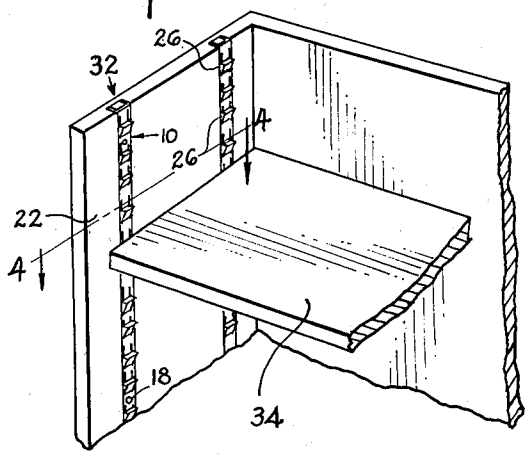
Jan. 10, 1961 D. R. HOOGENSTYN 2,967,625

SHELVING BRACKET

Filed April 21, 1958

Fig. 1



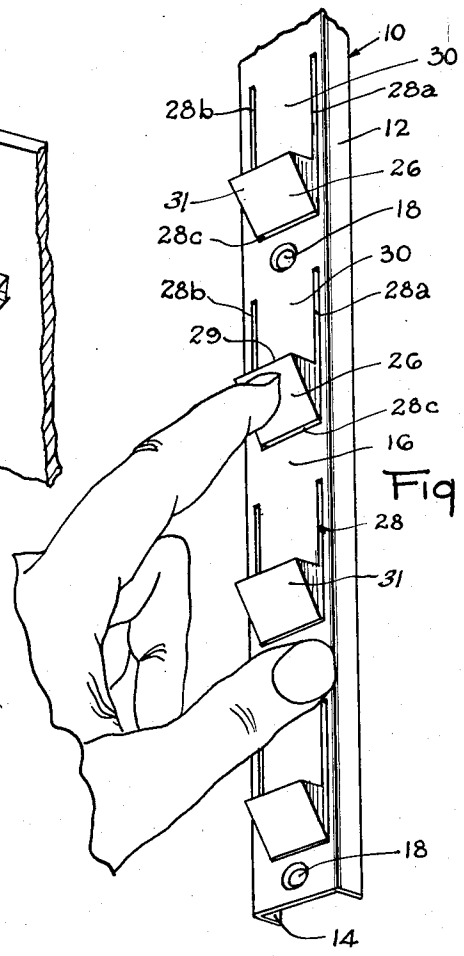


Fig. 2

Fig. 5

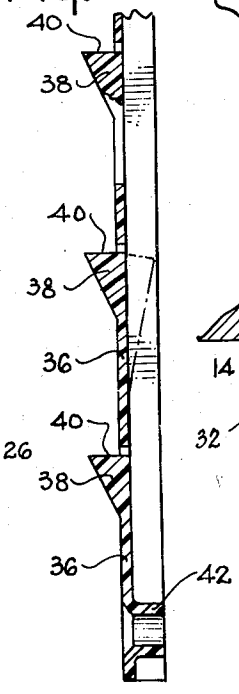
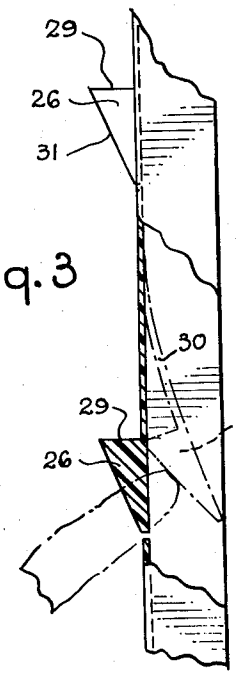


Fig. 3



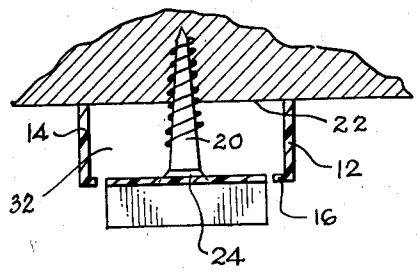


Fig. 4

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SHELVING BRACKET

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9 Claims. (Cl. 211—183)

This invention relates to a new and improved shelving bracket.

