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R. S. SANFORD

2,477,771

SHELF BRACKET

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2 Sheets-Sheet 1

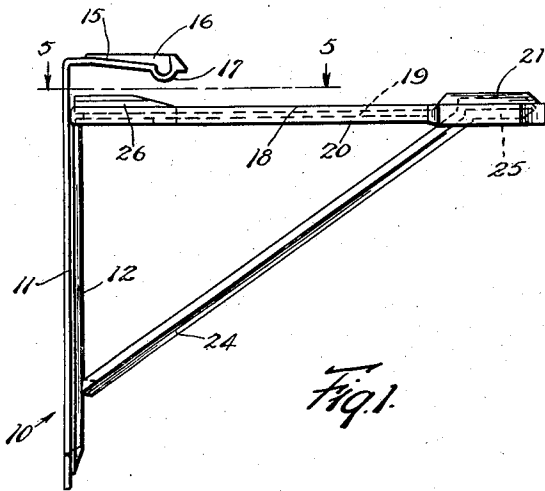


Fig. 1.

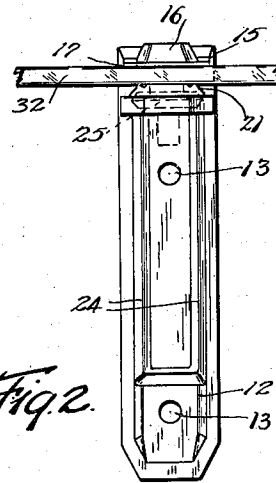


Fig. 2.

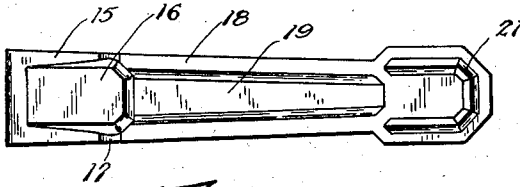


Fig. 3.

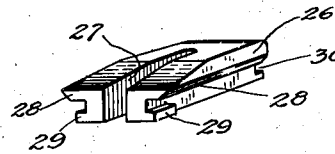


Fig. 4.

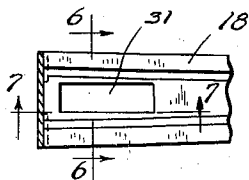


Fig. 5.

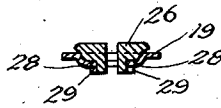


Fig. 6.

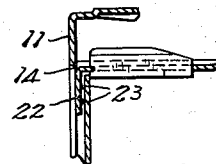


Fig. 7.

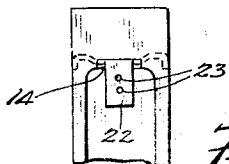


Fig. 8.

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UNITED STATES PATENT OFFICE

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SHELF BRACKET

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8 Claims. (Cl. 248—247)

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This invention relates to shelf brackets, more particularly to brackets adapted to be secured to a wall or similar surface for supporting a shelf in removable relation to the brackets, and the invention has for an object the provision of inexpensive, rugged and attractive shelf brackets of this character.

Shelf brackets heretofore proposed have usually been provided either with means permitting permanent attachment of the shelf to the brackets by screws or the like, or with shelf-engaging hook portions at the front ends of the brackets for engaging the front edge of the shelf to prevent forward displacement thereof and to hold the shelf securely against the wall or similar support on which the bracket is mounted.

The use of front end hooks of this character limits the use of the brackets to shelves having a width equal to the length of the shelf-supporting arm of the bracket, and accordingly requires the production of various sizes of brackets to accommodate shelves of different width. In recognition of this disadvantage of shelf-supporting brackets having front end hooks, it has heretofore been proposed to form the hook on a separate slide or adjustable member carried by the shelf-supporting arm of the bracket adapted to be adjusted forwardly or rearwardly in accordance with the shelf width. Such construction, however, adds to the expense and difficulty of manufacture of the shelf bracket, and accordingly it is a further object of this invention to provide an improved shelf bracket eliminating the use of adjustable slides but capable of supporting shelves of various widths and of firmly retaining the shelf against accidental displacement from the brackets while permitting ready removal of the shelf for cleaning.

In carrying out the invention in one form I provide a shelf bracket comprising a wall-engaging arm from which projects a forwardly extending shelf-supporting arm, and resilient clamping means are provided disposed adjacent the rear end of the shelf-supporting arm for firmly and frictionally clamping the rear edge portion of the shelf to retain the shelf in position on the bracket and prevent accidental displacement of the shelf. More particularly, the clamping means includes a plastic or resilient insert member including a forwardly sloping surface up which the shelf may ride when inserted into the clamping means so as to reduce the possibility of breakage when glass shelves are employed.

