April 17, 1962 K. BREUER 3,030,060

CURTAIN ROD MOUNTING DEVICES

Filed Jan. 15, 1960 2 Sheets-Sheet 1

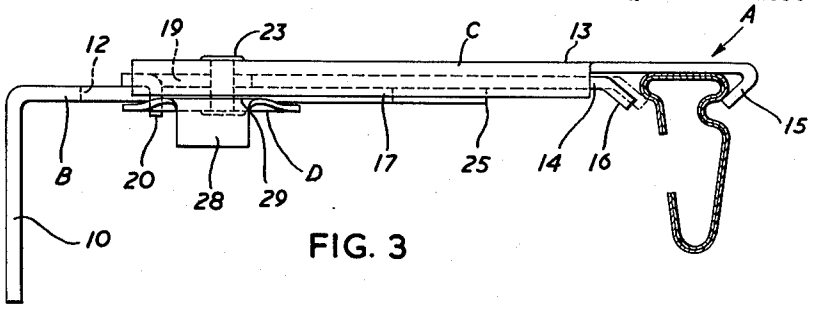


FIG. 3

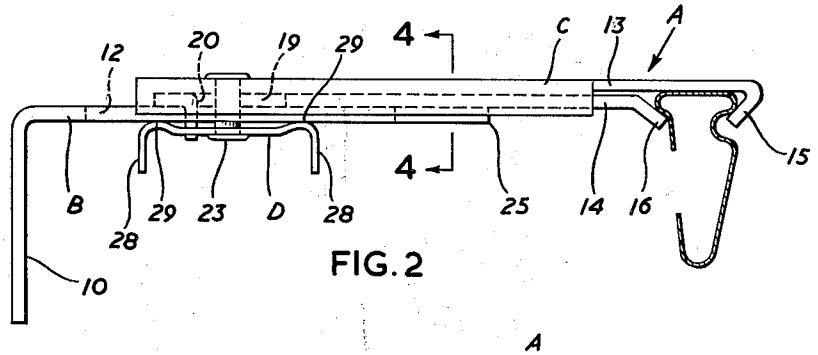


FIG. 2

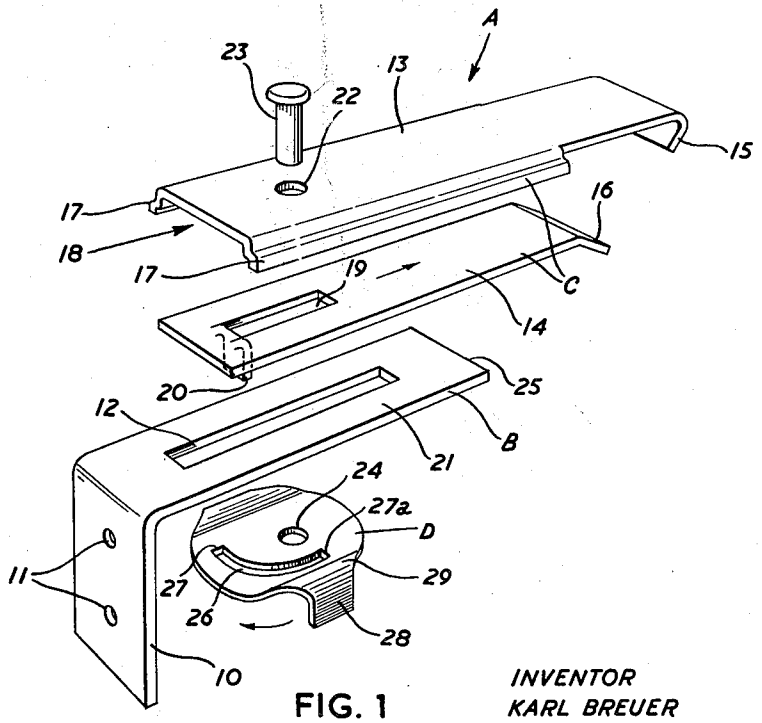


FIG. 1

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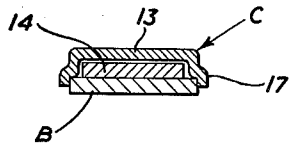


