W. J. HEWITT.

WINDOW SCREEN.

APPLICATION FILED JAN. 18, 1919.

1,398,017.

Patented Nov. 22, 1921.

2 SHEETS—SHEET 1.

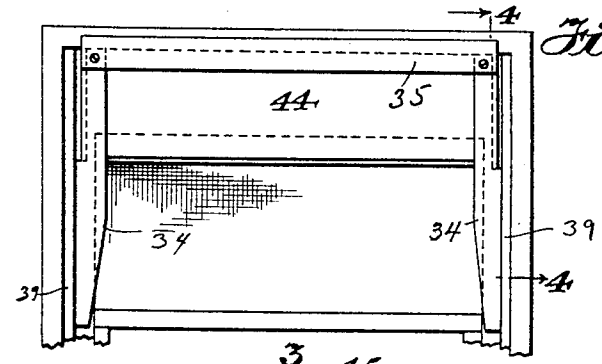



Fig. 2

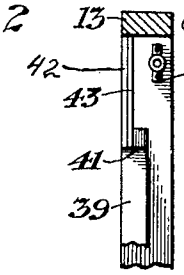



Fig. 4

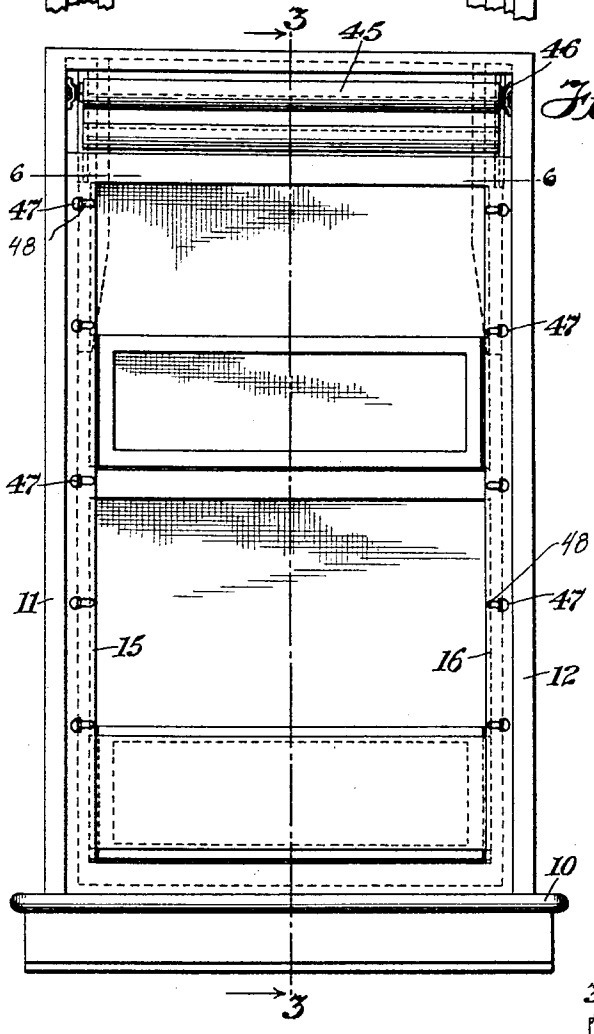
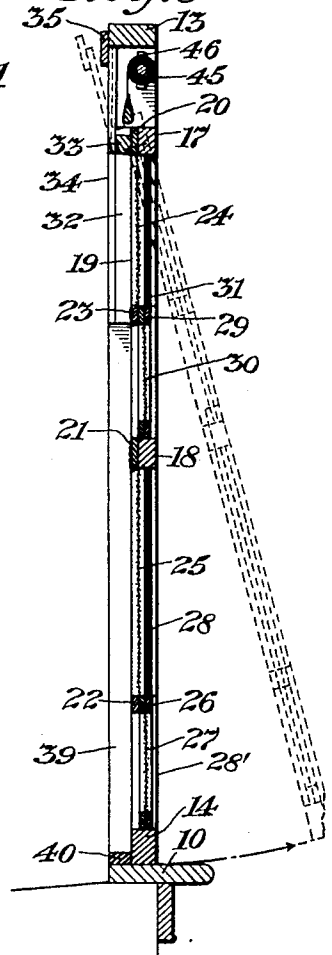



