March 14, 1950 D. J. RUST ET AL 2,500,470

WINDOW SCREEN

Filed Jan. 13, 1948

Fig. 1

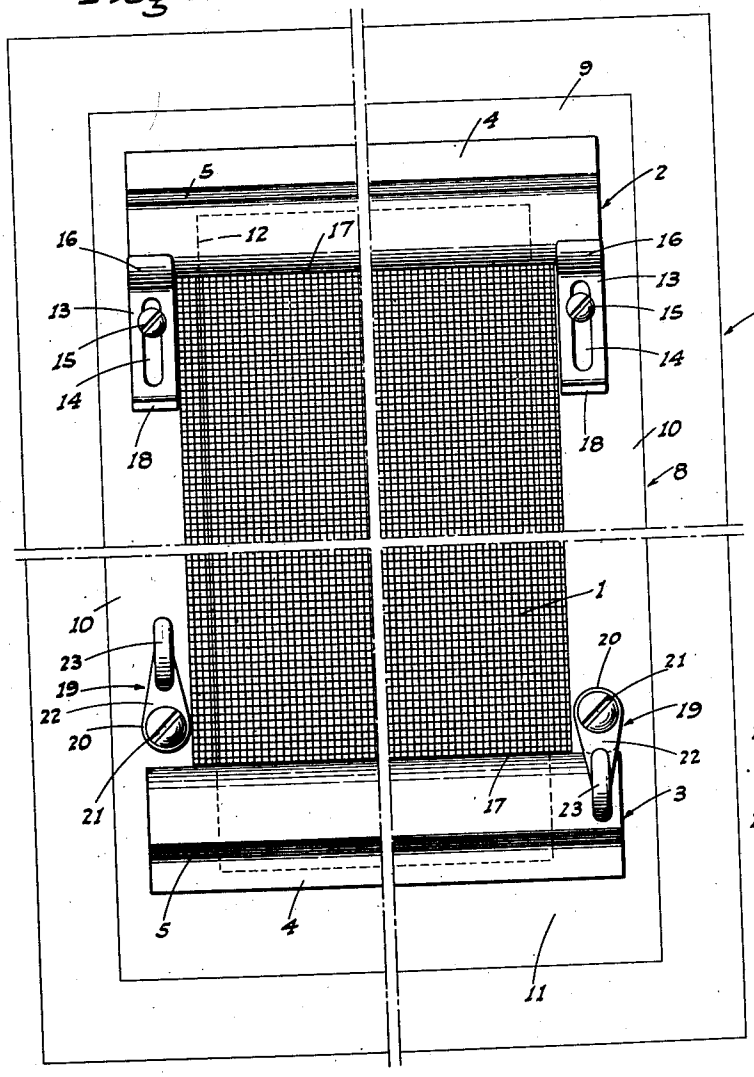


Fig. 2

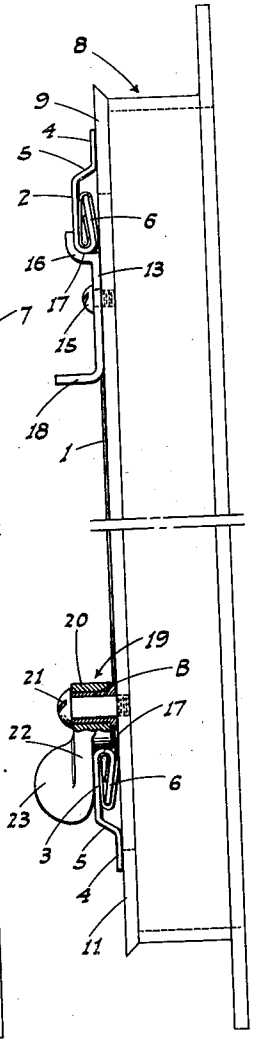


Fig. 3

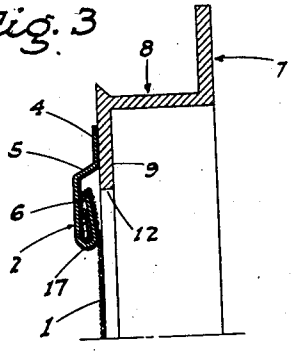
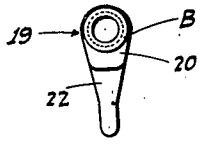


Fig. 4



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WINDOW SCREEN

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1 Claim. (Cl. 160—328)

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This invention relates to improvements in frameless window screens.

One object of the invention is to provide a window screen especially useful on metal casement-type windows; the screen being attached, in novel manner, to the fixed frame of such a casement.

Another object of the invention is to provide a frameless window screen which comprises a rectangular section of wire cloth having a top bar and a bottom bar secured to corresponding edges thereof; the top bar being attached to the casement by saddle brackets, and the lower bar being secured in place and the screen tensioned by novel turns which include bar engaging cams.