For a more complete understanding of the in-

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vention, reference should now be had to the drawings in which:

Fig. 1 is a side elevational view of a shelf bracket embodying the present invention;

Fig. 2 is a front elevational view of the bracket shown in Fig. 1 and illustrating a portion of a shelf carried by the bracket;

Fig. 3 is a top plan view of the bracket shown in Fig. 1;

Fig. 4 is a detail perspective view of the plastic insert member employed in the bracket of Fig. 1;

Fig. 5 is a fragmentary sectional view taken along the line 5—5 of Fig. 1 with the insert member omitted;

Fig. 6 is a detail sectional view taken along the line 6—6 of Fig. 5 with the insert member in place;

Fig. 7 is a fragmentary elevational sectional view taken along the line 7—7 of Fig. 5 with the insert member in place;

Fig. 8 is a fragmentary rear view of the upper end of the shelf bracket shown in Fig. 1;

Fig. 9 is a perspective view of a pair of shelf brackets supporting a shelf;

Fig. 10 is a fragmentary plan view showing the wall end of a shelf bracket forming another embodiment of this invention;

Fig. 11 is a fragmentary side elevational view of the portion of the shelf bracket shown in Fig. 10;

Fig. 12 is a fragmentary top plan view of the wall end of still another form of shelf bracket embodying the present invention; and

Fig. 13 is a fragmentary side elevational view of the portion of the shelf bracket shown in Fig. 12.

Referring first to Figs. 1 to 9 of the drawing, the invention is shown as embodied in a shelf bracket 10 having a wall-engaging arm 11 the central portion of which is forwardly embossed to provide a strengthening panel 12 which is provided with suitable apertures 13 for receiving screws or other suitable fastening means by which the wall-engaging arm may be secured to a wall or similar support. The wall-engaging arm 11 is provided adjacent the upper end of the panel 12 with a slot 14, the purpose of which will be referred to hereinafter, and at its upper end the wall-engaging arm 11 is provided with a forwardly-extending shelf-engaging resilient finger 15 which may be of any desired shape but is preferably embossed, as shown, to provide a center panel 16 and a pair of downwardly extending lugs 17 disposed on opposite sides of the

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panel 16 and adapted to engage the upper surface of a shelf.

Extending forwardly from the wall-engaging arm 11 of the shelf bracket 10 is a shelf-supporting arm 18 which may be embossed, as shown best in Figs. 3 and 9, to provide a depressed center panel 19 and suitable side flanges 20. Adjacent its forward end the arm 18 is provided with a substantially U-shaped embossment 21 which serves to receive the upper end of a diagonal bracing arm as will be described hereinafter. At its opposite end the shelf-supporting arm 18 is provided with a tab or finger 22 (Figs. 7 and 8) which extends through the slot 14 in the wall-engaging arm and is adapted to be spot welded or otherwise secured thereto as indicated at 23 in Figs. 7 and 8.

Extending between the lower portion of the wall-engaging arm 11 and the front end portion of the shelf-engaging arm 18 is a diagonal bracing arm 24 which, as shown, is preferably in the form of a wire loop, one end of which is welded or otherwise suitably secured to the panel 12 of the wall-engaging arm 11. At its upper end the loop 24 is provided with a horizontally extending portion 25 (Fig. 1) which rests within the embossment 21 and is adapted to be welded or otherwise suitably secured therein, thus providing a strong and rigid shelf structure.

While shelf brackets constructed as heretofore described are not limited to use with glass shelves but may be employed for supporting shelves formed of wood, molded plastic materials or the like, certain features of the present invention are particularly applicable to glass shelves in order to avoid breakage and chipping thereof when assembling the shelf on the bracket. These features of the invention reside in the provision of a nonmetallic resilient shelf-supporting pad adjacent the rear end of the shelf-supporting arm, which pad may be of the form shown in Fig. 4.

The shelf-supporting pad, as shown, comprises a body 28 preferably formed of molded plastic material and provided with a slot 27 extending substantially throughout the length thereof to provide a U-shaped pad. The side edges of the U-shaped pad are cut away, as shown best in Fig. 4, to provide an upper ledge 28 on each side of the pad and lower ledges 29 which extend throughout only a small portion of the length of the pad. Likewise, the rear end of the pad member 26 is provided with a notch or groove 30 for purposes to be hereinafter described. As shown best in Fig. 5, the shelf-supporting arm 18 of the shelf bracket is provided adjacent its rear end with an elongate slot 31 disposed below the shelf-engaging finger 15 for receiving the insert or pad 26.

