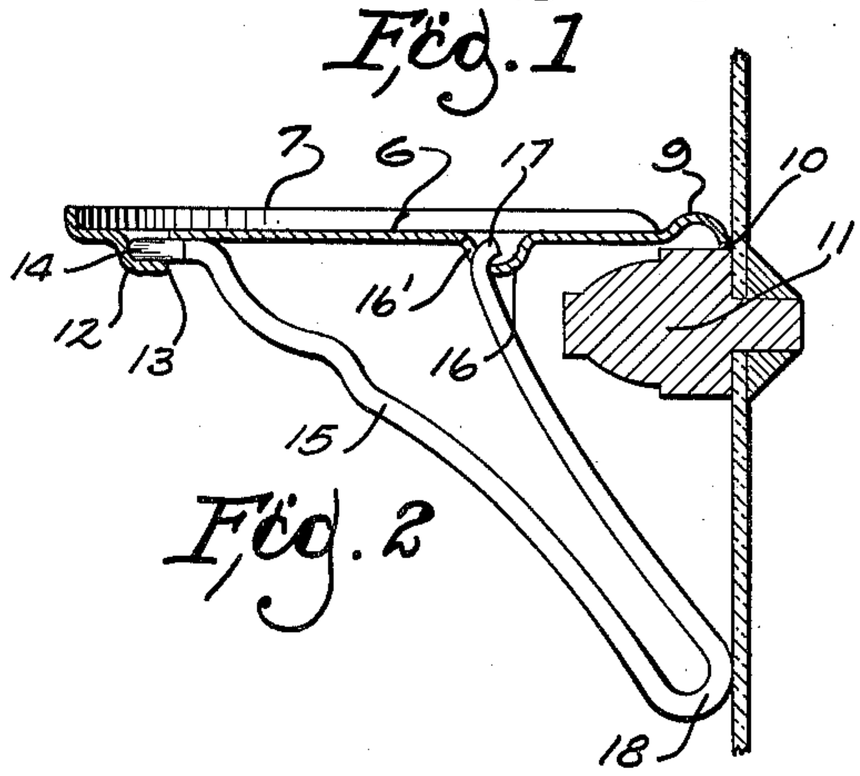

Fig. 2

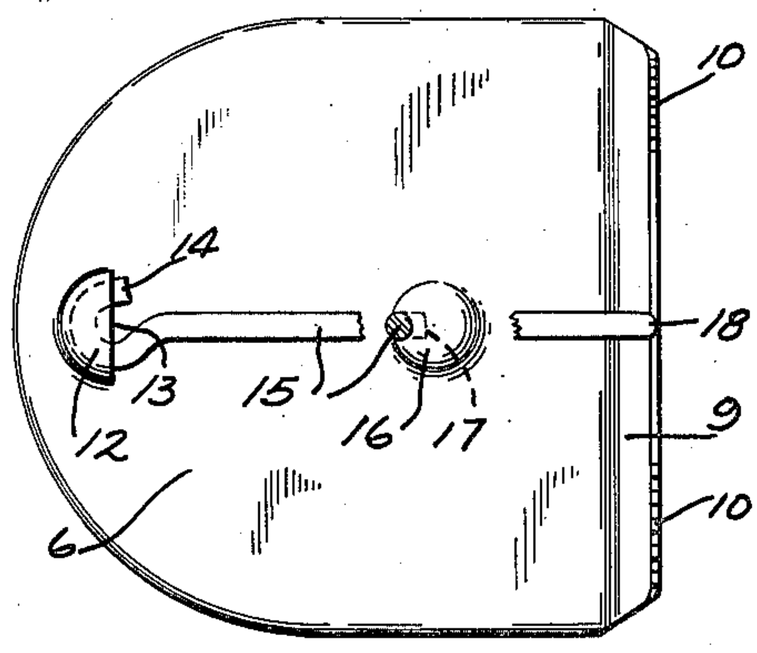

Fig. 3

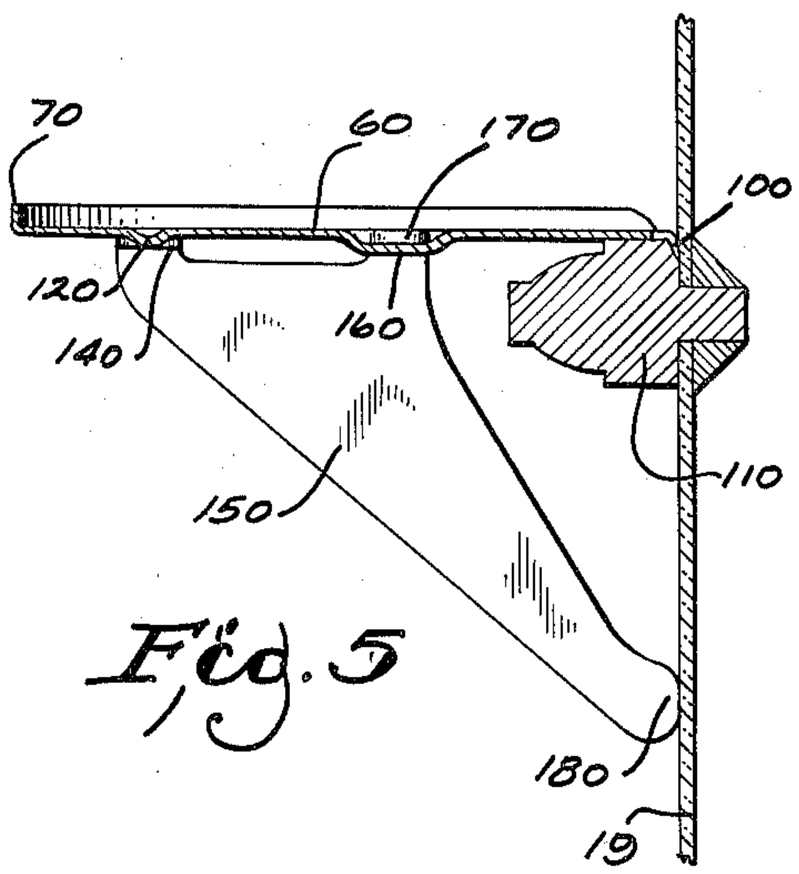

Fig. 5

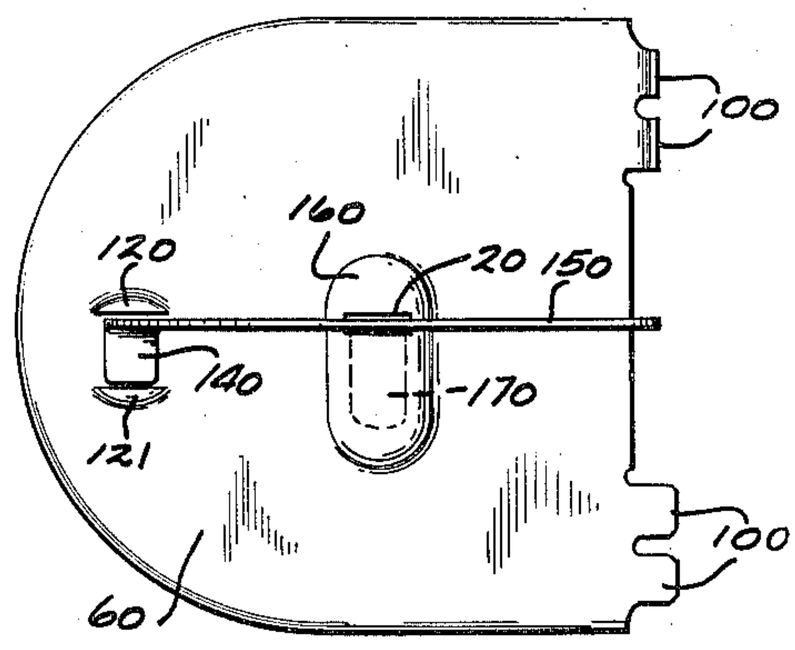

