Aug. 21, 1956 J. H. JENSEN 2,759,536

ADJUSTABLE TENSIONING DEVICE FOR FRAMELESS WINDOW SCREENS

Filed April 19, 1954

Fig. 1

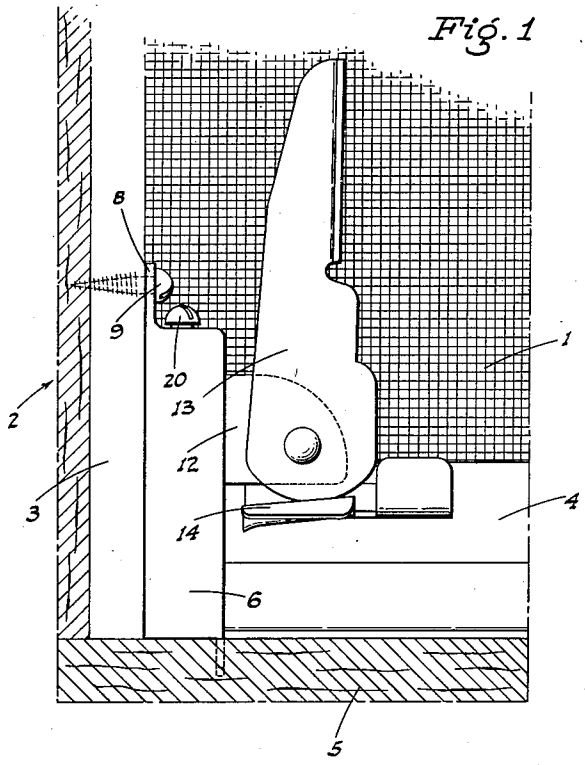


Fig. 2

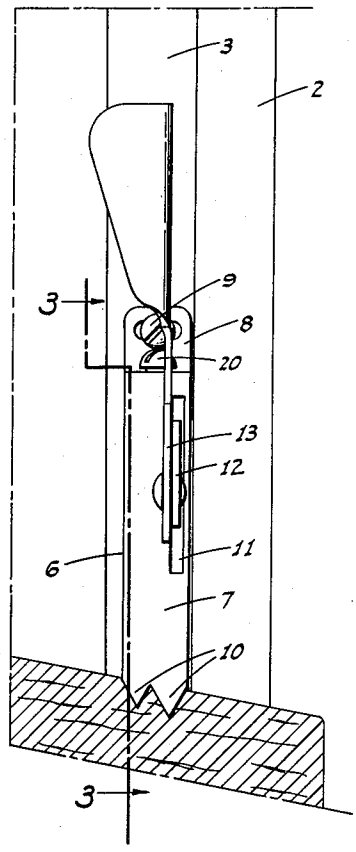


Fig. 3

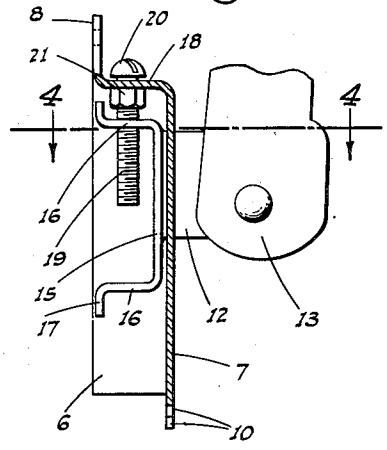
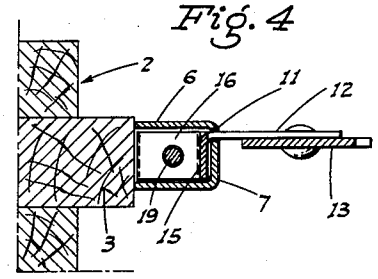


Fig. 4



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ADJUSTABLE TENSIONING DEVICE FOR FRAMELESS WINDOW SCREENS

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1 Claim. (Cl. 160—328)

This invention relates in general to frameless window screens, and in particular is directed to, and it is a major object to provide, a novel mounting bracket unit for the cam lever of a tensioning and hold-down device for a screen of such type.

In certain prior devices vertical adjustment of the cam lever, for the purpose of increasing the tension on the screen to compensate for stretch, was accomplished by adjusting a lever mounting bracket secured by a wood screw to the side of the window frame; the bracket having been slotted for reception of the screw and to permit of such adjustment upon loosening of said screw. This was not entirely satisfactory, since the screw—especially after being loosened and retightened several times—would lose its firm hold in the wood; sometimes resulting in the bracket slipping upwardly, with loss of the tension on the screen.

It is therefore another important object of this invention to provide a mounting bracket unit, for a screen tensioning and hold-down cam lever, which permits of vertical adjustment of such lever without requiring loosening of the wood screw which attaches the bracket unit to the window frame, and once installed on the latter said bracket need never be moved.

