June 6, 1933. G. HARLOW 1,913,077

WINDOW SCREEN

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Fig. 1.

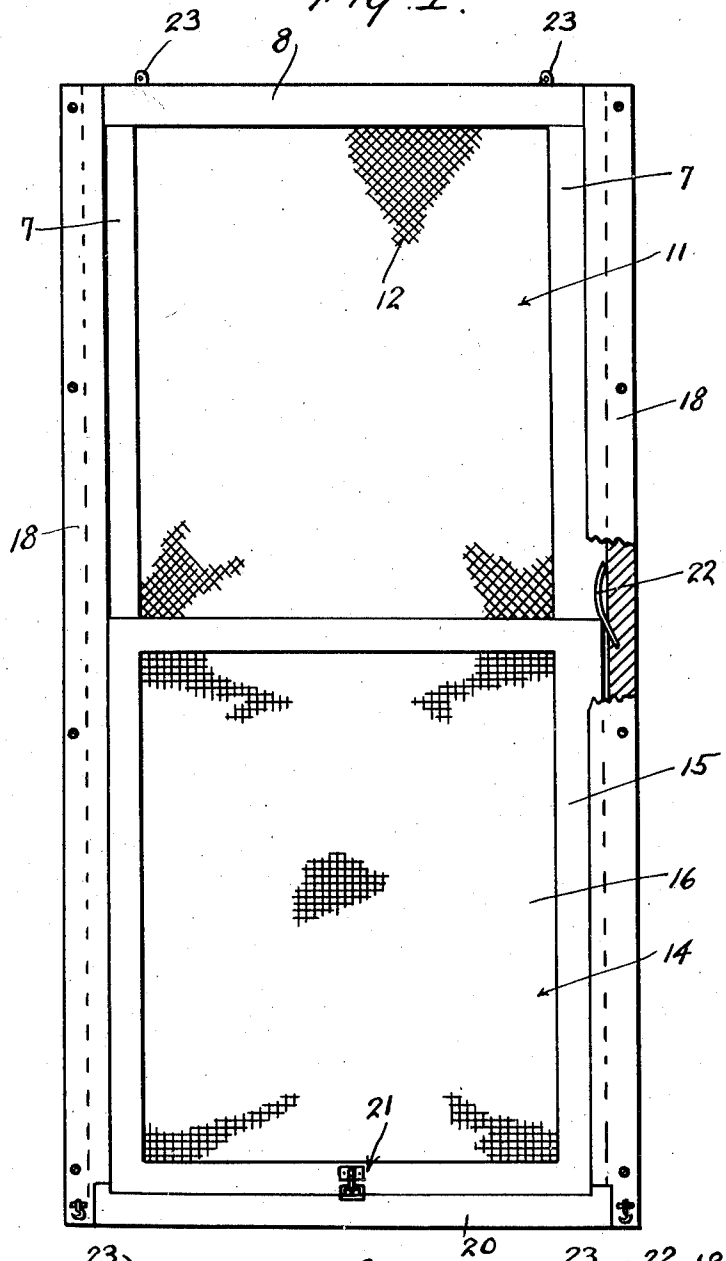
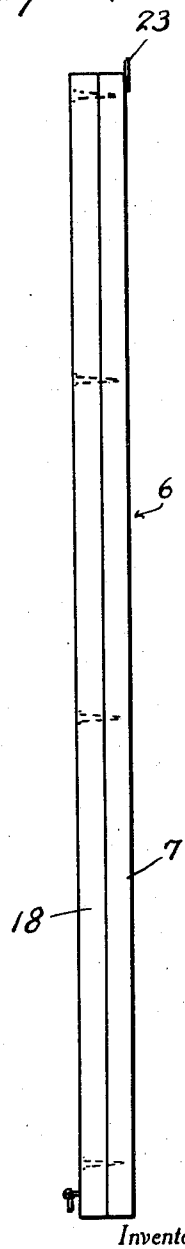


Fig. 2.