Fig. 6

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BRACKET SHELF

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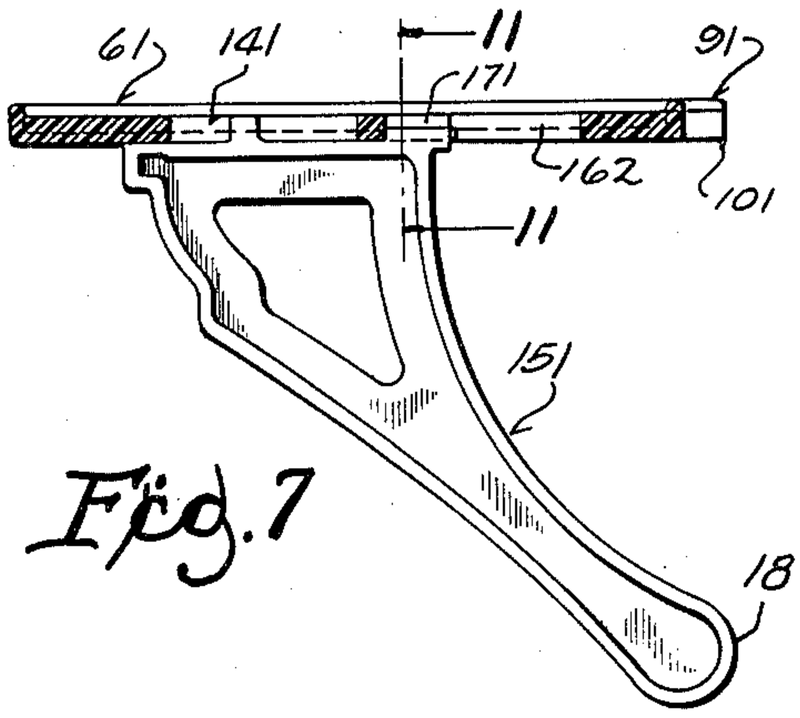

