April 9, 1940. LE ROY C. VAN GORDEN 2,196,571

BAR HOLDER CLIP

Filed March 29, 1937

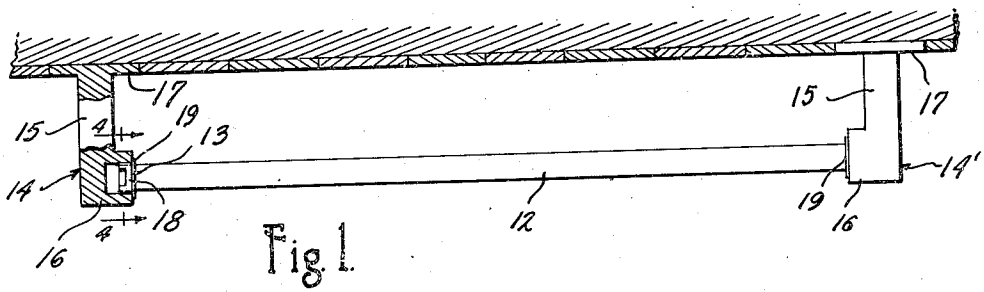

Fig. 1.

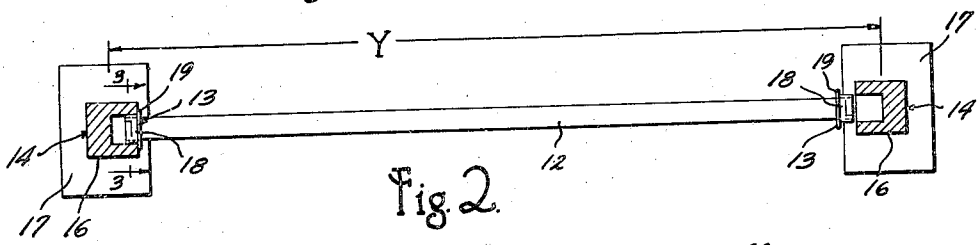

Fig. 2.

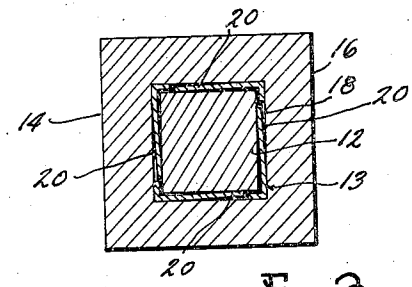

Fig. 3.

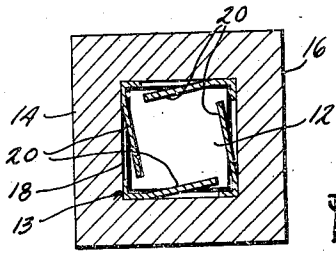

Fig. 4.

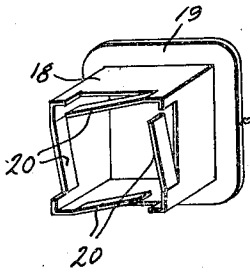

Fig. 10.

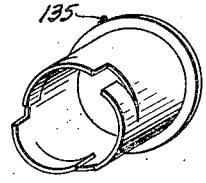

Fig. 5.

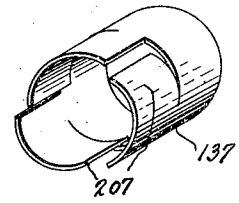

Fig. 7.

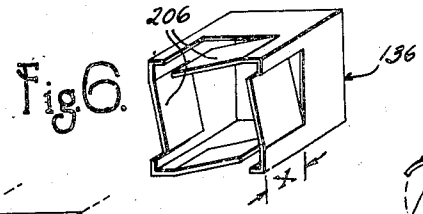

Fig. 6.

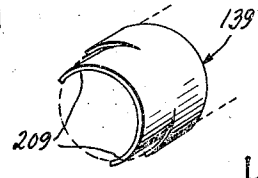

Fig. 9.

