

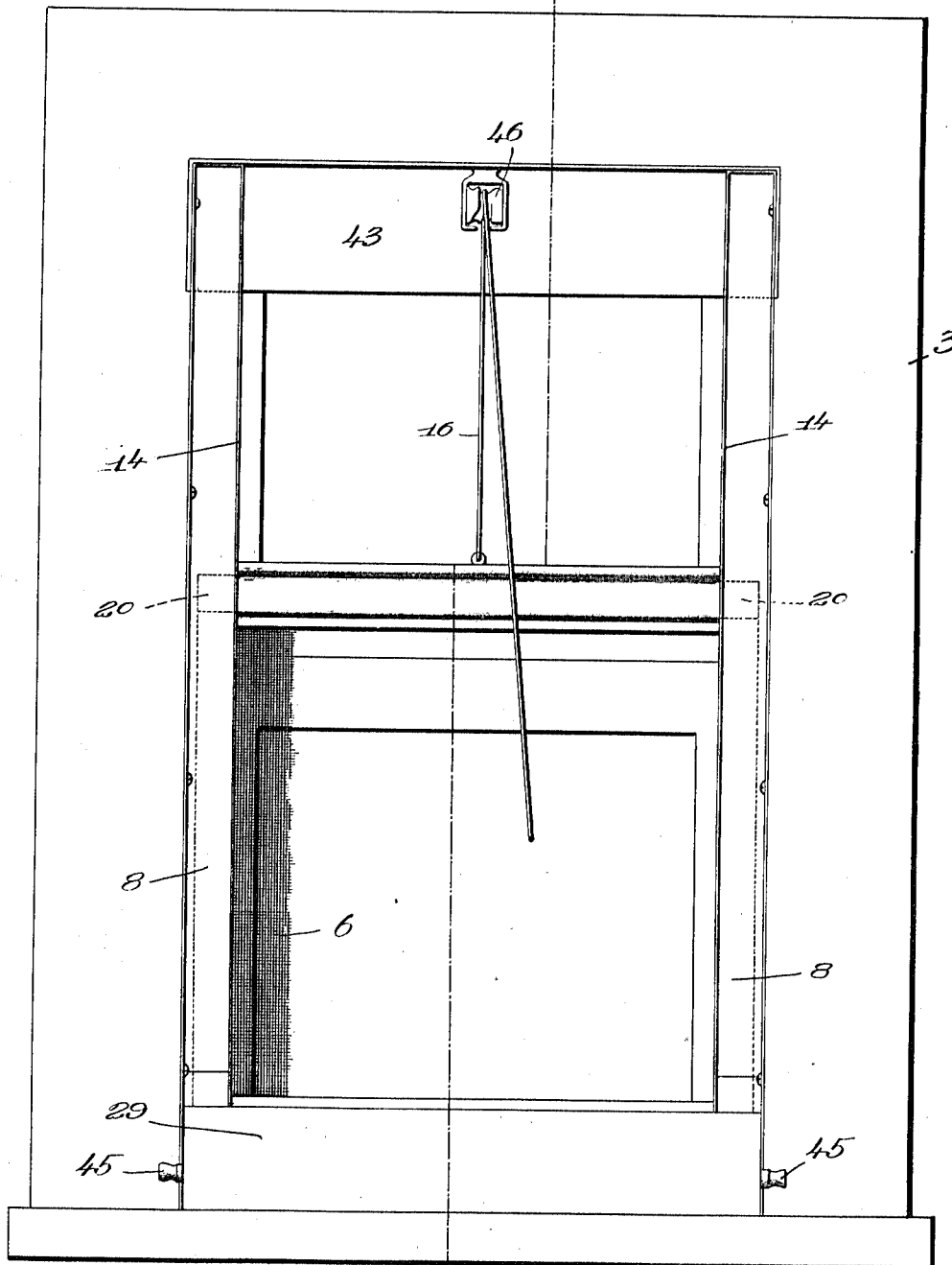
Z. TALBOT, DEC'D.
H. P. TALBOT, EXECUTOR.
WINDOW SCREEN.
APPLICATION FILED JAN. 19, 1906.

1,061,425.

Patented May 13, 1913.