Fig. 7

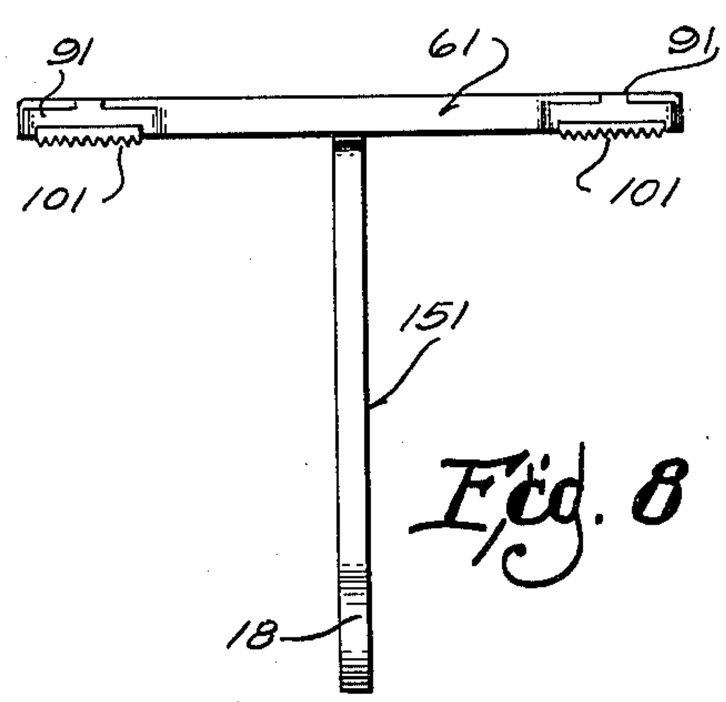

Fig. 8

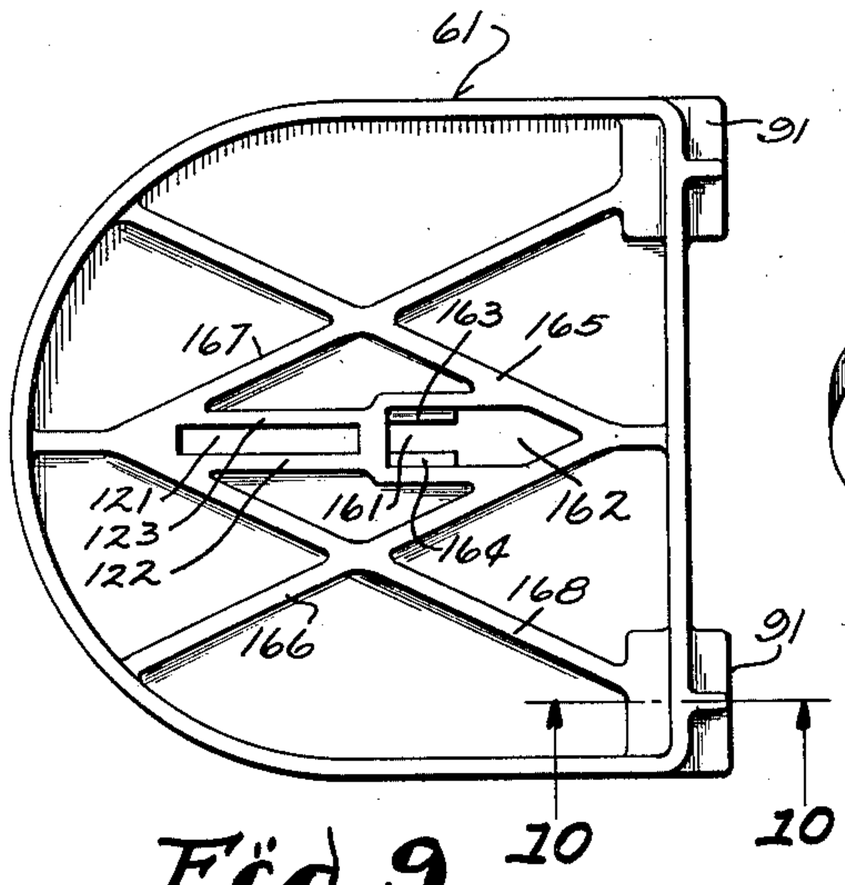

Fig. 9

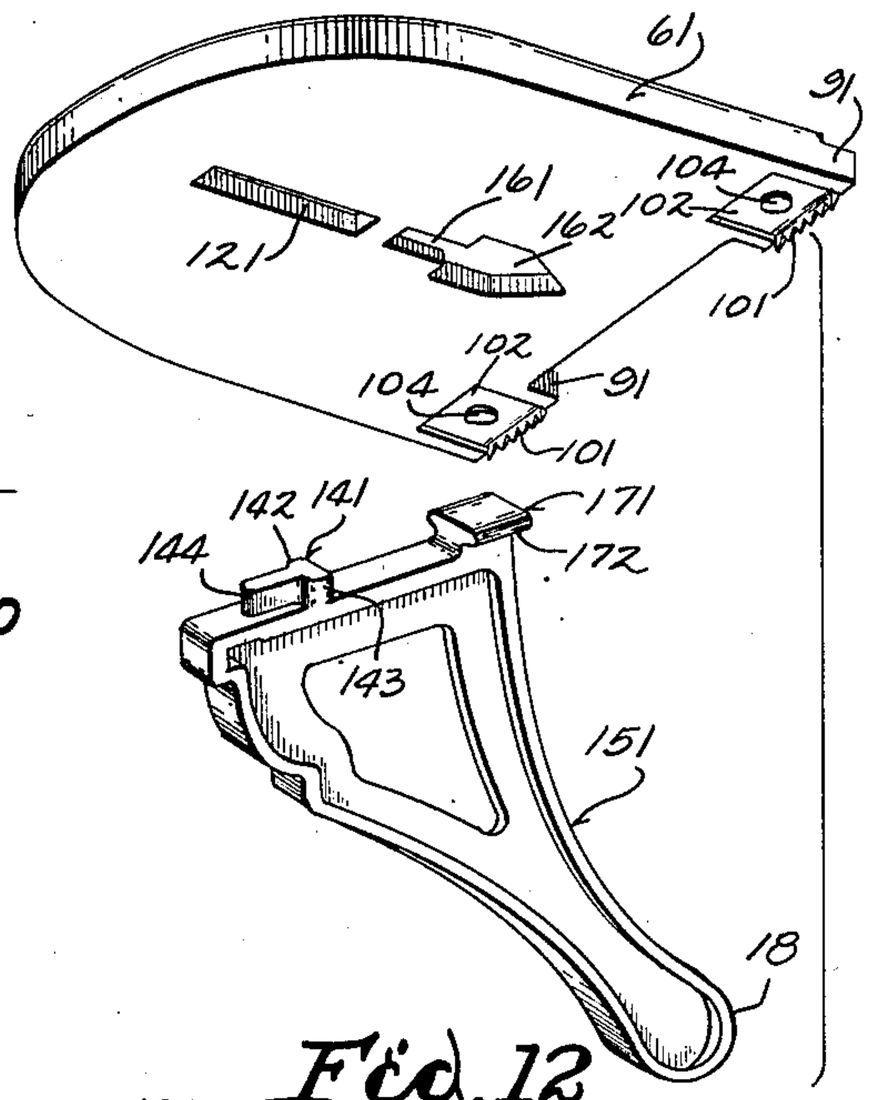

Fig. 12

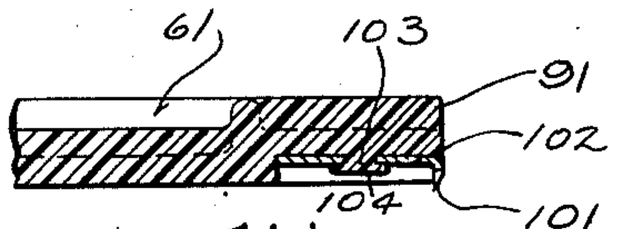

Fig. 10

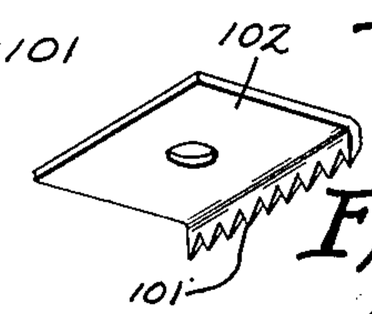

Fig. 13

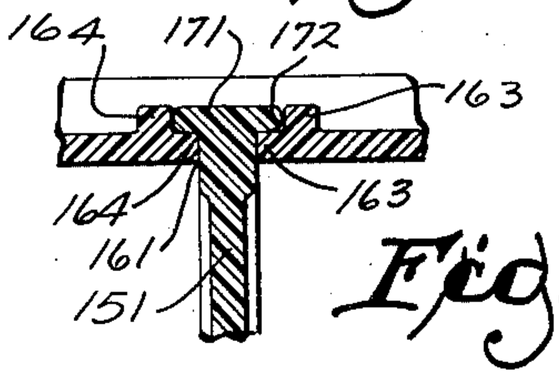

Fig. 11

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UNITED STATES PATENT OFFICE

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BRACKET SHELF

Lucius D. Watkins, Milwaukee, Wis.

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4 Claims. (Cl. 248—235)

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This invention relates to a bracket shelf. The device is of the type adapted to be suspended from a window mullion or sash rail for the support of a flowerpot or the like.