In order to assemble the pad or insert into the slot 25, it is necessary only to lower the rear end of the pad into the slot and move it rearwardly until the groove 30 receives the edge of the slot and then compress the free ends of the pad until the ledges 29 approach each other sufficiently to permit lowering of the front end of the pad into the slot. Upon release of the pressure the free ends of the U-shaped pad 26 will spring apart so that the edges of the slot 31 will be received between the ledges 28 and 29, as best shown in Fig. 6, thereby locking the insert member 26 in position on the shelf-supporting arm 18.

As shown best in Figs. 1, 4 and 9, the front upper surface of the insert member 26 slopes forwardly so that when a glass shelf, such for example as the shelf 32 of Fig. 9, is placed on the

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shelf-supporting arm 18 and forced rearwardly until its rear edge portion is clamped between finger 15 and the shelf-supporting pad 26, the rear edge of the shelf will ride up the sloping surface of the pad 26 and gradually flex the spring arm 15 so that there will be no sudden shock or jar tending to chip the rear edge of the shelf. The same is true when the shelf is removed by pulling it forwardly from the shelf brackets and consequently chipping or breakage of the rear edge of a glass shelf is eliminated.

In Fig. 9 the shelf 32 is shown as being only slightly greater in width than the length of the shelf-supporting arms of the brackets 10, but it will be understood that since no front end hooks are provided shelves of considerably greater width may be supported on the brackets 10, the front edges thereof overhanging the front ends of the brackets. The spring arms 15, in cooperation with the insert members or pads 26, firmly grip the rear portion of the shelf 32 so as to retain it against longitudinal or frontwise displacement, while at the same time permitting ready removal of the shelf from the brackets for cleaning or similar purposes; and it will be observed that when the shelf is in position on the brackets it is supported at its rear end on the plastic insert members or pads 26 and at its forward edge on the pads formed by the embossments 21.

In Figs. 10 and 11 I have shown portions of a shelf-supporting bracket forming a further embodiment of the invention, in which plastic insert members or pads are replaced by suitable spring fingers formed integrally with the sheet metal from which the shelf itself is formed. In this embodiment the wall-engaging arm 33 is again provided at its upper edge with a forwardly extending shelf-engaging finger 34 and the shelf-supporting arm 35 which extends forwardly from the wall-engaging arm is provided with an integrally formed spring finger 36 which is of considerably greater length than the shelf-engaging finger 34 and which has an upwardly sloping portion 37 lying beneath the finger 34 and terminating in the shelf-engaging portion 38. It will be apparent that in this embodiment of the invention rearward movement of a shelf member on the arm 35 will cause the spring finger 36 to move downwardly as the rear edge of the shelf comes into engagement with the sloping portion 37 of the finger so that the shelf, when in its rearmost position, is firmly clamped between the finger 34 and the portion 38 of the spring finger 36.

The front end of the bracket forming the embodiment of the invention shown in Figs. 10 and 11 is preferably provided with a suitable shelf-supporting pad extending slightly above the upper surface of the arm 35; so that when the shelf is in its final position it will be supported upon the portion 38 of the spring finger 36 and on the shelf-supporting pad at the front end of the bracket.

In the embodiment of the invention shown in Figs. 12 and 13, no shelf-supporting pads are provided on the shelf-supporting arm but instead the arm 39 is substantially flat throughout its length and is slotted, as shown, to provide side bars 40 on which the shelf rests. Extending upwardly from the rear end of the shelf-supporting bars 40 and constituting a continuation of the wall-engaging arm of the bracket is an upwardly and forwardly extending spring arm 41 which is of somewhat greater length than the spring arms 15 and 34, and which is adapted to firmly to press the rear edge portion of the shelf

into contact with the shelf-supporting arm formed by the bars 40 so as firmly to hold the shelf against accidental displacement from the bracket.

While I have shown particular embodiments of my invention, it will be understood, of course, that I do not wish to be limited thereto since many modifications may be made, and I, therefore, contemplate by the appended claims to cover any such modifications as fall within the true spirit and scope of my invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A shelf bracket comprising a wall-engaging arm, a shelf-supporting arm extending forwardly from said wall-engaging arm to receive a shelf thereon, means extending upwardly from the surface of said shelf-supporting arm adjacent the front and rear ends thereof to form front and rear shelf-engaging portions, and resilient means overhanging said rear portion to clamp a portion of a shelf therebetween to retain the shelf in position on said bracket.