FIG. 4

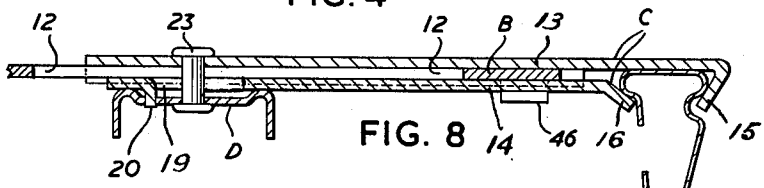


FIG. 8

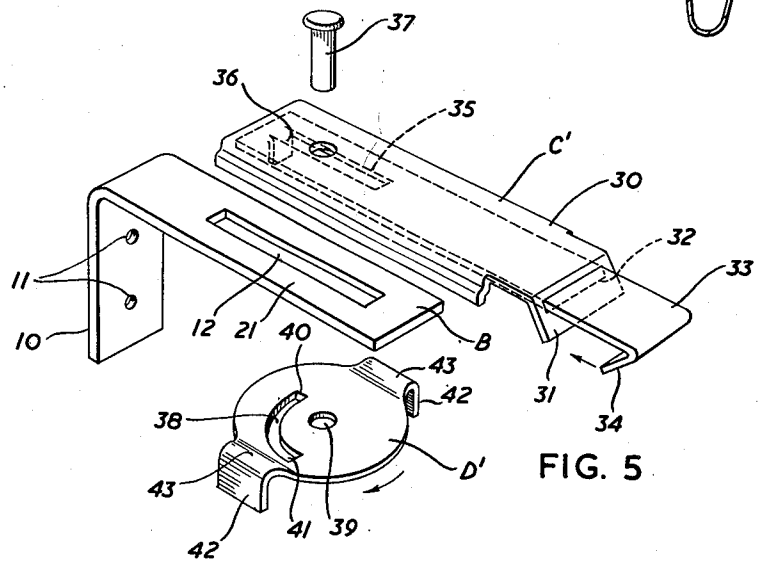


FIG. 5

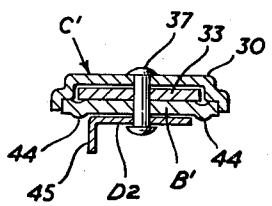


FIG. 6

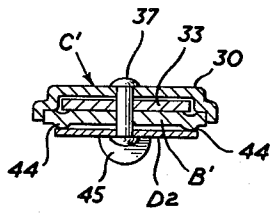


FIG. 7

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CURTAIN ROD MOUNTING DEVICES

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7 Claims. (Cl. 248—265)

This invention relates to curtain rod mounting devices.

It is an object of the present invention to provide a simplified device which will clamp and mount a curtain rod and which may be manipulated without the necessity of tools for the purpose.

A further object of the invention is to provide a device of this character which is adjustable to clamp rods of different sizes and which is also adjustable to space the rod a predetermined selected distance from the wall on which the device is mounted.

A further object of the invention is to provide a device of this kind which employs a single actuating member for moving and adjusting the rod gripping means and which actuator may function as a locking means for the grippers when moved into their gripping position.

With these and other objects in view, the invention generally embodies a mounting device incorporating a mounting bar having a longitudinal slot therein, a carriage slidably mounted on said mounting bar having a fixed and a movable jaw disposed beyond an end of said bar for clamping a curtain rod, an actuator, means traversing said slot rotatably mounting said actuator adjacent to said mounting bar and carriage, and forming a means of connecting said actuator and carriage, means operatively connecting between said actuator and carriage for moving said movable jaw relatively to the fixed jaw to and from a clamping position when said actuator is rotated and means for locking said jaws in rod clamping position. Preferably, the actuator performs the latter function as well and the structure includes means coacting between said actuator and said bar for locking said jaws when in rod clamping position.

The invention will be more clearly understood by reference to the following detailed specification taken in conjunction with the accompanying drawings.

In the drawings—

FIGURE 1 is an exploded perspective view of a preferred form of curtain rod mounting device showing the various parts in separated position clearly to illustrate the manner of construction.

FIGURE 2 is a side elevation of the mounting device shown in FIGURE 1 illustrating the gripping jaws in engagement with a curtain rod which is illustrated in cross section.

FIGURE 3 is a similar view to FIGURE 2 illustrating the jaws in the open position and illustrating in dotted lines the clamping position of one of said jaws in engagement with a section of curtain rod of larger size than that shown in FIGURE 2.

FIGURE 4 is a section taken on the line 4—4 of FIGURE 2.

FIGURE 5 is a perspective exploded view of an alternative form of mounting device.

FIGURES 6 and 7 are cross sections taken through a still further alternative form of the device illustrating unlocked and locked position respectively employing a ribbed mounting bar in conjunction with a flat-faced actuating device for achieving locking in an alternative manner to that illustrated in FIGURES 1 to 3 and 5; and,

FIGURE 8 is a fragmentary longitudinal section taken through a still further alternative form of the invention.