It is a primary object of the invention to provide a novel and simple device, one part of which comprises a shelf provided with hooks for engaging the window mullion, another part comprising a bracket having portions connected with the shelf for mutual support.

It is a further object of the invention to provide a device which will support considerable weight without requiring any positive connection with the window mullion, the shelf having hooks for non-sliding engagement with the mullion, and the bracket having a portion in thrust contact with the window beneath the mullion and desirably in the same vertical plane as the hooks to hold the shelf level.

Other objects of the invention will appear more particularly from the following disclosure thereof and with reference to the accompanying drawings wherein

Fig. 1 is a view in perspective showing in use a shelf bracket embodying my invention, portions of the window being illustrated fragmentarily.

Fig. 2 is a view in longitudinal section through a shelf bracket of the construction shown in Fig. 1.

Fig. 3 is a bottom plan view of the shelf shown in Figs. 1 and 2.

Fig. 4 is a fragmentary detail view in perspective showing a corner of the shelf having a toothed hook for engagement with a window mullion.

Fig. 5 is a view in longitudinal section through a bracket shelf showing a modified construction.

Fig. 6 is a bottom plan view of the shelf shown in Fig. 5, its hooked portions being partially illustrated prior to bending into hook form.

Fig. 7 is a view partially in side elevation and partially in longitudinal section through a further embodiment of my invention.

Fig. 8 is a view in rear elevation of the embodiment shown in Fig. 7.

