June 14, 1960 S. TAUBMAN 2,940,719

TOWEL BAR

Filed April 25, 1956

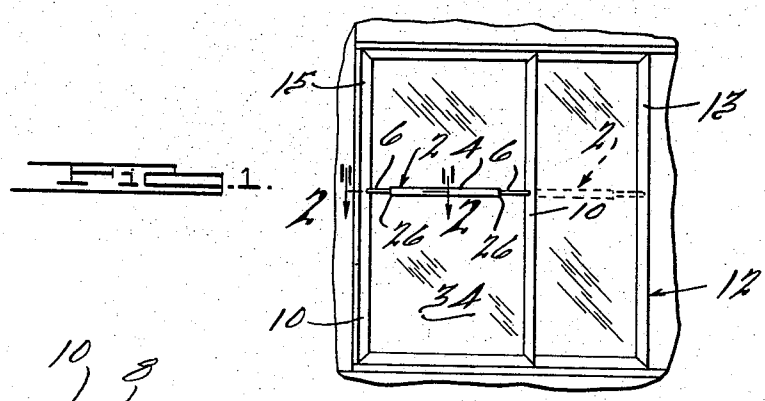


Fig. 1.

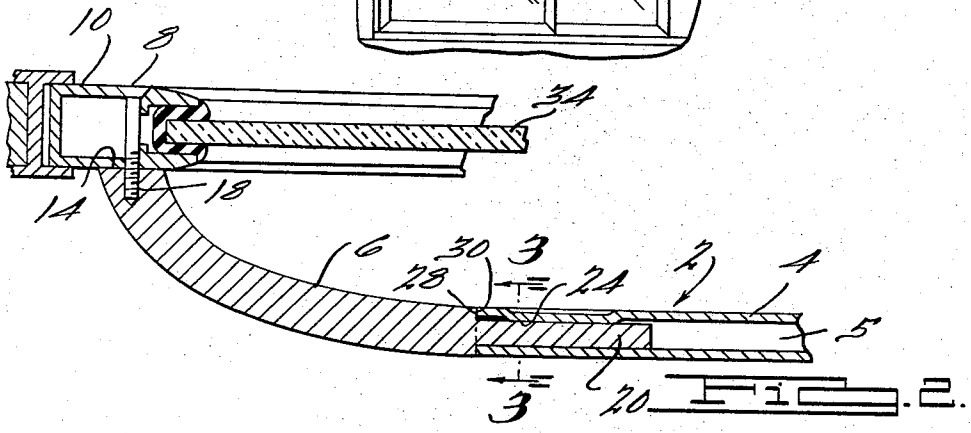


Fig. 2.

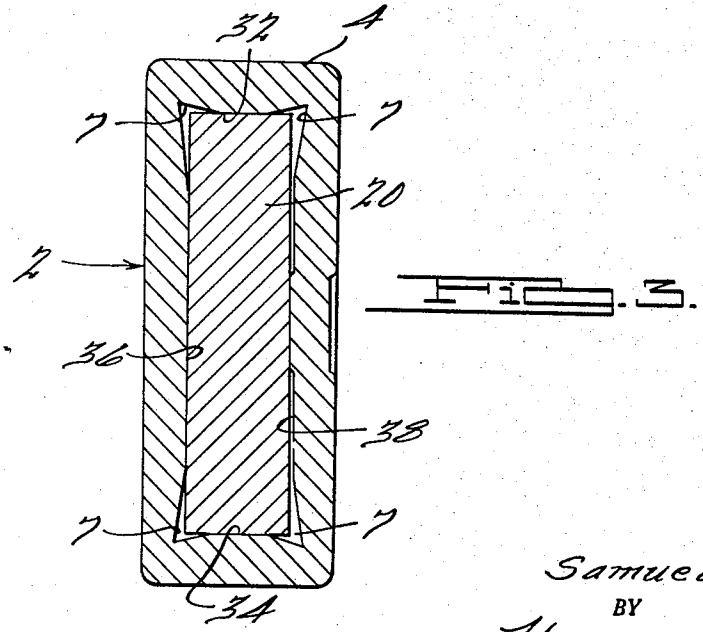


Fig. 3.

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TOWEL BAR

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3 Claims. (Cl. 248—251)

The present invention relates to an improved towel bar and more particularly, to an improved towel bar adapted to be mounted upon a shower door or a sliding sash of a bathtub enclosure such as the ones described in my copending application, Serial No. 175,107, filed July 12, 1950, now Patent No. 2,743,795.

One object of the instant invention is to provide such a towel bar which is neat and trim in appearance and which may be readily mounted upon a structural portion of the shower door or bathtub enclosure sash.

Another object is to provide an improved metal towel bar of trim and sturdy construction that may be quickly and rigidly mounted upon and secured to a sash molding member.

Still another object is to provide a sash for a bathtub or shower stall enclosure with a towel bar rigidly mounted thereon.

These and other objects are accomplished by the instant invention which provides a towel bar comprising an elongated, hollow member of rectangular cross section supported upon curved brackets. The brackets include fastening means by which they may be rigidly and securely affixed to a support such as a structural member of the sash of a bathtub enclosure. They also include tongues which, in the construction illustrated, are of reduced size relative to the size of the main bodies of the brackets and adapted to project into the opening of the hollow member. The opening within the hollow member is specially shaped in that its corners are outwardly flared to provide ample clearance for any burrs or the like that may be carried on the corresponding corners of the tongues. The inner walls of the hollow member intermediate the outwardly flared corners are spaced to closely fit the sides of the tongues so that when the tongues are inserted into the openings, they are firmly held therein by pressure-generated friction between the hollow bar member and the tongues.