3 SHEETS-SHEET 1.

Fig. 1. X



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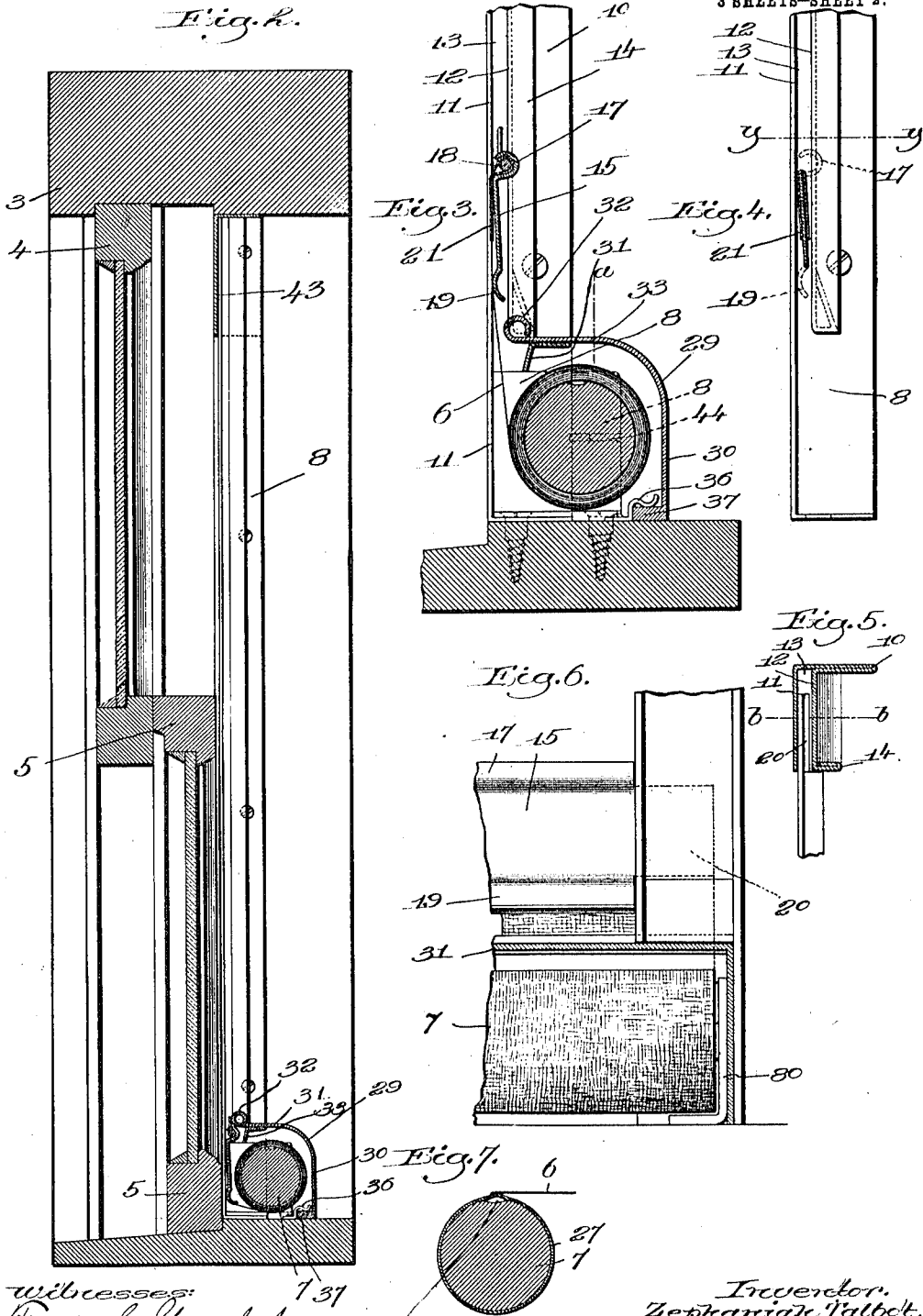
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3 SHEETS-SHEET 2.



