July 22, 1924. 1,502,288

J. H. BOYE

SHELF SUPPORT

Filed Sept. 16, 1922

Fig. 1.

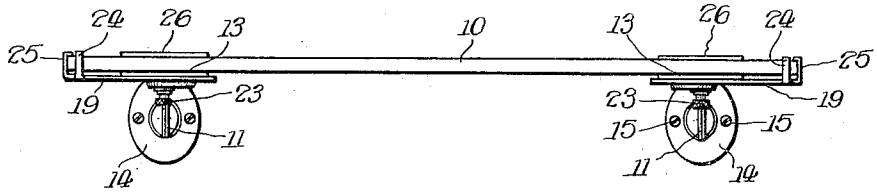


Fig. 3.

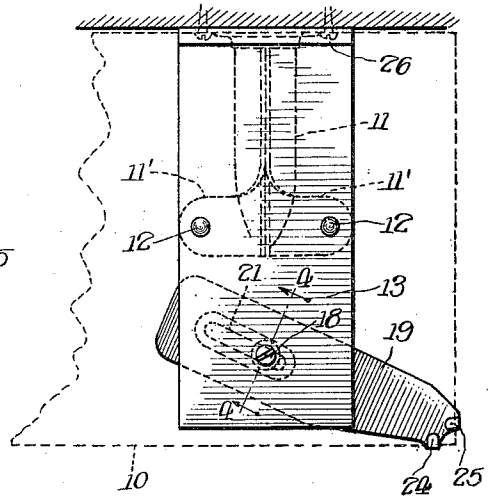


Fig. 2.

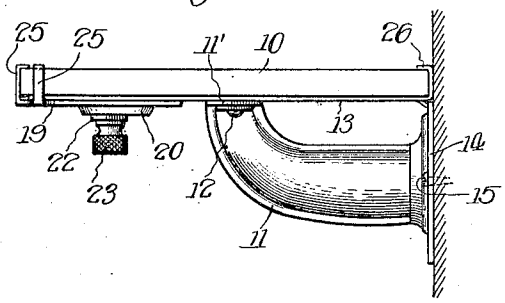


Fig. 4.

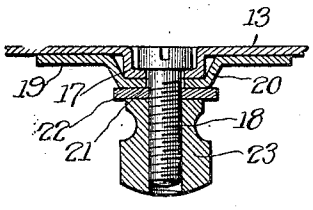
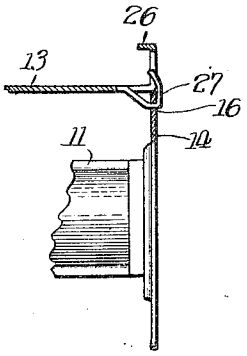


Fig. 5.



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UNITED STATES PATENT OFFICE.

JAMES H. BOYE, OF CHICAGO, ILLINOIS.

SHELF SUPPORT.

Application filed September 16, 1922. Serial No. 588,602.

To all whom it may concern:

Be it known that I, JAMES H. BOYE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Shelf Supports, of which the following is a specification.

This invention relates to improvements in shelf supports, and has been designed more particularly, although not exclusively, for use in connection with glass shelves, such as are now extensively used as bathroom fixtures to carry toilet articles.

Heavy glass plate shelves of this character, being expensive and easily breakable, require to be not only strongly supported, but also securely anchored or otherwise held to their supporting means against accidental displacement. Furthermore, it is desirable for at least two reasons to avoid the use of fastening means passing through the glass shelf itself. In the first place, the top surface of the shelf should be left smooth and free from any upstanding projections interfering with or lessening the surface required for toilet articles thereon, and in the second place, the aperturing of heavy glass plates to provide fastening means is a difficult and expensive operation.

One object of my present invention is to provide a simple, strong and secure means for both supporting and securely holding in place a glass or other shelf which will leave the top surface thereof unobstructed for the deposit thereon of toilet or other articles. Another object of the invention is to provide a shelf-supporting means which will be readily adjustable to fit shelves of considerably varying lengths and widths. A further object is to provide a shelf support, including a pair of brackets adapted for attachment to the wall, wherein shelves of considerably varying lengths and widths can be not only supported but securely clamped and held in place without involving readjustment of the relative positions of said brackets on the wall.

Other objects and attendant advantages of the invention will be readily apparent to persons skilled in the art as the same becomes better understood by reference to the following detailed description, taken in connection with the accompanying drawing wherein I have illustrated one practical and approved embodiment of the invention, and in which—

Fig. 1 is a front elevation of a glass shelf embodying my improved supporting and holding means;

Fig. 2 is an enlarged end elevation, viewed from the right of Fig. 1;

Fig. 3 is an enlarged top plan view of the right hand bracket shown in Fig. 1, with an overlying portion of the glass shelf indicated by dotted lines;

Fig. 4 is an enlarged sectional detail taken on the line 4—4 of Fig. 3; and

Fig. 5 is an enlarged vertical section through the rear end of the bracket plate and its supporting arm.

Referring to the drawing, 10 designates a rectangular shelf, which preferably consists of a heavy plate of glass such as is extensively used in the manufacture of bathroom shelves for holding toilet articles. This shelf is supported and securely held by a pair (right and left) of brackets, which are structural duplicates, and each of which, in the embodiment shown, is constructed as follows. 11 designates a hollow sheet metal elbow bracket arm, the forward upwardly turned end of which is divided and branched outwardly as shown at 11′ in Fig. 3 and secured by rivets 12 to the under side of a flat horizontal plate 13 on which the shelf 10 directly rests. At its inner end the bracket arm 11 is formed with a wide vertical base flange 14 that is apertured on opposite sides for the passage of fastening screws 15. The flange 14 is also provided at its upper end with an aperture 16 for a purpose hereinafter explained.