The invention will be described in greater detail in connection with the accompanying drawing in which:

Figure 1 is an elevational view showing a towel bar embodying the present invention mounted on a bathtub enclosure;

Figure 2 is an enlarged, broken and horizontal sectional view of the structure of Figure 1 taken along the line 2—2 thereof; and,

Figure 3 is an enlarged transverse sectional view of the structure illustrated in Figure 2 taken along the line 3—3 of Figure 2.

Referring now to the drawing, the invention provides a towel bar generally designated 2 comprising an elongated, hollow bar 4 which in the preferred embodiment illustrated is formed by extruding aluminum and is rectangular in cross section. The member is supported upon a pair of brackets 6 which may be attached as by the screws 8 to a sash member 10 of a bathtub enclosure 12. Conveniently, one bar may be mounted on each of the sashes 13 and 15, one facing inwardly toward the bathtub and one facing outwardly away from the tub. The brackets 6 are of a generally rectangular transverse cross section and are longitudinally spirally curved through 90° of arc so that when one end face 14 of the brackets is seated flush against the sash member, the other end projects horizontally and parallel to a pane of glass 34 held in the sash. The face of the bracket adapted to fit flush upon the sash member may be fitted with a tapped hole 18 to receive the fastening screws 8. At its opposite end the bracket is reduced in size as shown in the drawing to provide a tongue 20 which may be fitted into the central opening 5 of the hollow bar member 4.

In the preferred embodiment illustrated, the brackets 6 are formed by extruding a length of material having the same cross section as that shown for the bracket 6 in Figure 2. This extruded length of material is then cut by a series of parallel transverse cuts to form a number of the brackets 6. It will be appreciated that this may leave burrs on the tongue 20 along its edges.

The bar 4 is preferably of the same over-all thickness as the thickness of the bracket 6 immediately adjacent to the tongue 20. The opening 5 centrally of the bar 4 is generally of the same size and shape as the tongue 20 except that the corners 7 of the opening are outwardly flared as illustrated in Figure 3 to prevent any binding between the corners of the tongue and the corners of the opening. During the development of the instant towel bar, it was found that a precise fit between the tongue and the opening within the hollow member is not practical at reasonable cost because the corners of the tongues frequently have burrs or the like. Also, in low cost extrusion operations the corners of a rectangular opening cannot be accurately formed and held to close tolerances. By extruding the bar 4 with the corners 7 of the central opening 5 outwardly flared, important savings were realized both in the cost of the extrusions and in a reduction of the number of finishing operations required on the tongues. Intermediate the outwardly flared corners 7, the opening 5, extending centrally through the hollow bar 4, is defined by upper and lower inner wall portions 32 and 34 and front and rear wall portions 36 and 38. These wall portions 32, 34, 36 and 38 are spaced to closely fit the tongue 20. The bar 4 is also provided with a shallow boss 24 adjacent each end struck inwardly into the opening 5 from its rear wall 38. When the tongue 20 is forced into the opening 5, it is firmly gripped between the inner surface of the boss 24 and the opposite inner wall surface 36 of the bar. This forcing of tongue 20 into the opening 5 results in a galling of the boss 24 and the adjacent surface of the tongue and a seizing of these surfaces, bringing them into intimate contact under pressure to provide a very tight, shock-resistant and rattleproof connection of the bracket 6 and the bar 4.

If the vertical dimension (taken with respect to the position shown in Figure 1) of the bar 4 is greater than the vertical dimension of the bracket 6, as will necessarily be the case if the tongue of the bracket is not undercut vertically, then the shoulders 26 of the bar 4 are preferably rounded to minimize the possibility of tearing a towel or other article placed upon the bar.

The towel bar 2 may be assembled by inserting a bracket tongue 20 into each end of the bar 4 to form a rigid assembly. The tongues are preferably inserted fully into the openings of the hollow member, so that the ends 28 of the bar 4 abut shoulders 30 on the brackets 6. The assembled towel bars may then be buffed or otherwise treated to provide the desired final finish. The towel bar may then be mounted upon a shower door or the sash of a bathtub enclosure. In the embodiment illustrated, this is done by means of screws 8 extending through the sash frame channel 10 outwardly of the glass panel 34 mounted therein, and threaded into blind tapped openings 18 opening through the faces 14 of the brackets 6, as is clearly illustrated in Figure 2.

While the embodiment of the invention herein disclosed is well calculated to fulfill the objects above stated, it will be appreciated that the invention is susceptible to modification, variation and change, without departing from the spirit of the present invention.

What is claimed is:

1. A towel bar assembly comprising a pair of brackets adapted to be mounted upon a support, each of said brackets including a tongue having a plurality of substantially flat sides adjacent ones of which intersect to provide a plurality of corners on said tongue and a hollow bar having flat inner wall portions individual to and closely fitting the sides of said tongues, the opening within said hollow bar being enlarged adjacent and around said corners of said tongue to prevent engagement of the bar with the corners of said tongues.

2. A towel bar assembly comprising a pair of brackets adapted to be mounted upon a support, each of said brackets having a projecting tongue of rectangular cross section, and a hollow bar having generally flat inner wall portions closely fitting over said tongues, said wall portions of said hollow bar being outwardly flared at the corners of the opening therein to avoid interference with the corners of the tongues.

3. A towel bar assembly comprising a pair of brackets adapted to be mounted upon a support, each of said brackets having a projecting tongue of rectangular cross section, and an elongated bar having generally flat inner walls defining a generally rectangular opening within said bar extending longitudinally therethrough, said walls closely fitting said tongues and being outwardly flared at their intersections to avoid interference with the corners of said tongues, and a shallow boss at each end of said bar extending inwardly into said opening and engaging one of said tongues.

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