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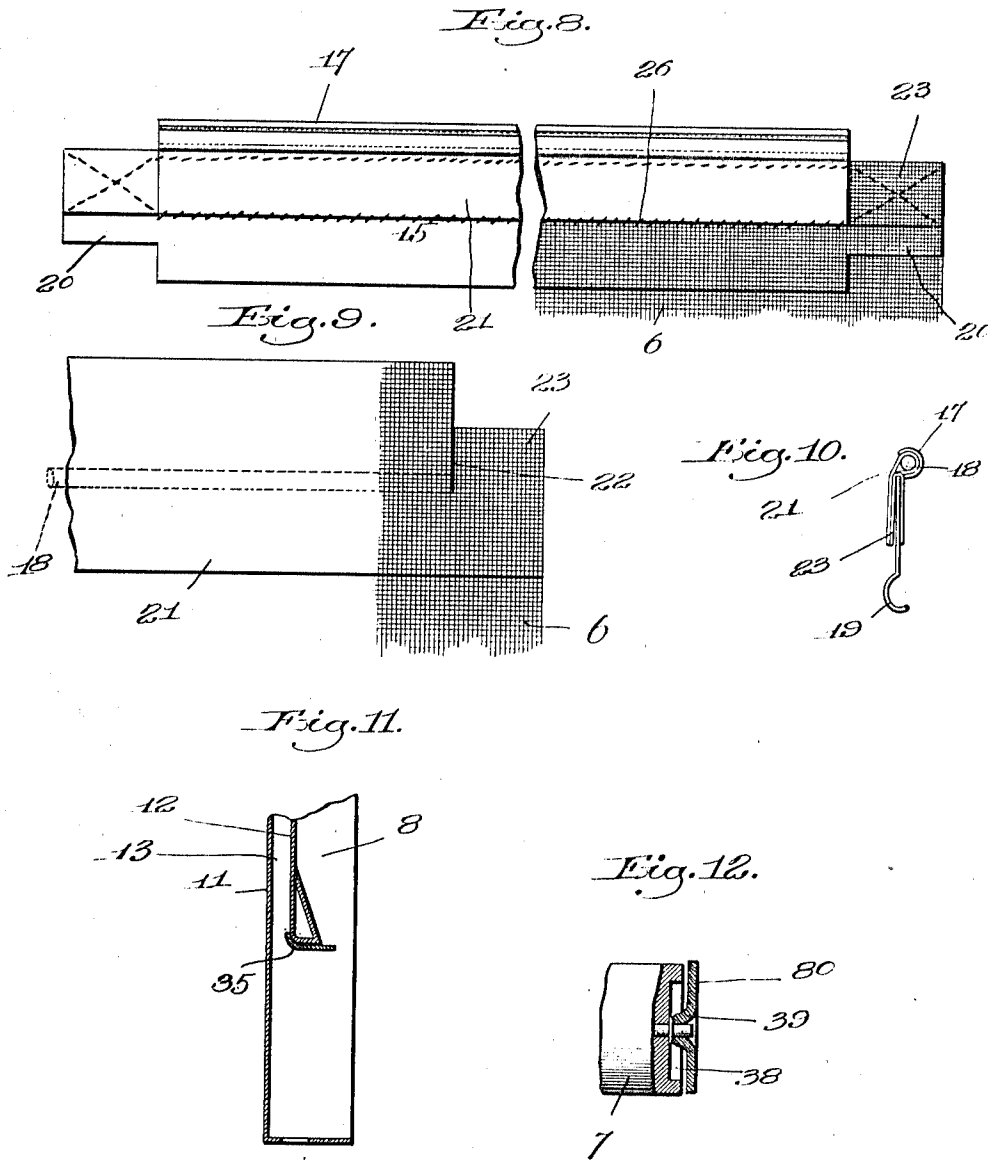
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3 SHEETS—SHEET 3.



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WINDOW-SCREEN.

1,061,425.

Specification of Letters Patent.

Patented May 13, 1913.

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To all whom it may concern:

Be it known that I, ZEPHANIAH TALBOT, a citizen of the United States, residing at Holliston, county of Middlesex, State of Massachusetts, have invented an Improvement in Window-Screens, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawings representing like parts.

This invention relates to screens for windows and the like.

A screen embodying all of the features of the invention, collectively considered, possesses numerous desirable qualifications. For example, the screen is readily adjustable to close an opening of the lower sash of a window without at the same time obstructing the entrance of light through the upper sash; and it may be further adjusted so as to close an opening of the upper sash.