Fig. 1

Fig. 3



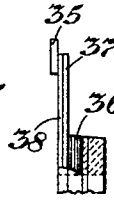




Fig. 5

INVENTOR

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Fig. 6

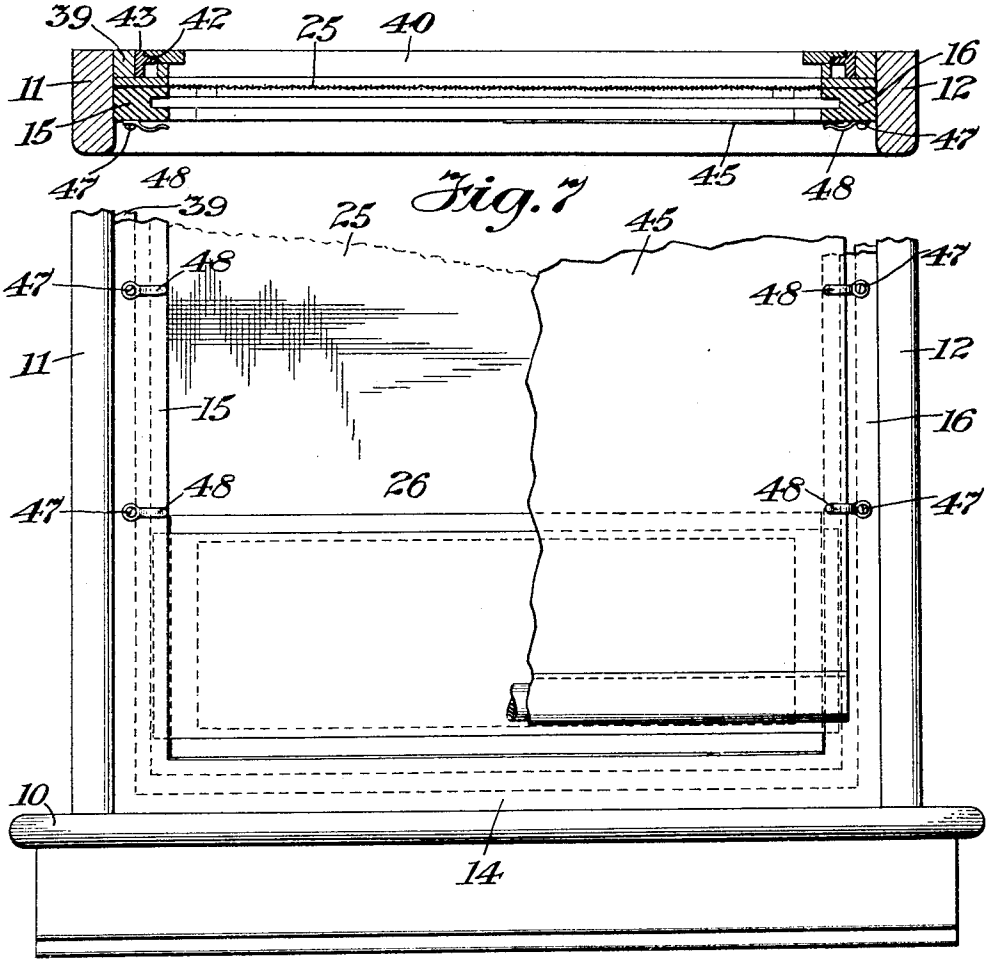



Fig. 7




INVENTOR

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# UNITED STATES PATENT OFFICE.

WILLIAM J. HEWITT, OF BLOOMFIELD, NEW JERSEY.

## WINDOW-SCREEN.

1,398,017. Specification of Letters Patent. Patented Nov. 22, 1921.

Application filed January 18, 1919. Serial No. 271,817.

*To all whom it may concern:*

Be it known that I, WILLIAM J. HEWITT, a citizen of the United States, residing at Bloomfield, in the county of Essex and State of New Jersey, have invented an Improvement in Window-Screens, of which the following is a specification.