It is well-known that elongate standards may be provided with openings or slots at various points along their lengthwise dimension to receive and seat bracket members therein; the standards being intended for installation in coacting pairs on oppositely disposed walls or other supporting surfaces so that the coacting pairs present their supporting portions or edges in the same plane. Shelves may then be laid between the brackets and thereby supported at their ends in assembled relation. In many of these, however, the positioning of the brackets must be carefully predetermined and in case of miscalculation adjusted by trial and error until the coating bracket members are suitably located and coordinated in position with one another.

Further, to relocate a shelf from one position to another, it is necessary to withdraw the shelf laterally from the assembly and to place it again laterally at another position. In many such known devices, the brackets are detachable from the standard and consequently easily misplaced or lost.

Therefore, it is an object of this invention to produce a new and improved support for shelving and the like and it is a related object to produce a standard and bracket assembly adapted to accommodate shelving in various positions without adjustment of the individual bracket elements.

It is another object of this invention to form the standard and bracket elements integrally so as to obviate the likelihood of loss or displacement of the bracket parts.

Other objects and advantages of the invention will become apparent from the further description in the specification and from the one embodiment shown in the appended drawings, wherein—

Figure 1 is a fragmentary perspective view of the invention in a shelving assembly;

Figure 2 is a perspective view in elevation of the bracket shown in Figure 1;

Figure 3 is a side elevational view of the bracket with portions cut away to disclose the bracket in alternative positions as hereinafter described;

Figure 4 is a sectional view taken along the line 4—4 of Figure 1; and

Figure 5 is a longitudinal side view in section of a variant form of the invention.

The standard comprises an elongate U-shaped member generally designated **10** provided with side walls **12** and **14** and a face portion **16**, the side walls **12** and **14** defining a channel **32** therebetween. The face portion **16** is provided with longitudinally spaced-apart openings **18** through which screws **20** or other suitable fastening means may be inserted to engage a supporting wall **22**. In the preferred embodiment, the portions about the openings are countersunk to accommodate any protruding head portion **24** of the screw **20** or other fastening means so that the head will not protrude outwardly beyond the general plane of the face portion **16**, and so that the end of a shelf or the like may be displaced vertically without obstruction by the head of the screw.

The face portion **16** of the standard is also provided with a plurality of longitudinally spaced-apart U-shaped relieved or cut-out portions **28** comprising a pair of elongate, laterally spaced-apart slots **28***a* and **28***b* joined at their lower edges by a crosswise slot **28***c* to provide vertically spaced-apart tongues **30** in the face portion **16** of the standard **10**. While in the preferred embodiment. the cut-out portion **28** is U-shaped, with the sides thereof parallel to each other, it may be of other configuration, such as V-shaped, the desideratum being an elongate tongue joined to the face of the standard at one of its edges and preferably flush with the face.

The tongue **30** is provided at its lower end with an outwardly projecting bracket **26** having a substantially flat horizontally disposed upper wall **29** and a lower surface **31** which is preferably inclined inwardly from the outer edge of the top wall **29** to the tongue **30** to provide a cam edge. It will be understood that the brackets may be otherwise shaped to provide the desired flat top wall extending outwardly from the tongue into the path of the shelf edge to receive the edge of the shelf thereon for support in position of use.

The entire standard **10**, including the tongue **30** and bracket portions **26**, may be formed of materials characterized by the properties of substantial rigidity, flexibility, and resiliency including metals such as aluminum, brass, stainless steel, Monel, and the like or plastics such as polystyrene, polyacrilics, glass fiber reinforced polyester resins such as polyvinyl chlorides, polyesters, and the like.

The lower end portions of the tongue **30** can be displaced inwardly for a distance to withdraw the top wall **29** from the path of the lateral edge of the shelf to enable vertical displacement of the shelf therebetween. For this purpose, it is desirable to construct the standard with the side walls **12** and **14** dimensioned to correspond with the length of the top wall **29** so that the top wall can, if necessary, be displaced inwardly for a distance to bring its outer edge substantially flush with the face **16**, as shown in Figure 3. Such displacement may be effected manually, as illustrated in Figure 3, or the bracket or abutment can be actuated for inward displacement in response to camming engagement between the lateral edge of the shelf and the cam edge **31** of the bracket as the shelf is displaced upwardly between the standards.