Prior to this invention adjustable screens have been employed to cooperate with the lower sash of a window; but no such screen has been arranged for further adjustment for the additional purpose of closing an opening of the upper sash. Also screens have been used heretofore which were arranged to occupy the entire space of a window and thereby to screen the openings of either the upper or lower sash or of both; but no such screen has had the additional considerable advantage of being adjustable to suit openings of the lower sash while leaving the upper sash entirely unobstructed. It is a matter of common experience that the presence of a screen in front of a window darkens a room very materially and consequently it is of great advantage to have a screen adaptable to close only a portion of the window. At the same time it is important, especially during those seasons of the year when screens are most needed, that the window be open at the top to permit proper ventilation,—hence the desirability of having a screen to close an opening of the upper sash. It is evident therefore, that the above suggested adjustments contemplated by certain features of this invention, not only combine all the advantages hitherto separately accessible in various types of screens, but also present features of inherent novelty.

It has been a well-known expedient, particularly in connection with screens wound on spring rollers, to have the end edge of the screen attached to the bottom part of the lower window sash, so that when the latter is elevated the screen will be drawn up with it. This arrangement has various disadvantages. For example, in the case of a heavy window, if it be lifted hurriedly it will acquire considerable momentum, sufficient, if the screen should catch or its unwinding should be obstructed, to tear the screen or to break some part connected with it. Furthermore the necessity for attaching a screen to the lower sash in the manner described, when this is the only provision for adjusting the screen, precludes the adaptability of the screen to the closure of the upper sash or the entire window if desired. It is preferable, therefore, though not indispensable, that the screen be adjustable independently of the sash, and a convenient embodiment of this invention supplies this preference.

Various advantages other than those pointed out are supplied by this invention and they will be apparent upon an examination of the illustrative embodiment of the invention hereinafter described.

In the accompanying drawings, Figure 1 is an elevation of a two sash window viewed from the interior of the room, and having associated with it a convenient embodiment of the invention, the screen being shown therein adjusted to close the extreme opening of the lower sash; Fig. 2 is a vertical section on the line $x-x$ of Fig. 1 showing the screen in inoperative position; Fig. 3 is an enlarged detail of the lower part of Fig. 2 showing the screen adjusted for a slight opening of the lower sash; Fig. 4 is a detail of certain parts shown in Fig. 3 omitting other parts for the sake of clearness; Fig. 5 is a horizontal detail section on the line $y-y$ of Fig. 4; Fig. 6 is a section on the vertical plane indicated by a line a in Fig. 3; Fig. 7 is a detail section of a screen roller shown in section also in Fig. 3; Fig. 8 is a front elevation of the cross head to which the end edge of the screen is attached; Fig. 9 illustrates a convenient method for preparing the screen for attachment to the cross head; Fig. 10 is an end elevation of

the cross head; Fig. 11 is a vertical section on the line *b-b* of Fig. 5; and, Fig. 12 is a partial vertical section through one end of the screen roller and its supporting bracket.

While a screen embodying features of this invention may be used in various connections it is shown in the drawings as applied to a window having a frame 3, an upper sash 4 and a lower sash 5. A screen 6 is attached at one end to a roller 7, which may be conveniently of the usual spring roller type. The roller 7 is journaled at its opposite ends in brackets 80, one of which is preferably slotted in the well known manner to permit removal of the roller when occasion requires. The roller 7 with the screen wound upon it, is disposed parallel to the front of the window and preferably upon the sill, the screen unwinding from that side of the roll adjacent the sash. When the screen is unwound its lateral edges engage guides 8 arranged not only to guide the screen in its proper path during adjustment, but also to effect a snug closure with the edges of the screen. A practicable form of guide is shown in cross section in Fig. 5. It is composed of a single piece of sheet metal bent to present a flat attaching portion 10, by which the guide is secured to the side of the window frame, and two oppositely disposed guide flanges 11 and 12 spaced slightly apart to provide a guide channel 13 to receive the edge of the screen. The guides 8 just described are duplicated on opposite sides of the window frame. The extremity of the flange 12 is preferably bent at an angle to provide a positioning flange 14 for purposes hereinafter explained.