This invention relates to a window screen and more particularly to a full length window screen adapted to be used on the inside of a window. I am aware that heretofore various forms of full length inside window screens have been proposed, but in all instances of such which have come to my knowledge, no provision has been made for so constructing the screen as to permit of the usual use of the window shade by mounting the same in brackets attached to the inner faces of the window casing, nor has any provision been made in this type of window screen so far as I am aware by which the screen and parts thereof maintain themselves in position in the window casing. The object of my present invention therefore is to provide a window screen so constructed as to make it possible to employ the window shade in the usual manner and also preferably to so construct the window screen that it automatically maintains itself in position in the window casing. Another object of my present invention is to associate with the full length window screen, devices by which the window shade or other covering may be secured to the window screen in such a manner as to provide a pocket for a layer of air between the window sashes and the screen with its covering, whether this covering be the window shade or not, and in this way as will be understood to make an insulator and thus assist in heating a room in which the window screens are used to form a space for non-circulating air. The window screen made in accordance with my invention will be hereinafter more particularly described.

In the drawing:

Figure 1 is a front elevation of a window casing with my improved screen fitted therein.

Fig. 2 is an elevation of the upper reverse side of the window screen and the parts associated therewith.

Fig. 3 is a cross-section on line 3—3 Fig. 1.

Fig. 4 is a partial elevation and cross-section showing the upper end of the window casing fitted with parts coöperating with the frame of the window screen to maintain the same in position.

Fig. 5 is a partial cross-section and elevation of the upper end of the window screen showing the offset part thereof.

Fig. 6 is an enlarged section on line 6—6, Fig. 1, and

Fig. 7 is an enlarged elevation illustrating the use of the clasp devices for holding the window shade.

Referring to the drawing, the window casing illustrated comprises a base board 10, side or upright members 11 and 12 together with the top cross member 13. The window screen includes a frame comprising a lower cross rail 14, side or upright rails 15 and 16, and a top cross rail 17 together with a central cross rail 18. On the outer side of the frame and associated with the side or upright rails 15 and 16 there are molding uprights 19. A similar molding cross piece 20 is associated with the top rail 17 and a molding piece 21 is similarly associated with the central cross rail 18. There is also a molding cross piece 22 extending between the upright side rails an appreciable distance above the bottom rail 14. 23 also designates a molding cross piece extending between the upright side rails 15 and 16 an appreciable distance above the central cross rail 18. Between the top cross rail 17 and the molding member 20 and also between the adjacent portions of the upright side rails 15, 16 and the molding uprights 19 there is secured a screen member 24 which as will be understood may be made of woven wire cloth or other similar material, and the lower edge of which is also suitably attached to the molding member 23. Similarly between the central cross rail 18, and the molding member 21 as well as the adjacent parts of the upright side rails 15 and 16, and the molding uprights 19, there is a screen member 25, the lower edge of which is suitably attached to the molding cross piece 22.

In the lower portion of the frame, I prefer to employ a slide frame 26 in which there is also secured a screen member 27. The sides of the slide frame 26 are provided with tongues which fit into and are movable in grooves 28 provided therefor in the adjacent edges of the upright side rails 15 and 16, it being understood that this slide frame is movable to gain access to the lower window sash, and if desired may be further fitted with a removable panel of glass or other ma-

terial indicated at 28′ for ventilating purposes. In order to gain access to the upper sash, I may also employ a slide frame 29 similar to the slide frame 26, the slide frame 29 being fitted with a screen 30 and the sides thereof provided with tongues fitting into and movable in grooves 31 provided therefor in the upright side rails 15 and 16. As will be understood, the grooves 28 and 31 may be continuations of one another.

In order to have the screen self-maintained in position in the window frame as well as to so construct the window screen as not to interfere with the window shade, the upper end of the window screen is provided with an offset portion which will now be described. At the upper end of the window screen, both upright side rails thereof are provided with offset longitudinal rails indicated at 32. These rails terminate at the top of the cross piece 17. Secured to each offset longitudinal rail 32 and extending appreciably above the same is an outside rail 34 and connected to and extending between the upper ends of the outside rails 34 is a cross rail 35. The upper end of each offset rail 32 is recessed on the inner side thereof as indicated at 36, and each outside rail 34 is recessed longitudinally as indicated at 37 providing a rib 38 thereon. This offset portion of the screen frame at the upper end thereof may be fitted with a paned made of screen material or otherwise as indicated at 44 in Fig. 2.