Referring to the drawings, and first of all to FIGURES 1 to 4, A indicates the mounting device as a whole which is made up of a mounting bar B, a slidable carriage C

and an actuator D. The mounting bar is preferably of the bracket type having an offset portion 10 disposed substantially at right angles to the bar proper and orificed as at 11 for mounting on a wall, window frame or the like. The bar B is formed with a longitudinally extending slot 12 for the purpose of slidably mounting thereon the carriage C.

The carriage C is made up of two elements, namely, the slide bar 13 and the slide bar 14, the former being provided with the offset portion 15 adjacent its outer end to form a gripping jaw, whereas the slide bar 14 is offset adjacent its outer free end to form the gripping jaw 16. The slide bar 13 is formed with depending flanges 17 extending longitudinally along its side edges over a substantial extent of its length to form a guideway 18 for slidably receiving the slide bar 14.

The slide bar 14 is provided with a longitudinally extending slot 19 disposed to register with slot 12 in mounting bar B when said slide is superimposed thereon in its assembled state and a part of the material removed to form slot 19 is struck in the form of a lug or tongue 20 which depends from this slide bar and is adapted to traverse the slot 12 in the mounting bar B for operative connection with the actuator D. Preferably, the slot 19 in the slide bar 14 is of the same width as the slot 12 in the bar B, and the lug or tongue 20, therefore, may act as a guide within slot 12 during the movement of the slide 14 relatively to the bar B.

The assembled carriage C made up of the relatively movable slides 13 and 14 is superimposed on the upper face 21 of the bar B with the tongue 20 projecting through the slot 12 in the bar B and, through a suitable orifice 22 in the slide bar 13, a suitable pin rivet or the like 23 is caused to pass through the orifice 22, slot 19 in slide bar 14 and slot 12 in bar B and to pass through an orifice 24 in the actuator D as to rotatably mount the actuator adjacent to the other face of the mounting bar B. This also serves to connect the slides 13 and 14 together to form the carriage C, and it will be understood that the carriage C together with the actuator D may be caused bodily to slide on the bar B to the extent of the length of the longitudinal slot 12 therein. Consequently, it will be understood that when the carriage is not locked to the bar B the carriage may be shifted so as to position the opposed gripping jaws 15 and 16 thereof directly adjacent to the outer free end 25 of the bar B, at which point the lug or tongue 20 will be disposed directly adjacent the opposite end of the longitudinal slot 12, or said carriage may be shifted axially of bar B to dispose the jaws a greater distance out therefrom. Accordingly, therefore, the mounting device provides for adjusting the location of the jaws, and a rod which they may hold, outwardly from the wall, window frame, etc. on which the mounting bar is secured so that the desired spacing of the rod from said wall, window frame, etc. may be selected as required within the limits of the sliding adjustment.

The actuating member D is provided with a suitable curved cam track preferably in the form of a slot 26 which is slotted eccentric to the pivotal orifice 24 thereof and so arranged that the terminal end thereof 27 is spaced further from the orifice 24 than the terminal end 27*a* and in the full open position of the jaws 15 and 16 the terminal end 27 of slot 26 is located just to one side of slot 12 in the bar B as to cause a portion of slot 26 at this end thereof to intersect slot 12 of bar B so that the tongue or lug 20, traversing this latter slot, will project into slot 26. Consequently, upon rotation of the actuator D in a clockwise direction, i.e., direction of the arrow shown in FIGURE 1, the cam track formed by slot 26 in this turning movement of actuator D will through the medium of lug 20 cause slide 14 of the carriage C to slide axially

and move jaw 16 towards jaw 15 and will space the jaws 15 and 16 a varied distance apart depending upon the extent to which the actuator is rotated. Consequently, the jaws may in this manner be caused to grip a curtain rod in the manner illustrated in FIGURE 2; thus, if the slides of carriage C are then locked in this clamping position the rod will be securely held as desired. Suitable locking means therefore forms a part of the invention to achieve this purpose.