Fig. 9 is a view in plan of the embodiments shown in Figures 7 and 8.

Fig. 10 is a detail view taken in section on the line 10—10 of Fig. 9.

Fig. 11 is a view taken in section on the line 11—11 of Fig. 7.

Fig. 12 is a view in perspective of the disassociated shelf and bracket elements of the embodiments disclosed in Figures 7 to 11.

Fig. 13 is a greatly enlarged detail view in perspective of one toothed plate made in accordance with a preferred construction.

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The shelf 6 comprises a plate preferably provided with an upturned margin at 7 for more securely locating thereon a flowerpot or other object such as is indicated in broken lines at 8 in Fig. 1. The marginal flange preferably need enclose only the front and sides of the shelf, the rear having a rolled bead at 9, the free margin of which is provided at spaced intervals with teeth 10. These teeth increase the frictional engagement of the shelf with any suitable support such as the window mullion 11, but under normal loads they do no injury to any surface.

It will be observed that the hooks are, in all embodiments of my invention, in substantially direct contact with the face of the glass of the window pane.

In the embodiment shown in Figs. 1 to 4, two portions of the shelf are embossed downwardly. One portion 12 is severed from the shelf proper along one margin at 13 leaving a space into which the eye portion 14 of the bracket 15 may be inserted to be retained frictionally therein as shown both in Fig. 2 and Fig. 3.

Another downwardly embossed portion 16 is apertured at 16' to receive the hooked end 17 of the bracket 15.

The bracket may comprise a single piece of wire having a bend at 18 where the wire is folded upon itself. One leg of the wire is carried upwardly in any desired convolutions for ornamental purposes to the eye 14 which is engaged within boss 12 as already described. The other leg of the wire bracket is carried upwardly and terminates in hooked end 17 which is engaged in the aperture 16' of boss 16. Thereby both points of engagement of the bracket with the shelf are disposed in recesses below the shelf level where they will not interfere with any object placed thereon.

Obviously the particular design of the shelf is immaterial. It is, however, desired that the shelf preferably should have a back margin with portions in substantially rectilinear transverse alignment in order properly to engage the window mullion or other support. The shelf may be supported on a chair rail or the like, or even on spaced nails in a wall over which the teeth are engaged.

In the construction shown in Figs. 5 and 6, the shelf 60 is similar to that already described, desirably having the same type of marginal flange at 70. However, the bracket 150, instead of being formed of a piece of wire is made of a stamp-

ing of somewhat similar outline in side elevation. At its lower end, it has a portion 180 adapted to engage the window glass 19 or any other vertical surface below the mullion 110. At its upper end the bracket 150 is provided with a laterally projecting ear at 170 which is thrust through a slot 20 in the downwardly embossed portion 150 of the shelf 60.

The ear lies within the boss, thus interlocking the bracket and the shelf. At another point the bracket 150 is also provided with a laterally offset ear at 140. This, however, is not interlockingly engaged with the shelf but merely abuts the lower surface thereof, being confined against lateral displacement by two small bosses at 120 and 121 as best shown in Fig. 6.

Although small teeth like those shown at 10 in Fig. 3 are to be preferred, the device may alternatively be provided with one or more wide chisel-like teeth 100 (Fig. 6).

It is found that almost any reasonable load can be imposed on the shelf of the device without in any way dislodging the shelf bracket from the million. In fact, the more heavily the device is loaded, the more secure will be its engagement with the mullion. Although a very definite and effective connection with the mullion results from the use of the teeth 10 or 100, it is found that no damage to the mullion results, even though the shelf is heavily loaded. The width of the mullion, within all standard commercial limits, is immaterial, the bracket providing adequate clearance and yet returning to the vertical plane of the teeth 10.