Associated with the parts of the window screen as hereinbefore described, I also employ longitudinal stop rails 39 suitably connected to the faces of the side members 11 and 12 of the window casing as well as the cross rail 40 which rests upon the base board 10 and extends between the longitudinal stop rails 39. The rails 39 and cross bar 40 are so placed as to lie flush against the adjacent side of the lower window sash. At its upper end, each longitudinal stop rail 39 is provided with a block forming a shoulder 41 and a strip extending above the same and being recessed as indicated at 42 so as to provide a rib 43 therein. In fitting the window screen to position as will now be apparent, the frame is necessarily placed at an inclination to the window casing as indicated in dotted lines in Fig. 3 of the drawing. In this position the upper offset end of the screen frame is passed below the shoulders 41 on the stop rails 39 and the recesses 36 are adapted to receive the blocks forming the shoulders 41 in which position the ribs on the outside rails 34 fit into the recesses in the extension of the longitudinal stop rails 39; that is the ribs 38 fit into the recess 42 and similarly the ribs 43 fit into the recesses 37, while the cross bar 35 then abuts against the outer edge of the top rail or cross member 13. This as will be understood forms a closed joint between the offset upper portion of the window screen frame and the parts associated with the upper ends of the longitudinal stop rails 39, while the manner in which the shoulders 41 of the blocks on the longitudinal side rails are received in the recesses 36 forms a lock or means for maintaining the window screen frame in position after the same has been properly placed as indicated in full lines in Figs. 1 and 3 in the window casing. Furthermore, as will be apparent, the offset portion of the window screen frame makes it possible to employ the window shade 45 in the usual manner by mounting it in brackets 46 which are secured to the inner faces of the side members 11 and 12 of the window casing.

In operating the window screen as hereinbefore described, the upper window sash is first lowered and then the upper end of the screen is passed through the window opening immediately below the shoulders 41 at the upper ends of the stop rails 39 with the screen in an inclined position. It will be understood, of course, that the distance between the outer edges of the offset rails 32 and the outside rails 34 is such as to permit these parts to pass between the inner faces of the stop rails 39. After the screen has been placed in this inclined position, the shoulders or blocks 41 are received in the recesses 36 provided therefor in the inner side of each of the offset rails 32 and the screen frame permitted to swing to its normal position in which the side and bottom rails of the screen frame abut against the stop rails 39 and 40, and the extensions of the outside rails 34 abut against the strips comprising the ribs 43 and the recesses 42 so as to completely cover the exposure or opening of the window casing, and at the upper end permit of sufficient space to employ the window shades in the usual manner by mounting the same in the brackets 46 fixed on the inner faces of the window casing. Of course as will be apparent, the reverse operation is necessary in removing the window screen from the window casing. It will also be apparent that after the screen is in position the slidable member or screen 30 may be opened to gain access to the upper window sash and the lower slidable screen 27 may be moved to gain access to the lower window sash.

Associated with the window screen frame, and preferably attached to the inner faces of the upright side rails 15 and 16 thereof and in suitably spaced positions, I prefer to employ a series of clamps or clasp members each consisting of a base 47 connected to the upright side rails and a spring actuated pivoted arm 48 adapted when the shade is pulled to engage the edges thereof so as to maintain the window shade in position rel-

atively to the window screen and thus provide a pocket between the window screen and the window sashes. As will be apparent, however, these clasp members are equally well adapted to engage the edges of any suitable cover which may be employed instead of utilizing the window shade for the purposes indicated.