The locking of the slide bars 13 and 14 of carriage C in the clamping position is preferably achieved, according to the invention, by the actuator D and effected when the actuator has caused the jaws 15 and 16 to engage and clamp a rod. In this instance, the actuator is provided with the depending actuating fingers 28 preferably disposed diametrically opposite one another, and the body of the actuator is provided with raised portions projecting above the plane of the upper face thereof and which may take the form of the raised shoulders or ribs 29, the upper face of the actuator body D between the shoulders 29 being of a width as to straddle the width of the bar B, thereby disposing the shoulders or ribs 29 outside the marginal side edges of bar B when the jaws are in their full open position and the carriage is freely slidable on bar B. When, however, the actuator D is rotated clockwise as to cause the jaw 16 to move toward the jaw 15, the shoulders or ribs 29 move into bearing engagement with the lower surface of bar B, thereby exerting an axial pull on the pin 23 as to cause the relatively sliding parts 13 and 14 of the carriage to be locked together and locked to the bar B, thus making this unit a rigid one. Accordingly, simultaneously with the movement of jaw 16 into clamping position, locking of the movable parts of the carriage C to the bar B occurs.

It should be clear, therefore, that when the actuator D is in the position shown in FIGURE 3, i.e., the unlocked position, the carriage is freely slidable on bar B to the extent of the longitudinal slot 12 as to position the open gripping jaws outwardly of the free end 25 of bar B to the required extent and upon then rotating the actuator D in a clockwise direction the jaw 16 is caused to move toward jaw 15 to clamp a curtain rod firmly therebetween, and the engagement of ribs or shoulders 29 with the bottom face of bar B in this operation will then cause locking of the parts as to form a rigid device. In both FIGURES 2 and 3, as will be noted from the location of the tongue 20 relatively to the left hand end of slot 12, the jaws are disposed in an outwardly adjusted position relatively to the end 25 of the bar B.

Referring to the alternative form of construction shown in FIGURE 5, the action is of similar character though the relative movement between the jaws of the device is opposite. In this construction, the bar B is substantially identical in construction to that shown in FIGURES 1 to 3. However, the carriage C^1 is of slightly different construction, wherein the flanged slide bar 30 is formed with an outer free end offset to form the inner jaw 31, said offset portion being slotted as at 32 to permit the slide bar 33 to pass therethrough in sliding relation. The outer end of slide bar 33 is provided with a longitudinal slot 35 and formed with a depending lug or tongue 36 similar to the corresponding construction of slide bar 14 in FIGURES 1 to 3, and the device is assembled in a similar manner and secured by the pin or rivet 37. The pin secures the actuator D^1 rotatably in a similar manner adjacent to the under face of bar B. The curved cam track or slot 38 of actuator D^1, however, is substantially reversed in relation to the orifice 39 thereof to the arrangement shown in FIGURE 1, and in this case with the carriage in free sliding relation to bar B and the jaws opened to their maximum extent the terminal end 40 of cam track 38 is disposed so that an adjacent portion thereof intersects the longitudinal slot 12 of bar B. Therefore, when the actuator D is rotated by fingers 42 in a clockwise direction, as indicated by the arrow, the cam track 40 acting on lug 36 of slide bar 33 will cause the slide bar to move inwardly in the direction of the arrow shown adjacent jaw 34, thus to cause jaw 34 to move in a direction towards jaw 31 to effect the clamping action of the curtain rod. Similarly, the ribs or shoulders 43 of actuator D^1 will engage the lower face of bar B and cause locking of the carriage in the manner described in respect to FIGURES 1 to 3. Thus, clamping of the jaws in both cases is effected by causing said jaws to move relatively to one another under actuation of the actuator D or D^1.

Locking of the carriage to the bar B may be effected by the actuator in a different manner from that described in the previously mentioned figures and this is illustrated in FIGURE 6, wherein the bar B^1 is formed with marginal ribs 44 that project outwardly below the plane of the lower face of the bar, whereas the actuator D^2 is simply a planar member having the depending fingers 45. The actuator here shown is of greater length than width and in the unlocked position (FIGURE 6), where it is axially aligned with bar B^1, its width fits within the span of the ribs 44, but as soon as the actuator is rotated cross-wise of bar B^1, to cause the jaws to effect their clamping action, the engagement of the upper planar face of actuator D^2 with the ribs 44 will naturally cause an axial pull on the pin 37 as to effect a locking of the parts rigidly together in a similar manner to the action effected in FIGURES 1 to 5.

In FIGURE 8 a further alternative is illustrated similar in action to the construction shown in FIGURES 1 to 5 but wherein mounting bar B is disposed between the slide bars 13 and 14 which together form the carriage C. The action in this case is the same except that locking is effected by co-action between the actuator D and the slide bar 14. Accordingly, it will be apparent that the locking action is achieved in respect of the various forms of construction by co-action between said actuator and one of the bars B, B^1 or 14.