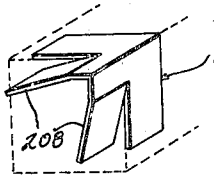

Fig. 8.

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BAR HOLDER CLIP

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5 Claims. (Cl. 287—119)

This invention pertains to rod holding devices, and more particularly to clips for holding towel bars in permanent fixtures. The invention comprises generally the provision of means which permit a bar to be attached to and held by a pair of fixtures or brackets after the latter have been fixed with respect to a wall or other supporting surface.

It is common practice when installing towel bars to insert the ends of the bars into recesses provided in brackets and then secure the brackets to a wall. It is obvious in this type of rack that, in order to support the bar, the distance between the inner faces of the brackets be considerably less than the length of the bar. Hence, when it is necessary to replace a broken bar, which is usually made of glass, one of the brackets must be removed to permit insertion of the ends of the bar in the bracket recesses. Frequently these brackets are made of vitreous material and form part of a wall tiling. They are subject to breakage when removed for bar replacements, thus causing delays and additional expense when the bracket as well as the bar must be replaced.

It is one of the objects of the present invention to provide clips or sleeves which, when properly positioned with respect to the brackets and bar, effectively secure the bar to the bracket. These clips permit the bar to be inserted in brackets which are fixed with respect to each other without displacing one of the brackets.

It is another object of the invention to secure the bar in the brackets in such a manner that it is securely locked therein and endwise movement of the bar inhibited.

Other objects will be apparent from the following description of the invention as illustrated in the accompanying drawing, in which:

Fig. 1 is a top plan view, partly in section, of a towel rack attached to a wall and illustrating the position of the present clip thereon;

Fig. 2 is a front view, partly in section, of the towel rack shown in Fig. 1;

Fig. 3 is a section taken on line 3—3 of Fig. 2;

Fig. 4 is a section taken on line 4—4 of Fig. 1; and

Figs. 5 to 10 are perspective views of several forms of clips, all embodying the invention.

Referring to the drawing, it will be seen that the bar 12 is rectangular in cross section, as shown in Fig. 3, and that the clip 13 is similar to that illustrated in Fig. 10. Brackets 14, 14' each comprise an arm 15 having a square boss 16 at one end thereof and a flanged portion 17 at its other end. As shown in Fig. 1, the flange constitutes one of the tiles of a wall. Boss 16 is provided with a square recess opening in the direction of the bar so that the latter may be inserted therein.

Assuming that the distance between the parallel inner faces of the bosses on a pair of brackets is somewhat less than the length of rod 12, it will be evident that one end of the rod may be inserted in the recess of the bracket 14 at the left of Fig. 1 to permit alignment of the other end of the bar with the recess in the bracket 14' at the right of this figure. It is obvious, however, that, unless some means are provided to prevent endwise movement of the bar after it has been aligned with the recess, the bar may be moved sufficiently far in one or the other direction to disengage one of the recesses and be unsupported thereby.

Clip 13, shown in Fig. 10, comprises a rectangular sleeve portion 18 adapted to fit the longitudinal surface of the bar and an outwardly extending flange 19 at one end thereof. Adjacent the other end of the sleeve, each face thereof is cut to form tongues 20, each of which is bent inwardly as shown. The clip is made of spring metal so that, after bending, the tongues tend normally to spring inwardly if moved into alignment with the planes of the sleeve sides.

Before inserting the bar 12 in the recesses of the brackets, a clip is slipped over the end of the bar, preferably at each end thereof, the tongues being moved outwardly so that they also rest on and engage the sides of the bar and are thus placed under tension. The ends of the bar are then aligned with the recesses in the brackets and each clip is moved endwise over the end of the bar into one of the recesses. The dimensions of the bar and clip, as well as the distance between the brackets, are predetermined and are such that, when flanges 19 abut the inner faces of the bracket bosses, tongues 20 will have passed over the ends of the bar and sprung inwardly. The ends of the bar will then be in substantial abutting relation with the edges of the tongues. Since further inward movement of the clips into the recesses is prevented by flanges 19, it will be apparent that the bar is held against endwise movement in either direction by the tongues at opposite ends of the bar.

