The present invention relates generally to frameless window screens, and particularly to the screen tensioning device and the manner of securing the latter to the window frame.

It is a prime object of this invention to provide a novel bracket unit, adapted to be secured to the window frame, as the support for a working part of a screen tensioning device.

Another object of the invention is to provide a bracket unit which is easy to install; there being novel locating and guide means embodied in the bracket unit to facilitate its installation in a correct, vertically adjustable position.

A further object of the invention is to provide a metal bracket unit which is of simple but sturdy construction; the bracket unit being integral or one-piece, and designed for ease and economy of manufacture.

Still another object of the invention is to provide a practical and reliable bracket unit for tension screens, 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. 2 is a side elevation of such tensioning device and bracket unit.

Fig. 3 is a similar view, but shows the manner of use of the bracket unit, before its attachment, to locate the center point for the holding screw.

Fig. 4 is a sectional plan on line 4—4 of Fig. 2.

Referring now more particularly to the characters of reference on the drawings, the invention is embodied in a frameless window screen, indicated generally at 1, which screen includes a bottom cross bar 2, and a top cross bar (not shown) which is secured to the header of a window frame 3 in a suitable manner. At each end of the frameless window screen 1 is adapted to be maintained taut or under tension by means of a screen tensioning device, indicated generally at 4, secured in part to an end portion of the bottom cross bar 2, and in part to the adjacent blind stop 5 on the corresponding side 6 of said window frame 3.

As the screen tensioning devices 4 at opposite ends of the bottom cross bar 2 are identical, except that they are right and left hand, only one of such devices is here shown and described.

Each screen tensioning device 4 comprises a longitudinal, upwardly opening channel 7 affixed to the back side of the bottom cross bar 2 adjacent the end thereof; there being a finger pull 8 extending rearwardly from the bottom cross bar laterally inwardly of the channel 7.

A cam lever 9 is disposed above the channel 7, being pivoted—as at 10—in connection with a bracket unit, indicated generally at 11, attached to the adjacent blind stop 5. The cam lever 9 is flat, except for a rearwardly offset finger tab 12 at its outer end portion; such lever facing the screen and being swingable about its pivot 10 from an upstanding released position to a lowered screen tensioning position.

The lever 9 is formed, at its lower end, with a cam 13 eccentric to the pivot 10 and such cam, upon swinging of the lever 9 between its upstanding position to its lowered position, works in the channel 7 and forcefully urges the same, together with the bottom cross bar 2, downwardly, so as to effectively tension the screen 1. The finger pull 8 is employed to initially draw the bottom cross bar 2 at its ends against the blind stops 5, at which time the lower edge of the eccentric cam 3 snaps easily into the channel 7; the latter having—at its rear edge—a downwardly inclined deflector tongue 14.

The bracket unit 11 which provides the pivotal mount for the cam lever 9 embodies the essence of the invention, and is constructed as follows:

The numeral 15 indicates a vertically adjustable attachment plate secured in face to face abutment against the corresponding blind stop 5 by means of a headed, holding screw 16 which extends through a vertically elongated slot 17 in said attachment plate 15. The upper end of such slot 17 is enlarged or rounded, as at 18, to permit of passage of screw 16 therethrough; this for the purpose of facilitating initial engagement of plate 15 on the screw 16, or its removal therefrom.

The vertically adjustable attachment plate 15 is maintained in proper alignment on the blind stop 5 by means of vertically spaced locating ears 19 which project laterally outwardly from the forward edge of said plate 15; such ears engaging against the front of said blind stop, as clearly shown in Fig. 4.

A flat bracket plate 20 projects laterally inwardly from the forward edge of the attachment plate 15 intermediate the locating ears 19; such bracket plate 20 thus facing the screen 1 and pro-
viding a face to face mount for the lower or cam end of the lever 9. Such lower or cam end of the lever 9 is connected to the bracket plate 20 by the pivot 10, as aforesaid.

By reason of the vertically spaced locating ears 18, the described bracket unit can be secured in proper position on the corresponding blind stop 5 with a single holding screw 16; there being no tendency of the bracket unit to cant out of position forwardly or rearwardly. Additionally, the bracket unit is further located by slightly deforming opposite ends of the attachment plate laterally outwardly, as at 21, whereby such deformed ends tend to bite into the blind stop 5 upon tightening of the headed holding screw 16. Thus, while the bracket unit 11 is vertically adjustable for proper setting of the lever 9 and its cam 12, such bracket unit is normally positively held in position by reason of the features above described.

At its upper end the attachment plate 15 is formed with an upwardly opening U-notch 22, whose purpose is as follows:

Before each bracket unit 11 is secured in place it is disposed flush against the blind stop 5 with the locating ears 19 against the front of said stop; such attachment plate 15 being slid downwardly until it abuts at one corner against the top of the sill 23, as shown in Fig. 3. The U-notch 22 is then used to mark or locate the center point 24 for the screw. Thereafter, the headed holding screw 16 is run into the blind stop 5 at such point, which is the correct point for the screw to engage through the slot 17 intermediate its ends.

The described bracket unit 11, being of one-piece metal construction, can be manufactured readily and with economy: the bracket unit, as formed, being sturdy and providing a very stable mount for the lever 9.

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 therefrom 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 may be desired:

A bracket adapted to be secured against the transversely extending side of a blind stop of a window frame for mounting the working part of a screen tensioning device, said bracket comprises an upstanding attachment plate adapted to engage said side of the stop, a bracket plate projecting laterally inward from the outer edge of the attachment plate on which to mount said working part, the attachment plate having a vertical key-hole slot to receive a headed screw pre-mounted in the blind stop to engage the slot intermediate its ends when the plate is in an operative position, and ears on one vertical edge of the attachment plate disposed in a plane parallel to the slot to overlap and engage a lateral side of the blind stop whereby the plate is slidably disposed on the stop; said plate at the top being provided with a centering notch aligned with the slot to provide a locating means for a screw prior to the mounting of the same when the plate is slid down to engage the sill of the window frame.

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