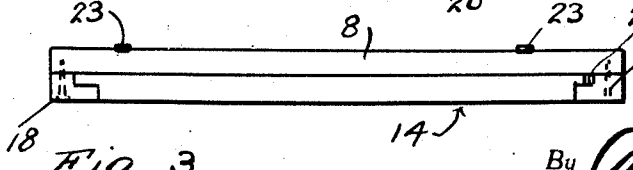


Fig. 3.

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Fig. 4.

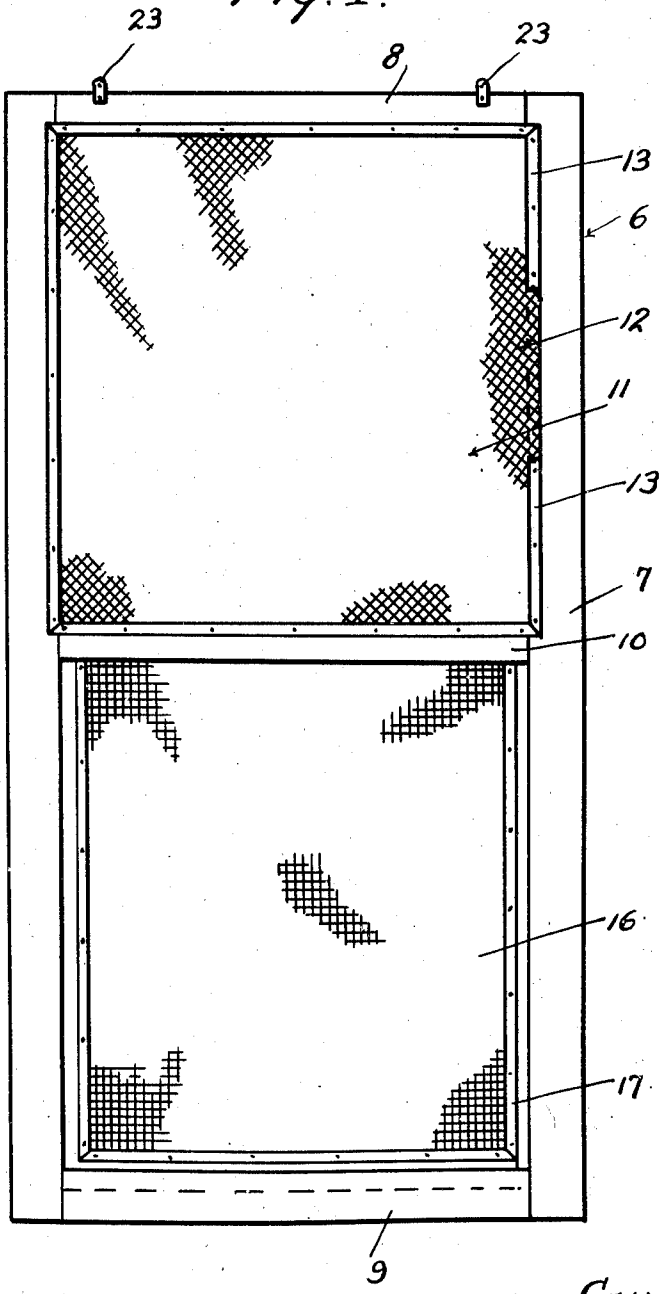
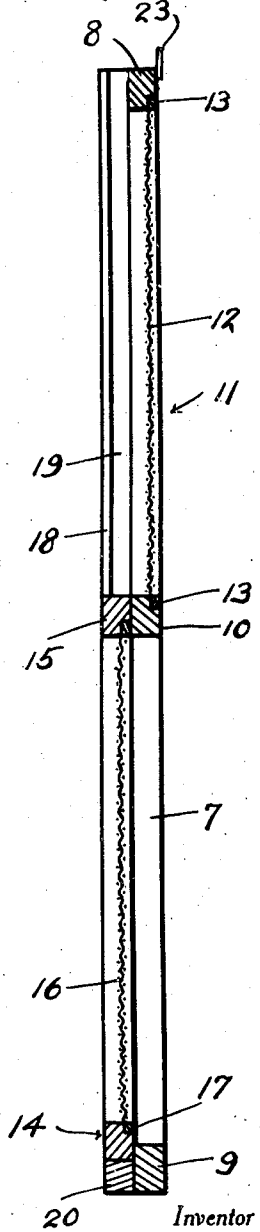