The plate 13 in its forward portion is formed with a countersink 17 (Fig. 4) to receive the head of a screw 18 passed therethrough. 19 designates an arm, the upper surface of which lies in contact with the under surface of the plate 13, and said arm is secured to the plate 13 by means of a longitudinally slotted countersunk portion 20 that underlies the countersunk portion 17 of the plate 13 with its slot 21 in register with the hole occupied by the screw 18. This latter extends through the slot 21 and is equipped with a washer 22 and a binding nut 23; the screw, washer and nut thus constituting a

clamp by which the arm 19 is rigidly attached to the under side of the plate 13 with capacity for endwise adjustment and also angular adjustment in a horizontal plane.

On its forward end the arm 19 is formed with a pair of upstanding hooks 24 and 25 disposed at right angles to each other, the hook 24 engaging with a front edge of the shelf 10, and the hook 25 engaging with a side edge of the shelf adjacent to the corner formed by said edges. These hooks 24 and 25 constitute stops to prevent displacement of the shelf forwardly or sidewise in its own plane, and they also serve further to grip the front corners of the shelf against accidental displacement upwardly.

The rear edge of the shelf is held down by a wide upstanding hook 26 formed on and integral with the rear edge of the plate 13, as clearly shown in Figs. 2 and 5.

The plate 13 is preferably, and for greater rigidity, secured at its rear end to the base flange 14 of the elbow bracket arm 11 by means of an integral hook 27 (Fig. 5) struck downwardly from the plate 13 and its hook 26 and passed through the aperture 16 of the base flange 14.

From the foregoing description of the structural features of the invention it will readily be perceived how the stated purposes and objects are attained thereby. The structure requires no perforation or other cutting of the shelf itself, and leaves the top surface thereof entirely clear and unobstructed, save for the small hooks 24, 25 and 26 at the extreme edges thereof. In mounting the shelf, no exact relative positioning of the two brackets in order to fit the shelf is required. The two brackets are secured to the wall at approximately the proper positions determined by the length of the shelf, and the latter is then laid thereon with its rear edge underlying the hooks 26. The thumb nuts 23 are then loosened, and the arms 19 are adjusted to a position wherein their hooks 24 and 25 snugly grip the front corner of the shelf. The thumb nuts 23 are then tightened, and the shelf is securely and strongly supported and held in place against displacement in any direction.

If it is desired to replace the shelf by another of different length or width, or both, within the longitudinal limits of the slots 21 of the arms 19, this can readily be done, the arms being fitted to the corners of the shelf in the manner already described. It will be observed that in the described construction a single pair of adjustable arms 19, through engagement with both the front and side edges of the shelf, accommodates both endwise and widthwise variations; but obviously separate arms, one to take care of widthwise variations and the other to take care of endwise variations, might be employed on each bracket, if desired, within the plan and purview of the invention. It is also manifest that the described structure may be otherwise varied in details without involving any departure from the substance of the invention or sacrificing any of the advantages thereof. Hence, I do not limit the invention to the particular structure shown and described, except to the extent clearly indicated in specific claims.

I claim—

1. A shelf-supporting bracket comprising, in combination, a flat horizontal plate on which the shelf rests, supporting means for said plate adapted for attachment to a wall, and an arm attached to said plate with capacity for both endwise adjustment and angular adjustment in a horizontal plane, said arm having at its forward end a pair of upstanding hooks adapted to engage respectively with the front and a side edge of the shelf adjacent to a corner of the latter.

2. A shelf-supporting bracket, comprising, in combination, a flat horizontal plate on which the shelf rests, said plate formed at its rear edge with an integral upstanding hook adapted to engage with the rear edge of the shelf, supporting means for said plate adapted for attachment to a wall, and an arm attached to said plate with capacity for both endwise adjustment and angular adjustment in a horizontal plane, said arm having at its forward end a pair of upstanding hooks adapted to engage respectively with the front and a side edge of the shelf adjacent to a corner of the latter.

3. A shelf-supporting bracket comprising, in combination, a flat horizontal plate on which the shelf rests, said plate formed with a countersink, supporting means for said plate adapted for attachment to a wall, an arm formed with a longitudinally slotted countersunk portion registering with the countersink of said plate and adjustable both lengthwise and angularly relatively to the latter, said arm having at its forward end a pair of upstanding hooks adapted to engage respectively with the front and a side edge of the shelf, a screw passed through said countersink and the slot of said arm, and a nut on said screw adapted to clamp said arm in any adjusted position against the under side of said plate.

4. A shelf support consisting of a pair of right and left brackets; each of said brackets comprising a flat horizontal plate on which the shelf rests, supporting means for said plate adapted for attachment to a wall, and a longitudinally and angularly adjustable arm attached to said plate and provided at its forward end with means for gripping both the front and side edges of a front corner portion of the shelf.

5. A shelf supporting bracket, comprising, in combination, a flat horizontal plate forming a rest for the shelf, supporting and

attaching means for said plate comprising an elbow bracket arm attached at its forward end to the under side of said plate and provided at its rear end with a vertical base flange apertured to receive fastening screws for securing the same to a vertical wall and also having an aperture at its upper end, an integral hook struck downwardly from the rear edge of said plate and passed through said aperture, whereby to anchor the rear edge of said plate to said base flange, an upstanding hook on the rear edge of said plate for engaging the rear edge of the shelf, and shelf-gripping means carried by said plate.

JAMES H. BOYE.