In the embodiment shown in Figs. 7 to 12, inclusive, both the shelf portion and the bracket portion are desirably molded. Plastic or the like, such as any of the synthetic resins, is a suitable material. The shelf 61 has at its rear or window-adjacent end, rearwardly projecting bosses 91 from which the teeth 101 project downwardly in substantial contact with the glass of the window, the teeth being engaged with any mullion, adjacent the glass or with any suitable support on a wall. The teeth are conveniently formed on plates 102 which are apertured. As best shown in Fig. 13, the teeth are conveniently and desirably made with downwardly beveled rear faces extending to the apices of the teeth at an angle which may approximate 45°, in the devices illustrated. The general proportions of these devices are such that the resultant line of thrust through the teeth is at an angle of approximately 45°. Since the teeth are correspondingly beveled, they tend to engage the supporting surface more securely than they would if formed at any other angle. If the proportions of the device are modified from those illustrated, it is desirable, for the best results, that the bevel of the rear surface of the teeth be correspondingly modified to conform, at least in a general way, with the direction of the resultant line of thrust 6.

In molding the shelf 61, studs 103 are provided which are receivable into the apertures of the plates 102, thereafter being riveted, as by means of a hot iron, to form a head 104 which anchors the plate 102 to the shelf as best shown in Fig. 10.

The shelf may conveniently be reenforced by intersecting ribs at 165, 167, 166 and 168 as best shown in Fig. 9, these providing a flowerpot support which, due to flowerpot irregularities, is more apt to be stable than a planiform surface. The pockets between the ribs receive and retain surplus water which might drip from a planiform surface.

Additional ribs at 122 and 123 enclose a slot at 121 in which the boss 141 of bracket 151 is receivable. The boss 141 has a forwardly projecting tongue at 144 which engages the end of the slot to limit further movement in the assembly of the bracket with the shelf. In the final position of the parts, the thickened side margins 142, 143 of the boss 141 lie intermediate the ends of slot 121 in pressed fit engagement with the sides of the slot. In this intermediate portion of the slot, there is substantial resilient yielding of the side margins for the frictional retention of the boss.

A more positive interlock is provided between the rear of the bracket and the rear of the shelf, the bracket having a stud 171 headed at 172 and the shelf having a slot 161 between flanges 163 and 164, such flanges terminating to provide a widened slot portion at 162 into which the head 172 is receivable. The rear of this slot comes to an apex between the ribs 165 and 166, but this is immaterial to the result.

The various forms of the attachable interlocking connection herein disclosed as a means of securing the bracket to the shelf are preferred to a one-piece construction because they enable the device to be shipped with the parts disassembled. However, it is contemplated that within the scope of this invention any other desired means of connecting the bracket and shelf may be used.

The several forms of my device are all extremely simple and inexpensive requiring few parts and very little cost of manufacture or assembly. In fact, each is adapted to be shipped knocked down; the shelf and bracket being assembled by the consumer. In each case, the bracket element assembles to the shelf in such a way as to provide a horizontal shelf and to locate the glass-engaging terminus of the bracket 18 substantially vertically below the teeth.

I claim:

1. A bracket shelf comprising the combination with a shelf plate having near its rearmost extremity downwardly directed teeth, of a bracket connected with the plate and extending therebeneath and having a terminus substantially in the transverse vertical plane of such extremity and disposed for engagement with a vertical surface beneath said extremity.

2. The combination with a shelf plate provided adjacent one margin with teeth, said plate having a central portion provided with spaced openings respectively closer to and more remote from said teeth, of a bracket having a terminal portion lying beneath the teeth and having connecting means respectively engaged through said openings and securing the bracket to the plate, the connecting means closest to the teeth having an offset portion interlocked with the plate against separation therefrom when the plate is subjected to load.

3. A device of the character described comprising the combination with a molded shelf having aligned slot means, one of which has a wide portion and laterally spaced flanges providing a narrower extension from said wide portion, together with a bracket having a stud provided with a head receivable through the wide portion and slidable into interlocking engagement over said flanges, said bracket having a second stud receivable into the other of said slot means and of such width as to be engaged therein with a pressed fit.

4. A bracket shelf comprising the combination

with a shelf plate having near its rearmost extremity downwardly directed teeth, of a bracket connected with the plate and extending therebeneath and having a terminus substantially in the transverse vertical plane of such extremity and disposed for engagement with a vertical surface beneath said extremity, the said teeth having rear faces substantially in said plane and beveled surfaces leading rearwardly to said faces.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
476,994	Ellis	June 14, 1892
1,156,129	Berger	Oct. 12, 1915
1,984,602	Snyder	Dec. 18, 1934
2,029,246	McCarroll	Jan. 28, 1936