Fig. 5



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1,913,077

UNITED STATES PATENT OFFICE

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WINDOW SCREEN

Application filed June 15, 1932. Serial No. 617,458.

This invention relates to an improved window screen and has more specific reference to that type of screen generally referred to in the trade as a full screen, that is, one which is of a size to conform to the complete proportions of the window frame in which it is mounted.

The aforesaid full-type of screen is of course not new. In fact, it generally consists of a single frame over which a single sheet of wire netting is stretched and fastened, the upper edge of the frame being hinged to the window frame and the lower edge being provided with ordinary hooks to engage in screw eyes carried by the sill of the window frame to hold the screen closed.

I am also aware of the fact that some of these full screens are made up of upper and lower sections where one section is slidable.

The purpose of the present invention is to provide a screen of the aforesaid type, wherein the novelty is predicated upon the specific frame construction and the novel arrangement of the sliding screen, together with a spring retaining clip for holding the sliding screen in different adjusted positions.

In carrying the inventive conception into actual practice, I have discovered an arrangement of specific parts which provides a screen which is substantial and rigid and therefore not likely to become warped and mis-shapen, said structure being further characterized by the requisite simplicity and economy in order to provide an appreciable contribution to the trade and the art to which the invention relates.

In the drawings, Figure 1 is an inside elevational view with a portion in section showing the arrangement as developed in accordance with the present inventive conception.

Figure 2 is an edge elevation thereof.

Figure 3 is a top edge view.

Figure 4 is a rear elevational view, that is a view opposed to Figure 1.

Figure 5 is a central vertical sectional view.

The main screen frame is generally denoted by the numeral 6 and comprises a pair of spaced parallel longitudinal frame bars 7, a top cross bar 8 fastened therebetween and a similar bottom cross bar 9. Then too, there is a central cross bar 10 which divides the frame into upper and lower portions.

The stationary screen 11 is mounted in the upper portion and comprises a sheet of screen wire 12 having its edge portions fitted in grooves formed in the bars 7, 8 and 10 and fastened in place by molding or beads 13 disposed flush with the surfaces of the frame bars as shown in Figure 5.

The slidable screen is denoted by the numeral 14 and is arranged on the inner side of the complete screen as a unit, as evidenced from the illustration seen in Figure 1. The sliding screen comprises a rectangular frame 15 covered with screen wire 16 held in place by retaining strips or beads 17 as shown in Figure 5.

This sliding screen is mounted in guide tracks formed by a pair of duplicate longitudinal rails 18. These rails are secured to the frame bar 7, and have their inner edge portions rabbeted to define guideways 19 in which the screen 14 is slidable. It will be noticed that there is a cross rail 20 secured across the bottom bar 9 of the main screen frame, and as seen in Figure 5, this is of cross sectional proportion less than the bar 9 so as to permit the bar 9 to project above the rail 20 to provide an abutment surface for the lower member of the sliding screen frame 15.

This cross rail 20 provides a stop and is secured at its ends to the complemental rails 18 to further reinforce the complete structure. There is no cross piece at the top of the rails. In fact, they are left open so that the screen 14 may be bodily removed without any trouble whatsoever when the screen assembly is not applied to a window frame. It is evident that the vertical frame members of the screen frame 15 are rabbeted to fit into the guideways 19 as shown in Figure 3.