The end edge of the screen is preferably secured to a cross-head 15, to which is attached a lifting cord 16. The cord passes over a pulley,—it may be a self locking pulley,—at the top of the window.

Referring to Fig. 10 the upper portion of the cross head is bent into cylindrical form to supply a seat into which a key rod 18 may be inserted endwise, said key rod being then encircled by the end of the screen or some material attached thereto. The lower edge of the cross head has a curved pressing portion 19 adapted to rest against the screen and press it toward the window sash. The cross head is preferably made of flexible sheet metal and the pressing portion 19 tends by its own elasticity to press against the screen. It is assisted in this office by the action of the lifting cord 16, which is attached to the cross head (see Fig. 3) at a point displaced laterally from the axis of the key rod 18. Thus, when the cord 16 is drawn taut to elevate the screen it tends to rock the cross head on the key rod 18 as a fulcrum and thereby it assists in holding the pressing portion 19 snugly against the screen and in holding the latter

against any part with which it is desired to make closure. The spring of the roll 7, which opposes the pull of the cord 16 with considerable force, contributes also to the operation of the pressing portion 19.

When the screen is adjusted to close an opening of the lower window sash, the cross head 15 lies adjacent the bottom of the sash and the pressing portion 19 holds the screen snugly thereagainst. To cooperate with the pressing portion 19 when the screen is adjusted to close an opening of the upper sash, an apron 43 is provided. As shown in the drawings for purposes of illustration this apron 43 is merely a strip interposed between the sides of the window frame and arranged to register vertically with the inner faces of the lower sash. Obviously, the form of this apron is immaterial and it may be replaced by any practicable device which will serve the same purpose. The curved seat 17 of the cross head and the pressing portion 19 project, as shown in Fig. 3, somewhat beyond the plane of the screen and are preferably of such extent as to bear at their opposite ends with easy sliding contact upon the positioning flanges 14 (see Fig. 5), thus serving to hold the screen against lateral displacement and to guide it in its proper vertical path.

The body portion of the cross head 15 which intervenes between the curved seat 17 and the pressing portion 19 is extended endwise at each end to provide a wing 20 (Figs. 1 and 5), which enters a guiding channel 13. The width of the screen 6 is such that its lateral edges extend into the guiding channels 13, which are arranged to fit snugly over the wings 20 with the screen edges attached thereto.

The screen may be secured to the cross head in any practicable manner. For example, the screen itself may be sewed or otherwise fastened to a piece of fabric 21, the fabric being passed around the key rod 18 and thereafter folded upon itself and sewed, the key rod being then inserted endwise in the curved seat 17. The edges of the fabric are preferably cut to present flaps 23 (shown in Figs. 9 and 10) which fold over the wings 20, and are secured in place in any desired manner. The end of the screen opposite the cross head may be attached to a fabric cover 27 encircling the roller 7. Adjacent this point of attachment the roller is preferably supplied with a longitudinal groove 28, both for convenience in sewing or otherwise fastening the screen, and to receive the increased thickness when the screen is wound upon the roller.

The roller 7 is inclosed in a casing 29, detachably supported on the window-sill. The casing 29 has a vertical front wall 30, resting at its lower edge upon the sill and a top wall 31 extending over the roll 7. The op-

posite ends of the casing 29 abut snugly against the guides 8 on the sides of the window frame and thereby form a tight closure.

The inner edge of the top wall 31 of the casing 29 is rounded somewhat to supply an easy bearing for the screen as it is adjusted. The brackets 80 are attached to the window sill; and a flange 33 (Fig. 3) carried by the casing 29 rests against the brackets and serves to support the inner edge of the casing. The extreme opposite ends of the edge 32 are trimmed away so as to form latches 35 which, as shown in Fig. 11, engage the lower extremities of the guide flanges 12. Said flanges 12 are cut away at some distance from the bottoms of the guides 8 to provide for this convenient mode of securing the casing in place. The casing may be further locked in position by means of spring catches 36 arranged to engage a foot 37, as shown in Fig. 2. To permit compactness in the arrangement of the parts it is preferred to recess the roll 7 (as at 38, Fig. 12) to receive the projecting bearing portions 39 of the brackets 80.