It will be apparent from the foregoing, therefore, that by a simple variable arrangement of carriage and mounting bar, a curtain rod mounting device is readily provided which is easy of mounting, readily adjustable and will effect firm clamping and unclamping of curtain rods in a simple manner without the necessity of tools for the purpose. As shown, the combination may be varied with different arrangement of the slide bars of the carriage such as illustrated and obviously, of course, the arrangement of FIGURE 1 could be reversed as to dispose the actuator above the mounting bar and the slides below it. It will also be understood, of course, that the device can be constructed so that the slide bars are adjustable relatively to one another for clamping purposes without providing for the sliding adjustment of the bars for spacing the jaws in selected spaced apart relation from the end of the mounting bar, in which case it would only be necessary to so slot the movable slide bar as to cause its movement relatively to the other slide bar.

What I claim as my invention is:

1. A curtain rod mounting device comprising a mounting bar having a longitudinal slot therein, a carriage including a pair of slide bars, slidably mounted on said mounting bar one of said slide bars having a longitudinal slot therein, said carriage having a fixed and a movable jaw arranged in spaced apart cooperative relation and disposed beyond one end of said mounting bar for clamping a curtain rod, an actuator, means depending from said slide bars of said carriage and traversing the slot in said slotted slide bar and said slot in said mounting bar for rotatably mounting said actuator in close proximity to one of said bars and slidably securing said carriage on said mounting bar, means operatively connecting said actuator and carriage for moving said movable jaw relatively to the fixed jaw, to and from curtain rod clamping position, and means coacting between said actuator and one of

said bars for locking said jaws when in rod clamping position.

2. A curtain rod mounting device comprising a mounting bar having a longitudinal slot therein, a carriage including a pair of slide bars, slidably mounted on said mounting bar one of said slide bars having a longitudinal slot therein, said carriage having a fixed and a movable jaw arranged in spaced apart cooperative relation and disposed beyond one end of said mounting bar for clamping a curtain rod, an actuator, means depending from one of said slide bars of said carriage and traversing the slot in said slotted slide bar and the slot in said mounting bar for rotatably mounting said actuator in close proximity to one of said bars and securing said carriage on said mounting bar, said actuator and carriage being bodily slidable axially of said mounting bar to locate said jaws in selected adjusted position outwardly beyond said mounting bar, means operatively connecting said actuator and carriage for moving said movable jaw relatively to the fixed jaw, to and from curtain rod clamping position, and means coacting between said actuator and one of said bars for locking said jaws in rod clamping position and locking said carriage in selected adjusted position relatively to said mounting bar.

3. A curtain rod mounting device comprising a mounting bar having a longitudinal slot therein, a pair of slide bars mounted on said mounting bar and slidable with respect thereto, each slide bar having a jaw element substantially at its terminal end jointly to form spaced apart cooperative jaws for gripping a curtain rod, one of said slide bars having a slot designed to register with the slot in said mounting bar, an actuator, pin means traversing said slots in said mounting bar and slotted slide bar rotatably mounting said actuator in close proximity to one of said bars and securing said carriage on said mounting bar, means operatively connecting said actuator and said slotted slide bar for moving the latter relatively to said other slide bar whereby to move its jaw element relatively to the jaw element of said other slide bar for clamping and unclamping said curtain rod, and means co-acting between said actuator and one of said bars for locking said jaws when in rod clamping position.

4. A curtain rod mounting device comprising a mounting bar, a carriage including a pair of slide bars slidably mounted on said mounting bar, one of said slide bars having a longitudinal slot therein, said carriage having a fixed and a movable jaw arranged in spaced apart cooperative relation and disposed beyond one end of said mounting bar for clamping a curtain rod, an actuator, means depending from one of the slide bars of said carriage and traversing the slot in said other slide bar and the mounting bar for rotatably mounting said actuator in close proximity to one of said bars and securing said carriage on said mounting bar, means operatively connecting said actuator and one of the slide bars of said carriage for moving said movable jaw relatively to the fixed jaw to and from curtain rod clamping position, and means cooperating between said actuator and one of said bars for locking said jaws in rod clamping position when said actuator is rotated to predetermined position.

5. A device as claimed in claim 4 in which the slide bars of the carriage are mounted one on the other and both are mounted on one face of the mounting bar.

6. A device as claimed in claim 4 in which one of the slide bars is mounted on one face of the mounting bar and the other slide bar is mounted on the opposite face of the mounting bar.

7. A device as claimed in claim 4 wherein said mounting bar has a longitudinal slot traversed by said depending means and said carriage and said actuator are slidable relatively to the mounting bar to locate said gripping jaws a selected distance beyond said end of the mounting bar, said slide bars being lockable in adjusted position by said actuator when operated to move the movable jaw to curtain rod clamping position.

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