In the several modifications shown, each form of the invention employs a member adapted to fit over a bar of a particular cross section, but, in each type of clip, the spring tongues at one end of the clip constitute essential elements of the

invention. In Fig. 5, the clip 135 differs from that shown in Fig. 10 only in the form thereof, that is, the sleeve is cylindrical to fit a bar of circular cross section. Its function and the manner in which it secures the bar to the brackets is similar to that with respect to the rectangular clip illustrated in Fig. 10.

In Figs. 6 and 7, there are shown rectangular and cylindrical clips 136 and 137, respectively, but these clips differ from those heretofore described in that they are not flanged. When employing this type of clip, the dimensions of the tongues 206, 207 are such that the sum of their lengths is substantially equal to or slightly less than the difference between the length of the bar and the distance between the closed ends of the opposite recesses. Expressed mathematically, $Y-L=2x$, where Y is the distance between the closed ends of the recesses (see Fig. 2), L is the length of the rod, and x is the length of a tongue, as indicated in Fig. 6. Thus, when the clips are forced into the recesses, the tongues at each end of the rod will substantially bridge the gap between that end of the bar and the closed end of the recess in which the clip is disposed.

When the tongues are not sufficiently long to form a complete bridge between the ends of the bar and the closed ends of the recesses, they at least limit endwise movement of the bar enough to prevent the bar from being removed from the clips. In other words, when the tongue portions of the clips have been forced over the ends of the rod, the distance between the uncut ends of the clips is always less than the length of the rod. The uncut portions of the clips will then support the bar.

In Figs. 8 and 9, the clips 138, 139 do not extend completely around the bar. They are sufficiently wide, however, to engage a substantial surface of the bar and provide tongues 208, 209 adapted to spring inwardly when forced over the ends of the bar. While these clips are shown without flanges, it is obvious that they may be provided with end flanges and function in a manner similar to the clips shown in Figs. 5 and 10.

While the invention has been illustrated as applied to bars of rectangular and circular cross section, it is intended that clips for bars of other cross sections be included in the definition thereof as set forth in the claims. Also, it is not intended to limit the number or shape of the tongues on each clip, since it is apparent that the function of the clip is not impaired by increasing or decreasing the number of tongues thereon or by changing the shape thereof.

What I claim is:

1. A one-piece clip for locking towel bars or the like in brackets comprising a member having a portion adapted to snugly fit the bar adjacent one end of the bar and an extension of said portion having a spring tongue normally disposed to engage the end of said bar, said tongue being yieldable to permit the bar to pass through said extension and being bent about a line parallel with the longitudinal axis of the bar.

2. A one-piece clip for locking towel bars or the like in brackets comprising a member having a portion adapted to snugly fit the bar adjacent one end of the bar and an extension of said portion having a spring tongue normally disposed to engage the end of said bar, said tongue being bent inwardly about a line parallel with the longitudinal axis of the bar, the end of said member removed from said extension being flanged outwardly.

3. A one-piece clip for locking towel bars or the like in brackets comprising a sleeve shaped to conform to the cross section of the bar to be locked, one end of said sleeve being cut to form a tongue disposed inwardly of the sleeve, said tongue being yieldable to permit the sleeve and tongue to pass over said bar and being bent about a line parallel with the longitudinal axis of the bar.

4. A one-piece clip for locking towel bars or the like in brackets comprising a sleeve shaped to conform to the cross section of the bar to be locked, one end of said sleeve being cut to form a tongue disposed inwardly of the sleeve, said tongue being yieldable to permit the sleeve and tongue to pass over said bar and being bent about a line parallel with the longitudinal axis of the bar, the other end of said sleeve being flanged outwardly.

5. A one-piece clip for locking towel bars or the like in brackets comprising a member having a portion adapted to snugly fit the bar adjacent one end of the bar and an extension of said portion having a spring tongue normally disposed to engage the end of said bar, said tongue being bent inwardly about a line parallel with the longitudinal axis of the bar.

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