2. A shelf bracket comprising a wall-engaging arm, a shelf-supporting arm extending forwardly from said wall-engaging arm to receive a shelf thereon, means extending upwardly from the surface of said shelf-supporting arm adjacent the front end thereof to form a first shelf-engaging portion, a member formed of resilient material secured to said shelf-supporting arm adjacent the rear end thereof to provide a second shelf-engaging portion, and a spring finger in juxtaposed spaced relation to said second shelf-engaging portion for clamping a shelf against said portion to retain said shelf in position on said bracket.

3. A shelf bracket comprising a wall-engaging arm, a shelf-supporting arm extending forwardly from said wall-engaging arm to receive a shelf thereon, said shelf-supporting arm having a slot therein adjacent the rear end thereof, a resilient insert member removably disposed in said slot to form a shelf engaging pad, and a spring finger extending over said pad in spaced relation thereto for clamping a shelf against said pad to retain said shelf in position on said bracket.

4. A shelf bracket comprising a wall-engaging arm, a shelf-supporting arm extending forwardly from said wall-engaging arm to receive a shelf thereon, said shelf-supporting arm having a slot therein adjacent the rear end thereof, a resilient insert member removably disposed in said slot to form a shelf-engaging pad disposed at a level above said shelf-supporting arm, said pad tapering forwardly downwardly to said shelf-supporting arm, and a spring finger extending over said pad in spaced relation thereto for clamping a shelf against said pad to position said shelf on said bracket.

5. A shelf bracket comprising a wall-engaging arm, a shelf-supporting arm extending forwardly from said wall-engaging arm to receive a shelf thereon, said shelf-supporting arm having a slot therein adjacent the rear end thereof, a non-metallic insert member shaped to provide a substantially U-shaped shelf-supporting pad, the side edges of said pad each having a ledge for engaging the upper surface of said shelf-supporting arm when said pad is disposed in said

slot and each having a second ledge at the free end of said U spaced from said first ledge to receive the edges of said slot therebetween, said free ends being compressible toward each other to permit insertion of said pad into said slot and thereafter springing outwardly to lock said pad, and a spring finger extending forwardly from said wall-engaging arm for clamping the rear portion of a shelf against said pad to position said shelf on said bracket.

6. A shelf bracket comprising a wall-engaging arm, a shelf-supporting arm extending forwardly from said wall-engaging arm to receive a shelf thereon, means at the rear end of said shelf-supporting arm including a finger extending forwardly from said wall-engaging arm in spaced relation to said shelf-supporting arm and a spring finger extending upwardly from said shelf-supporting arm for frictionally clamping the rear edge of a shelf between said fingers upon insertion therebetween.

7. A shelf bracket comprising a wall-engaging arm, a shelf-supporting arm extending forwardly from said wall-engaging arm to receive a shelf thereon, a shelf-engaging finger extending forwardly from said wall-engaging arm in spaced relation to said shelf-supporting arm, and a spring finger extending upwardly from said shelf-supporting arm with the free rear end thereof disposed beneath said shelf-engaging finger to clamp the rear portion of a shelf therebetween when said shelf is positioned on said shelf-supporting arm and forced rearwardly thereof.

8. A shelf bracket comprising a wall-engaging arm, a shelf-supporting arm extending forwardly from said wall-engaging arm to receive a shelf thereon in forwardly slidable relation, and resilient clamping means cooperating with said shelf-supporting arm for frictionally holding said shelf on said shelf-supporting arm against accidental dislodgment, said clamping means constituting the sole means for retaining said shelf on said shelf-supporting arm while permitting removal of said shelf by forward sliding movement thereof, said resilient clamping means comprising a spring finger rigidly secured to one of said arms and having a part projecting forwardly and downwardly toward the upper surface of the shelf to overlie the rear portion of the shelf-engaging arm, said part terminating in an upwardly directed portion to provide a curved end for facilitating the insertion of said shelf on said shelf-supporting arm.

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REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
560,884	Anderson	May 26, 1896
883,323	Macduff	Mar. 31, 1908
2,271,784	Tritt	Feb. 3, 1942

FOREIGN PATENTS

Number	Country	Date
294,310	Great Britain	July 26, 1928