Figure 1 shows a pair of laterally spaced-apart, facing standards **10**, mounted upon a supporting wall **22**, and supporting a shelf **34**. The standards **10** may be installed upon a flat supporting surface and to extend outwardly therefrom, or the supporting wall may be recessed in suitably spaced-apart and predetermined offset portions to permit the standards **10** to be fitted or seated into them as shown in Figure 1. The latter is the preferred arrangement inasmuch as the face portion **16** and the surface of the supporting wall **32** coact to present a generally flat and effectively continuous surface opposite the adjacent edge of the shelf **34**.

In assembly, two or more standards should be arranged side-by-side, in laterally spaced-apart relation with top walls **29** one at the same level as the top walls of the others to support a given shelf; and it will be readily perceived that standards should be provided on both of two opposite supporting walls **22** and spaced apart by an amount to correspond with the length of the shelf so that the top walls, when in normal position, will be in position to be engaged by the outer edges of the shelf for support.

It will be seen that shelf **34** may be positioned at various

alternative stations along the lengthwise extension of the standards **10**. Moreover, once the standards **10** are assembled and the shelf once positioned, the shelf may be moved to other positions without lateral removal from the assembly by virtue of the fact that the bracket portions **26** may be displaced rearwardly in a manner previously described and as shown in Figure 3 or in response to camming action between the shelf edge and the abutment to permit the ends of the shelf **34** to move unimpeded along the face **16** of the standards.

In the latter concept the shelf may be located crosswise between the standards and then displaced upwardly to a desired position of use. As the shelf engages the lower cam edges of the brackets, the length will be displaced inwardly until the edges of the shelf clear the top walls. As the top wall of each of the brackets is cleared, the tongue and the abutment will snap it back from a displaced to a normal position whereby the top wall will return into the path of the shelf edge to provide a supporting surface for the shelf. Thus, the shelf can be displaced upwardly to beyond the desired position for support by the underlying bracket. The weight of the shelf will be carried by the vertically disposed tongue in a manner which will tend to stabilize the tongue in its normal position with the flat top wall in supporting engagement with the underside of the shelf at its outer edges.

Fig. 5 shows an alternative form of the invention which differs from the form shown in Figs. 1–4 principally in that the tongue is joined to the face of the standard at its lower edge. More particularly, in Fig. 5 the standard is provided with a plurality of tongue members **36** arranged in spaced-apart relation along the lengthwise dimension of the standard and joined at their respective lower edges to the face of the standard to permit them to be displaced into a position between the side walls of the standard as shown by the dotted lines. In the form shown in Fig. 5, the tongues **36** carry the brackets **38**, each having an upper wall **40** and a lower surface **42** extending between the outer edge of the upper wall **40** and the face of the standard.

Fig. 5 also shows the standard to be provided with a sleeve **42**, which may be used in either of the embodiments shown in the drawing, and be formed of the same material as that from which the standard is formed, joined at one of its ends to the standard and extending rearwardly to terminate in the plane perpendicular to the rear edges of the sides of the standard so that the inner zone of the sleeve **42** communicates with the opening for receiving fastening means such as the screw **20**. When the standard is installed in position of use, the sleeve **42** houses the shank of the screw **20** or other fastening means and also maintains the face of the standard at a predetermined distance from the supporting wall to which the standard is to be affixed, thus deterring the installer from tightening the fastening means to the supporting wall so tightly as to distend the face of the standard inwardly in those portions surrounding the opening therein.

It will be understood that the drawings disclose one preferred embodiment of the invention.

Having disclosed one embodiment of my invention, I, therefore, claim:

1. A wall bracket for supporting shelving comprising an elongate member formed of substantially flexible and resilient material and having a front wall and means for attachment of the elongate member in a vertically disposed position to a supporting surface with a spaced relation between the front wall and the supporting surface immediately rearwardly thereof, elongate tongues struck from the front wall in vertically spaced-apart relation with the tongues joined at their upper edges to the front wall to enable flexure of the tongues between a normal position substantially flush with the front wall and a displaced position in which the lower edge of the tongue is spaced inwardly from the front wall, and an abutment carried on the lower end portion of each of the tongue members having a substantially flat, horizontally disposed top wall extending outwardly from the tongue by an amount to bring the outer edge substantially flush with the front wall when the tongue is in displaced position.