A further object of the invention is to provide a mounting bracket unit, as in the preceding paragraph, wherein the cam lever is vertically adjustably secured to the bracket by means which assures against any upward vertical movement of said cam lever from any selected position of adjustment.

It is also an object of the invention to provide a mounting bracket unit, for the purpose described, which is designed for ease and economy of manufacture, a simplicity of initial installation, and convenience of adjustment.

Still another object of the invention is to provide a mounting bracket unit which is practical, reliable, and durable, and one which will be exceedingly effective for the purpose for which it is designed.

These objects are accomplished by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claim.

In the drawings:

Fig. 1 is a fragmentary inside elevation of a frameless window screen and window frame and a tensioning device mounted in cooperative relation therewith and which includes the improved adjustable lever mounting bracket unit; the lever being shown in its screen releasing position.

Fig. 2 is a front or face view of said unit, the screen being omitted.

Fig. 3 is a fragmentary sectional elevation on line 3—3 of Fig. 2.

Fig. 4 is a fragmentary sectional plan on line 4—4 of Fig. 3.

Referring now more particularly to the characters of reference on the drawings, the frameless window screen 1 is suspended, as usual, from the top of the window

frame 2 in any suitable manner, and at its side edges abuts the jambs or blind stops 3 of the frame 2.

The screen, along the bottom, is secured to a rigid depending cross bar unit 4 which, when the screen is in place and properly tensioned, bears along its lower edge on the window sill 5.

Adjacent each side of the window frame, a screen tensioning device is located. Such device comprises an elongated box-like bracket 6 of rectangular channel form in plan, as shown in Fig. 4, and which includes a front wall 7.

At its upper end, the bracket is provided with an upstanding flange 8 adapted to abut against the blind stop 4 and to be secured thereto by a screw 9. This screw is the only one needed to hold the bracket in place, since the front wall 7 is formed, at its lower end, with depending prongs 10 which are driven into the sill, as shown in Fig. 2, before the screw 9 is mounted.

Projecting forwardly through a vertical slot 11, in the front wall 7 of the bracket, is a vertical ear 12 on which a cam lever 13 is pivoted. This lever is arranged, at its lower end, to overhang and cooperate with a horizontal catch channel 14 mounted on the cross bar 4 of the screen at a level such as to cause the bar to be lowered and the screen tensioned upon downward movement of the cam lever from a vertical position.

The ear 12, inside the bracket, is secured to an elongated upstanding bar or strap 15 slidably engaged between the side walls of the bracket and formed, at its ends, with right angle flanges 16 projecting away from the front wall 7 and terminating at their rear ends in flat pads or feet 17 adapted to slidably engage the blind stop 3.

Freely projecting through the top wall 18 of the bracket and threaded through the top flange 16 is a vertical screw 19 held against axial movement in wall 18 by the head 20 of the screw above said wall, and a nut 21 on the screw below said wall.

By turning screw 19 one way or the other, therefore, the ear 12 (and consequently the cam lever 13) will be raised or lowered as may be necessary to locate the lever for the proper tensioning of the screen; the length of slot 11 relative to the height of the ear being, of course, sufficient to permit of such movement of the ear 12.

By reason of the above described mounting of the ear 12, the latter is held in a stable manner, and any tendency to upward movement and tilting of the ear (due to the engagement of the cam lever 13 with channel 14) is accompanied by a frictional contact of one end of bar 15 with the front wall 7, and by frictional contact of the opposite end foot 17 with the blind stop.

No appreciable strains are placed on the screw and there is no tendency for the same to turn of itself to effect the setting of the ear.

From the foregoing description it will be readily seen that there has been produced such a device as substantially fulfills the objects of the invention, as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claim.

Having thus described the invention, the following is claimed as new and useful, and upon which Letters Patent are desired:

In a device for tensioning a screen in a window frame, a cam lever whose swinging movement in a vertical plane tensions the screen, and an ear on which the lever is mounted, the window frame including a vertical blind stop and a bottom sill; means to mount the ear in connection with the window frame for vertical adjustment and including a vertical elongated bracket of rectangular form in cross section and having sidewalls, a front wall,

and a top wall, means to secure the bracket on the window frame with the bottom and back edges of the sidewalls in contact with the sill and blind stop respectively, the front wall having a vertical elongated slot through which the ear projects in vertically slidable relation, a member attached to the ear within the bracket and vertically slidable therein, and a vertical axially immovable adjustment screw projecting downwardly through and turnable in the top wall of the bracket and threaded into said member; said member comprising a strap longer than the height of the ear and substantially the width of the bracket between the sidewalls and disposed adjacent the front wall, flanges on the strap at its ends projecting away from said front wall, the screw being threaded through the top flange, and vertical feet on the flanges at their free rear end substantially slidably engaging the blind stop.

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