An additional object of this invention is to provide a window screen, of the type described, which is easy to install, and thereafter quick-detachable, without the use of tools, for cleaning or maintenance.

A further object of the invention is to provide a neat, attractive, inexpensive window screen for casements, 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 front elevation of the window screen in place on a casement; one of the bar locking and screw tensioning turns being shown in holding position, while the other is shown in released position.

Fig. 2 is a side elevation showing the screen in place on the casement.

Fig. 3 is a fragmentary sectional elevation showing the cross sectional configuration of one of the bars, and the manner of attachment of the wire cloth thereto.

Fig. 4 is an under side view of one of the turns, detached.

Referring now more particularly to the characters of reference on the drawings, the improved window screen comprises a rectangular section 1 of wire cloth having a transverse top bar 2 and a transverse bottom bar 3 attached to corresponding edges thereof; said bars 2 and 3 projecting, in symmetrical relation, beyond the side edges of the section 1.

Each of the bars 2 and 3 includes a longitudinal foot 4 along one edge, and an outwardly, longitudinally extending offset 5 intermediate its edges. The longitudinal edge portion opposite

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the foot is bent inwardly, and back toward the offset 5, to form a holding flange 6, and the adjacent portion of the screen extends over the inner face of said flange and thence is frictionally engaged between the same and the adjacent portion of the bar. In this manner the section 1 of wire cloth is effectively but removably attached, at opposite ends, to the corresponding bars, with the latter extending transversely of said section.

The numeral 7 indicates, generally, a metallic casement which includes, on one side thereof, a fixed rectangular frame 8 having a top flange 9, side flanges 10, and a bottom flange 11, which flanges define the window opening 12.

The window screen is disposed for use with the wire cloth section 1 overlying the window opening 12, with the top bar 2 and bottom bar 3 lapping and abutting against the top flange 9 and bottom flange 11, and also projecting across adjacent end portions of the side flanges 10.

A pair of saddle brackets 13 are affixed to the side flanges 10 of the frame 8 adjacent the upper portions thereof, but below the top bar 2. Said saddle brackets 13 each include a vertical slot 14 through which a screw 15 is threaded into the corresponding flange 10, whereby said brackets 13 are initially vertically adjustable to properly position and level the top bar 2.

Each bracket 13 includes an upstanding saddle 16 which engages the lower edge of the top bar 2 in supporting relation at the projecting ends thereof, which lower edge is rounded, as at 17, to matchingly engage in the saddle, which is similarly rounded. The brackets 13 include, at their lower end, an outwardly projecting finger tab 18 which facilitates initial installation and adjustment.

In the above described manner, the window screen is suspended from the top bar 2 in position overlying the window opening 12, and said screen is tensioned, and the bottom bar 3 locked, in the following manner:

Directly above each of the projecting ends of the bottom bar 3 the corresponding side flanges 10 are fitted with a turn, indicated generally at 19; each turn 19 including a rotary, eccentric cam 20. The turns are each carried on a flanged bushing B secured to the corresponding side flange 10 by a screw 21, and a radial finger 22 projects from each cam 20 in clearance relation to the corresponding side flange 10. Each radial finger 22 is formed with an outwardly projecting wing 23 for manual engagement.

The turns 19 are set sufficiently close to the bottom bar 3 so that when turned from a re-

leased position with the finger 22 and wing 23 projecting upwardly, to a holding position with said parts projecting downwardly, the cam 20 engages the adjacent edge of the bottom bar 3 and urges it downwardly, thus effectively tensioning the section 1 of wire cloth. At the same time the fingers 22 of the turns 19 ride over the face of the bottom bar 3 to lock it against outward displacement from the fixed frame 8. It will thus be recognized that the turns 19 serve the dual purpose of tensioning the section 1 of wire cloth, and locking the bottom bar 3 in its normal position of use.

The described window screen is quick-detachable for cleaning or maintenance merely by swinging the turns 19 to released position and then lifting the top bar 2 from the saddle brackets 13.

By reason of the particular configuration of the bars 2 and 3 in cross section, the section of wire cloth 1 lies in engagement with the corresponding side flanges 10 to assure against the passage therebetween of insects.

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 frameless window screen which includes a section of wire cloth and a cross bar at one end thereof; a bar holding and section tensioning device adapted to be mounted adjacent the bar in cooperative relation to its inner edge and outer face, such device being in the form of a turn having a rotary cam for engagement with said edge, and a projecting finger to engage in hold-down relation over said bar.

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JACK H. JENSEN.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
551,095	Ramsden	Dec. 10, 1895
2,415,200	Willett	Feb. 4, 1947

FOREIGN PATENTS

Number	Country	Date
389,615	Great Britain	Mar. 23, 1933