2. A wall bracket as claimed in claim 1 in which the abutment is formed with a lower surface which tapers inwardly from the outer edge of the abutment to the tongue to provide a camming surface.

3. In an assembly for installation upon supporting wall surfaces whereby to provide support for shelving and the like, a standard comprising an elongate member formed of a substantially flexible and resilient material and having a face portion and oppositely disposed side wall portions integrally connected at one of their edges to said face portion and extending rearwardly therefrom and defining a channel therebetween said face portion being provided with continuous U-shaped relieved portions longitudinally spaced-apart thereon and a plurality of tongue portions integrally connected to said face portion and extending downwardly from the point of connection between opposite sides of said U-shaped relieved portions in substantially the same plane as said face portion, said tongue portions carrying at their respective lower ends brackets projecting forwardly therefrom and provided with a bearing surface, said tongue portions being adapted to pivot rearwardly at its point of integral connection to the face portion into the said channel zone, said channel dimensioned to have a depth adequate to permit the outer edges of said brackets to clear the face of the standard in its rearward displaced position.

4. A wall bracket for supporting shelving comprising an elongate member formed of a substantially flexible and resilient material and having a front wall and means for attachment of the elongate member in a vertically disposed position to a supporting surface with a spaced relation between the front wall and the supporting surface immediately rearwardly thereof, elongate tongues struck from the front wall in vertically spaced-apart relation with the tongues joined at one of their end edges to the front wall to enable flexure of the tongues between a normal position substantially flush with the front wall and a displaced position in which the end of the tongue opposite the end joined to the front wall is spaced inwardly from the front wall and an abutment carried at the end of the tongue members opposite the end joined to the front wall having a substantially flat, horizontally disposed top wall extending outwardly from the tongue by an amount to bring the outer edge thereof substantially flush with the front wall when the tongue is in displaced position.

5. A wall bracket for supporting shelving comprising an elongate member formed of a substantially flexible and resilient material and having a front wall and means for attachment of the elongate member in a vertically disposed position to a supporting surface with a spaced relation between the front wall and the supporting surface immediately rearwardly thereof, elongate tongues struck from the front wall in vertically spaced-apart relation with the tongues joined at their lower edges to the front wall to enable flexure of the tongues between a normal position substantially flush with the front wall and a displaced position in which the upper edge of the tongue is spaced inwardly from the front wall, and an abutment carried on the upper end portion of each of the tongue members having a substantially flat, horizontally disposed top wall extending outwardly from the tongue by an amount to bring the outer edge substantially flush with the front wall when the tongue is in its displaced position.

6. A wall bracket as claimed in claim 5 in which the abutment is formed with a lower surface which tapers inwardly from the outer edge of the abutment to the tongue to provide a camming surface.

7. A wall bracket as claimed in claim 4 in which the abutment is formed with a lower surface which tapers

inwardly from the outer edge of the abutment to the tongue to provide a camming surface.

8. A standard for use in an assembly for the support of shelving and the like, said standard comprising an elongate member having a face portion and side walls, said side walls being joined at one of their lengthwise margins to the respective lengthwise margins of said face portion and extending rearwardly therefrom; a plurality of lengthwise elongate relieved portions in said face portion spaced inwardly from the longitudinal margins of said face portion and disposed in pairs at longitudinally spaced apart intervals, each pair of adjacent elongate relieved portions being connected at their lower ends by another relieved portion transverse thereto; a plurality of tongue members having their outer surfaces normally disposed in substantially the same plane as that of said face portion and flexibly and resiliently joined at their upper ends to said face portion; said tongue members

lying between respective adjacent relieved portions and carrying at their lower ends said bracket members.

9. A standard as claimed in claim 8 in which both the elongate member and tongue members are both formed of the same substantially flexible and resilient material.

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