

April 12, 1927.

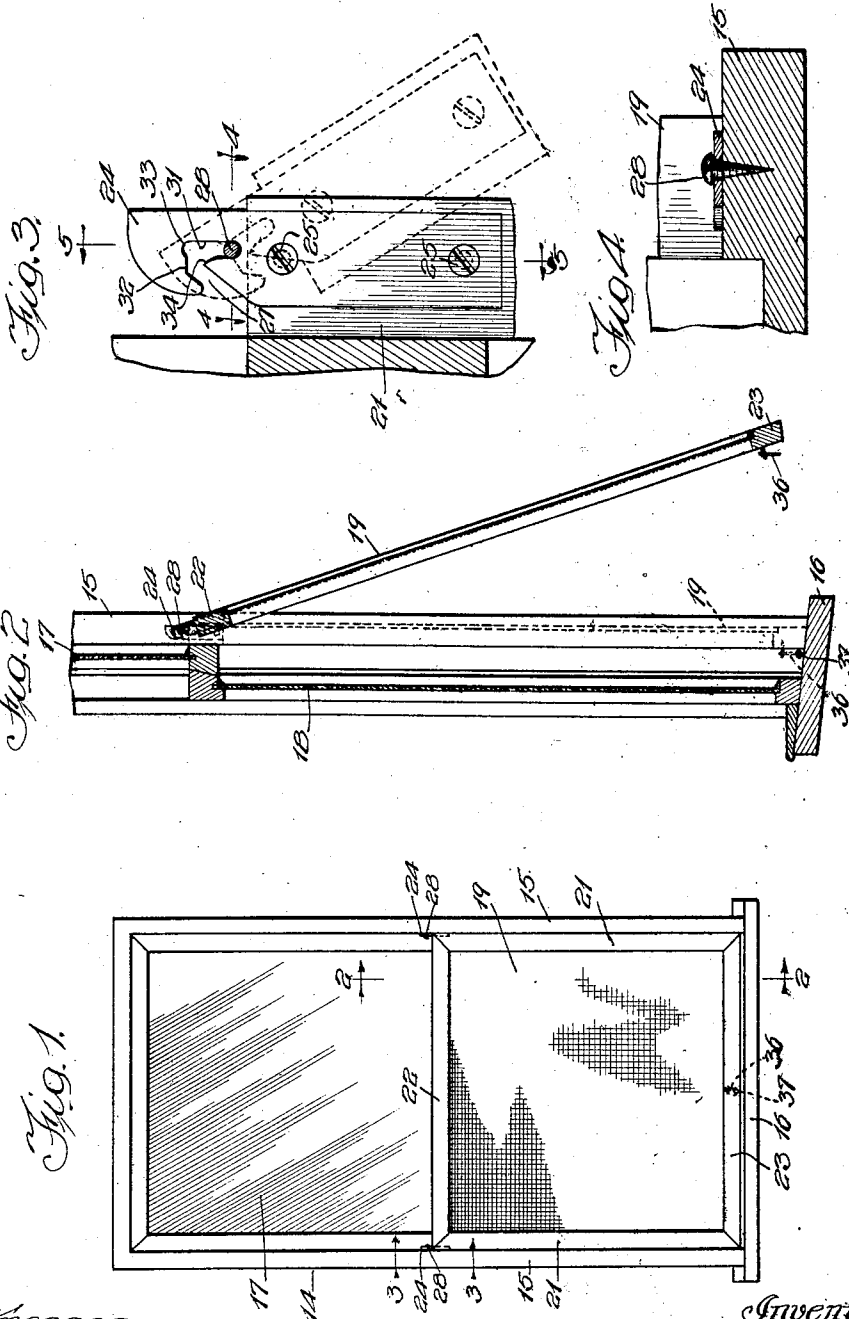
W. F. RAPP

1,624,181

SCREEN HANGER

Filed May 2, 1924

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 5.

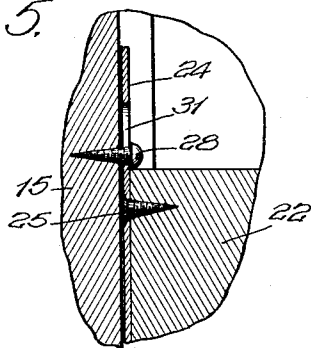


Fig. 6.