As herein shown and described, the upper offset end of the window screen is made an integral part of the window screen itself. It will be understood however, as within the spirit and scope of my invention to make this upper offset end of the screen a separate member and fix it permanently in the window casing for the purposes specified; that is, so as to mount the window shade in the usual manner in brackets secured to the inner faces of the window casing. And furthermore, that whether made as an integral part of the window screen or separately and permanently fixed in the window casing, this upper offset end of the frame may contain a panel of any suitable material, because in some instances, a netting may be advantageously used and in others, a sheet of fabric or even a panel of solid inflexible material.

I claim as my invention:

1. In an inside full length window screen and in combination, a frame, screen members mounted in the said frame, an offset upper end member associated with the said frame, and devices coacting with the said offset upper end member for holding the said frame in place.

2. In an inside full length window screen and in combination, a frame, screen members mounted in the said frame, an offset upper end member associated with the said frame, a screen member mounted in the upper offset end of the said frame, and devices coacting with the said offset upper end member for holding the said frame in place.

3. In an inside full length window screen and in combination, a frame, screen members mounted in the said frame, auxiliary frame and screen members mounted to move in the said frame to gain access to the upper and lower window sashes, an offset upper end member associated with the said frame, a screen member mounted in the said offset upper end member, and devices coacting with the said offset upper end member for holding the said frame in place.

4. In an inside full length window screen and in combination, a frame, screen members mounted therein, stop rails against which the said frame is adapted to bear, an offset upper end member associated with the said frame, and devices associated with the said stop rails and coacting with the upper offset end of the frame for holding same in position in a window casing.

5. In an inside full length window screen and in combination, a frame, screen members mounted therein, an offset upper end member comprising longitudinal rails connected to the outer faces of the upright members of the said frame and a cross bar extending between the ends of the said rails, stop rails against which the parts of the said frame are adapted to bear, and devices associated with the said stop rails and adapted to coact with the said offset upper end of the frame for holding the same in position in a window casing.

6. In an inside full length window screen and in combination, a frame, screen members mounted therein, an offset upper end member connected to the said frame and comprising longitudinal rails secured to the outer faces of the upright side rails of the frame and a cross bar extending between and connected to the ends of the said longitudinal rails, there being recesses in the said longitudinal rails adjacent the upper end of the said frame, and stop rails against which the said frame is adapted to bear, the said stop rails being provided with shoulders adjacent the upper ends thereof which are received in the said recesses in the upper ends of the said longitudinal rails forming part of the offset upper end of the said frame in order to maintain the screen frame in position in a window casing.

7. In an inside full length window screen and in combination, a frame, screen members mounted therein, auxiliary screen frame members movable in the said frame to gain access to the upper and lower window sashes, an offset upper end member connected to the said frame and comprising longitudinal rails secured to the outer faces of the upright side rails of the frame and a cross bar extending between and connected to the ends of the said longitudinal rails, there being recesses in the said longitudinal rails adjacent the upper end of the said frame, and stop rails adapted to be secured to the side members of a window casing and against which the said frame is adapted to bear, the said stop rails being provided with shoulders adjacent the upper end thereof which are received in the said recesses in the upper ends of the said longitudinal rails forming part of the offset end of the said frame in order to maintain the screen frame in position in a window casing.

8. In an inside full length window screen and in combination, a frame, screen members mounted in the frame, devices coacting with the upper portion of the frame for holding the same in place in the window casing, and devices associated with the frame for maintaining in position thereon a sheet of material so as to form a space for non-circulating air between the frame and the window sashes.

9. In an inside full length window screen

and in combination, a frame, screen members mounted in the frame, an offset upper end member associated with the frame, devices coacting with the said offset upper end member for holding the frame in position in the window casing, and means associated with the frame for securing in place thereon a sheet of material in order to form a space for non-circulating air between the same and the window sashes.

10. In an inside full length window screen and in combination, a frame, screen members mounted in the frame, an offset upper end member associated with the frame in such a manner as to leave the upper portion of the window casing free to receive the window shade in brackets provided therefor on the inner faces of the window casing, means coacting with the upper offset end member for holding the frame in place in a window casing, and clamp members secured in the frame for engaging the edges of the window shade when drawn to secure the same in place against the frame for forming a space for non-circulating air between the window shade and the window sashes.

Signed by me this 10th day of January, 1919.

WILLIAM J. HEWITT.