When the screen is rolled up upon the roller 7 the cross head occupies substantially the position shown in Fig. 2, wherein it is inclosed within the casing 29. When in this position the cord 16 may be detached from the cross head and removed, if desired, leaving the window entirely free from any obstruction. When it is proposed to screen an opening of the window, pulling of the cord 16 will elevate the cross head, and when the latter reaches position adjacent the bottom of the lower sash, the pressing portion 19 of the cross head will press against the sash and make a tight closure therewith. The screen may be held in this adjusted position in any convenient manner,—for example, as already suggested, by a self-locking pulley acting on the cord 16. If it be desired to open the upper sash of the window, the screen may be further elevated to such a position that the pressing portion 19 will form a closure with the apron 43.

It is to be understood that the specific embodiment of this invention above described, has been disclosed herein for illustrative purposes only, and that said embodiment is susceptible of various changes and modifications (such as will appear to those familiar with the art) which are to be construed as included within the proper scope of the invention as it is defined in the subjoined claims. It is not essential that all of the features of the invention be used collectively, as in the instance of the illustrative embodiment described, but they may be used in various combinations and sub-combinations.

Where words denoting direction, position and the like are employed in the subjoined claims, such words are to be construed, where the context permits, as words of relative

designation and not limitation, since obviously relative direction, relative position and the like are alone of importance.

Having thus described a selected embodiment of my invention, what I claim and desire to secure by Letters Patent is:—

1. The combination with the sashes of a window, of a screen independently adjustable to a plurality of positions including a position for closing an opening of the lower sash alone and a position for closing an opening of the upper sash, and means carried by the screen to press the end edge of the screen snugly against the part with which it is desired to make closure.

2. The combination with the sashes of a window, of a roller screen adjustable to close an opening of a lower sash, and adjustable further to close an opening of the upper sash; means coöperating with the screen to supply closure at the lateral edges of the screen, and means to press the end edge of the screen snugly against the part with which it is desired to make closure.

3. The combination with the sashes and frame of a window, of an adjustable screen; and means independent of the window frame to hold the end edge of the screen snugly against a part with which said edge is desired to make closure.

4. The combination of a frame having an opening to be screened; a screen to close said opening; and means carried by the screen for pressing an edge of the screen against a part of the frame with which it is desired to make closure.

5. The combination of a part proximate an opening to be screened; a screen to close said opening; and means carried by the screen and pressing an edge of the screen yieldingly against said part.

6. The combination of a part proximate an opening to be screened; an adjustable screen; means to adjust the screen; and means, acted upon by the adjusting means, to hold an edge of the screen against the said part.

7. The combination of a part proximate an opening to be screened; an adjustable screen; means to adjust the screen; and means, acted upon by the adjusting means, to press an edge of the screen yieldingly against the said part.

8. The combination of a part proximate an opening to be screened; a screen to close said opening; means tending to withdraw the screen from operative position; adjusting means to oppose said withdrawing means for moving the screen into operative position; and means, acted upon by the withdrawing means and adjusting means, to hold an edge of the screen against the said part.

9. The combination of a part proximate an opening to be screened; a screen to close said opening; means to withdraw the screen

from operative position; means to hold the screen in operative position; and means, acted upon by said withdrawing means, to maintain an edge of the screen in contact
5 with the said part.

10 10. The combination of a part proximate an opening to be screened; a screen to close said opening; means to withdraw the screen from operative position; closing means to maintain the screen in contact with the said part to make closure; and means to hold the screen in operative position, connected to the closing means at a point offset from the plane of the screen and thereby to assist the
15 action of said closing means.

11. The combination of a screen 6; a cross-head secured to said screen for guiding the latter, and pressing means 19 tending to

maintain the screen against the sash of the window. 20

12. The combination of a screen with a cross-head 15 connected thereto having a screen securing seat 17 and a pressing portion 19 for holding the screen tight against the sash. 25

13. The combination of a screen and a cross-head 15, including a seat 17 and a pressing portion 19.

In testimony whereof, I have signed my name to this specification, in the presence of
30 two subscribing witnesses.

ZEPHANIAH TALBOT.

Witnesses:

MINNIE E. LELAND,
JOHN C. TALBOT.