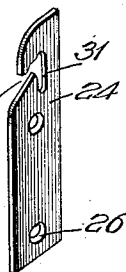


Fig. 7.

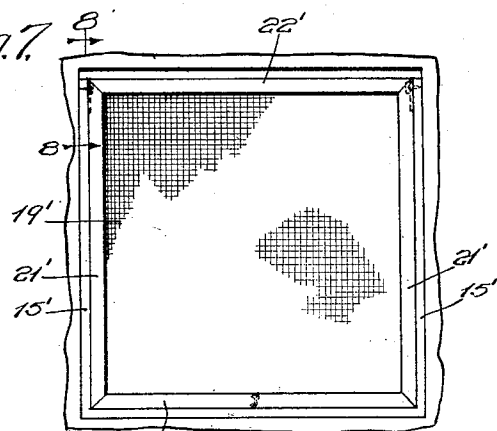


Fig. 10.

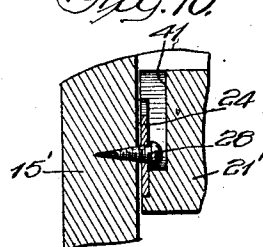


Fig. 8.

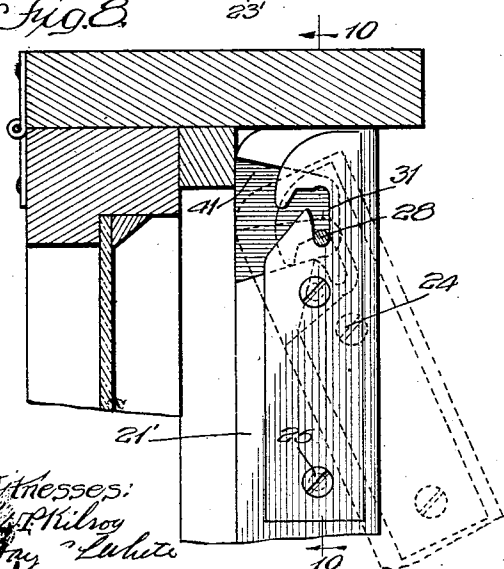
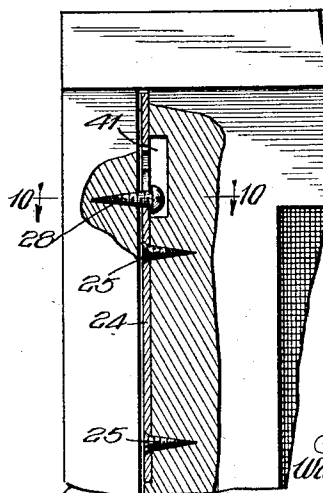


Fig. 9.



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Patented Apr. 12, 1927.

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UNITED STATES PATENT OFFICE.

WILLIAM F. RAPP, OF CHICAGO, ILLINOIS.

SCREEN HANGER.

Application filed May 2, 1924. Serial No. 710,522.

The present invention relates to hangers for window screens.

The invention pertains to that type of window screen which is pivotally connected at its upper end to the window frame so as to be capable of outward swinging motion for facility of removal or for offering ready access to the outer sides of the windows for washing the same. The primary object of the invention is to provide an arrangement of window screen, hanger and hanger pin which will automatically lock the upper edge of the screen to the window frame when the screen is swung back into closed position. This locking function is performed at the screen hanger in such manner that it is impossible to lift the screen vertically and thereby release the upper edge of the screen.

While I have specifically described my invention as being for the purpose of hanging and locking window screens, it will be obvious that it may also be used for removable windows or sash of any description.

Referring to the accompanying drawings illustrating my invention:—

Figure 1 is an outside elevational view of a window showing the screen hanger of my invention adapted thereto;

Figure 2 is a vertical sectional view taken approximately on the plane of a line 2—2 of Figure 1;

Figure 3 is a sectional view on the plane of the line 3—3 of Figure 1 on a larger scale;

Figure 4 is a transverse sectional view through the hanger taken on the line 4—4 of Figure 3;

Figure 5 is a vertical sectional view taken on the plane of the line 5—5 of Figure 3;

Figure 6 is a perspective view of one of the hangers;

Figure 7 is an elevational view illustrating my invention embodied in a basement window screen;

Figure 8 is a sectional view taken on the line 8—8 of Figure 7;

Figure 9 is a vertical sectional view through the hanger, and

Figure 10 is a horizontal sectional view through Figure 9 on the plane 10—10.