The numeral 21 in Figure 1 merely designates an appropriate fastener co-operable with the rail 20 in locking the sliding screen in its lowered or closed position. The numeral 22 designates a longitudinally bowed

spring clip secured to the intermediate portion of one of the rails 18 and co-operable with the frame 15 to hold the screen 14 in different adjusted positions in a substantially automatic manner. The numeral 23 merely designates hanger fixtures or hinges as desired for supporting the main screen frame in the companion window frame.

The arrangement whereby the screen wire 12 is fitted flush in grooves in the complemental frame bars 7, 8 and 10 to form the upper stationary screen is regarded as one feature of construction. Secondly, the use of the three rails 18 and 20 fastened in superposed relation on the frame bars 7 and 9 is considered another feature of the invention in that the rails 20 provide the requisite stop and the rails 18 being rabbeted provide the requisite tracks for sliding movement of the slidable screen 14.

This arrangement decidedly reinforces the whole construction. In some screens where the sliding screen is mounted in the rails of the main frame the structure is decidedly weakened.

Another feature of the invention is the cross bar 10 which reinforces the main frame and prevents it from buckling so that there is no chance of the sliding screen 14 striking the stationary screen 11 and injuring it. The sliding screen moves in a path as seen in Figure 5 so as to clear the outside stationary screen 11 to further avoid this nuisance.

Another important feature is the spring clip 22 which is a simple means for holding the sliding screen in different adjusted positions. It is therefore believed that the construction in its entirety provides a novel contribution to the trade and the art which will fulfill the requirements of a convenience of this class in a highly satisfactory manner.

For household usage, this improved full-type screen with a sliding section is noteworthy in that it allows the housewife to open the screen 14 to conveniently air blankets and bed clothing and is otherwise advantages in this line of endeavor.

It is thought that the description taken in connection with the drawings will enable a clear understanding of the invention to be had. Therefore, a more lengthy description is thought unnecessary. While the preferred embodiment of the invention has been shown and described, it is to be understood that minor changes coming within the field of invention claimed may be resorted to if desired.

I claim:

1. A detachable screen unit comprising a main screen frame including a pair of spaced parallel longitudinal bars, upper and lower end bars, and a centrally disposed cross bar, the inner marginal portions of the outer faces of said central cross bar, one end bar, and said side bars being grooved, screen wire having its edge portions fastened in said grooves, a pair of longitudinal spaced parallel rails secured against the inner faces of said longitudinal bars and having their inner edge portions rabbeted to define guideways, a transverse connecting rail fastened to the lower ends of said first-named rails and forming a stop to close the adjacent ends of said guideways, the opposite upper ends of said guideways being completely open, a sliding screen slidable in said guideways and adapted to abut said stop rail when in closed position while at the same time bearing against said central cross bar.

2. A detachable screen unit comprising a main screen frame including a pair of spaced parallel longitudinal bars, upper and lower end bars, and a centrally disposed cross bar, the inner marginal portions of the outer faces of said central cross bar, one end bar and said side bars being grooved, screen wire having its edge portions fastened in said grooves, a pair of longitudinal spaced parallel rails secured against the inner faces of said longitudinal bars and having their inner edge portions rabbeted to define guideways, a transverse connecting rail fastened to the lower end of said first-named rails and forming a stop to close the adjacent end of said guideway, the opposite upper ends of said guideways being completely open, a sliding screen slidable in said guideways and adapted to abut said stop rail when in closed position while at the same time bearing against said central cross bar, said last-named rail being of cross sectional proportion less than that of the adjacent cross bar to permit said cross bar to serve as an abutment for the adjacent portion of the sliding screen, and a spring clip carried by one of said rails and projecting into the guideway and co-operable with the sliding screen for holding it automatically in different adjusted positions.

In testimony whereof I affix my signature.

GUY HARLOW.