The window frame 14 comprises the two vertical rails 15—15 and the lower base board 16. This base board 16 is preferably sloped as illustrated in Figure 2. The two sashes 17 and 18 are guided in this frame 14 in the usual manner.

The window screen 19 is of conventional

construction, comprising the two side rails 21—21, the top rail 22, and the bottom rail 23. Secured at the upper corners of the screen frame are the two hangers 24—24. As shown in Figure 3, these hangers consist of metal plates which are set into recesses in the side rails of the screen frame, and are secured to the side rails by screws 25 which pass through countersunk holes 26 in the hangers, whereby the entire outer face of each hanger lies flush with the side of the screen frame. For the usual double sash window, these hangers are secured to the screen frame with their upper ends projecting above the top of the frame as shown in Figure 3. The inner edge of each hanger is formed with an entering slot 27 extending diagonally upwards for engaging over hanger pins 28 in the side frame members 15 of the window frame. These hanger pins preferably consist of ordinary wood screws, as shown in Figure 4, which are driven into the window frame at a predetermined height above the base board 16, for a purpose which will presently appear.

The entering slot 27 opens into a vertical locking slot 31 extending downwardly from the top of the entering slot 27. A substantially horizontal guiding surface 32 joins the upper end of the entering slot with the locking slot 31. The locking slot 31 may be recessed to a point slightly above the surface 32, as indicated at 33. The lower intersection of the entering slot and the locking slot is preferably cut back as indicated at 34, for affording a guiding slope for guiding the shank of the hanger pin 28 down into the bottom of the slot 31 when the screen is moved upwardly.

In mounting the screen the upper edge of the screen is inserted between the frame rails 15 and the hangers 24 are hooked over the hanger pins or screws 28 by hooking the entering slots 27 down over these pins. This leaves the pins in the recesses 33 at the upper ends of the locking slots. The lower part of the screen is now swung inwardly to its closed position, in which action the screen is cammed upwardly along the sloped base board 16. This raises the hangers 24 to approximately the full line position illustrated in Figure 3 and brings the locking pins 28 down into the bottoms of the locking slots 31. The lateral slopes 34 deflect the hanger pins 28 down into the bottoms of the locking slots 31 in the action

of raising the screen and prevent these hanger pins from moving out through the entering slots 27. The lower edge of the screen is held in closed position by a swivel hook 36 engaging in a screw eye 37 screwed down into the base board 16. This hook latch prevents the lower edge of the screen being swung outwardly and thus locks the screen at both top and bottom, it being obvious that the screen cannot be forced downwardly to clear the hanger pins 28 and it cannot be forced upwardly because of the engagement of these hanger pins in the bottoms of the locking slots.

Figures 7 to 10 inclusive illustrate the invention embodied in a basement window screen where there is generally no head room for permitting the hangers to project above the upper edge of the screen frame. For such situations the hangers are recessed into the sides of the screen frame with no part projecting above the top of the frame. To permit the insertion of the hanger pins 28 into the slots 27 and 31 the sides of the rails 21 are preferably chamfered or cut away, as indicated at 41, to receive the heads of the hanger screws. Each cut-away portion 41 extends below the depth of the locking

slot 31 to permit the shank of the screw to pass down to approximately the bottom of the slot 31.

The screen is hooked over these hanger pins or screws in the same manner described above, and upon being swung inwardly, the screen is raised to bring the locking slots 31 up into engagement with the pins 28.

I claim:

The combination of a window frame having pins in the opposite sides of said frame, with an auxiliary frame for a screen or the like, hangers at the upper ends of the side edges of said auxiliary frame, said hangers having entering slots adapted to receive said pins, locking slots extending downwardly from the said entering slots and adapted to receive said pins when the auxiliary frame is swung inwardly and moved upwardly into closed position in said window frame and camming surfaces forming sides of said locking slots to draw said auxiliary frame into said window frame as said pins enter said locking slots.

In witness whereof, I hereunto subscribe my name this 22nd day of April, 1924.

WILLIAM F. RAPP.