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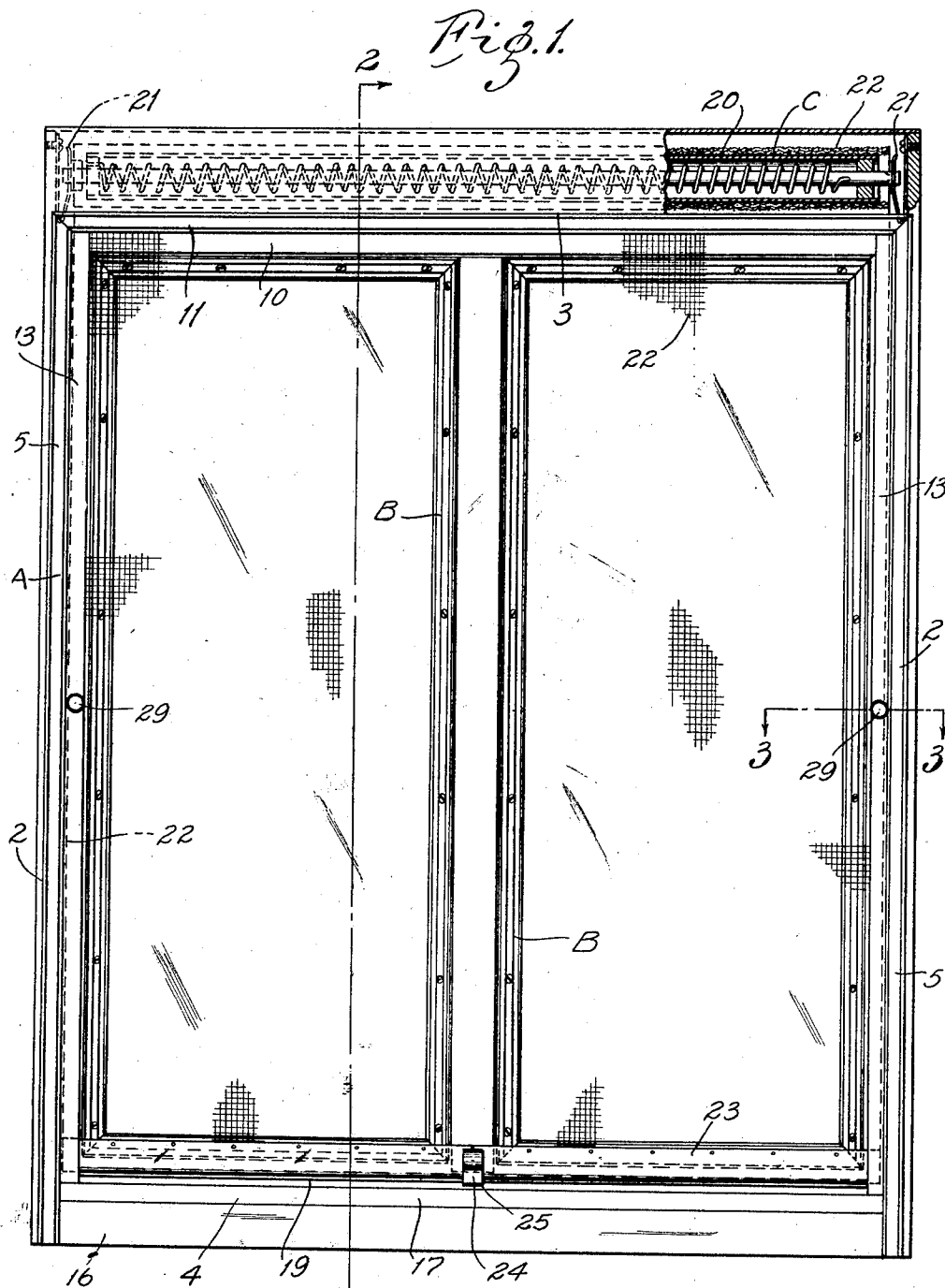
A. M. LANE

1,781,401

SCREENED WINDOW

Filed March 8, 1929

2 Sheets-Sheet 1



INVENTOR.

Alfred M. Lane
by Cant & Cant

HIS ATTORNEYS.

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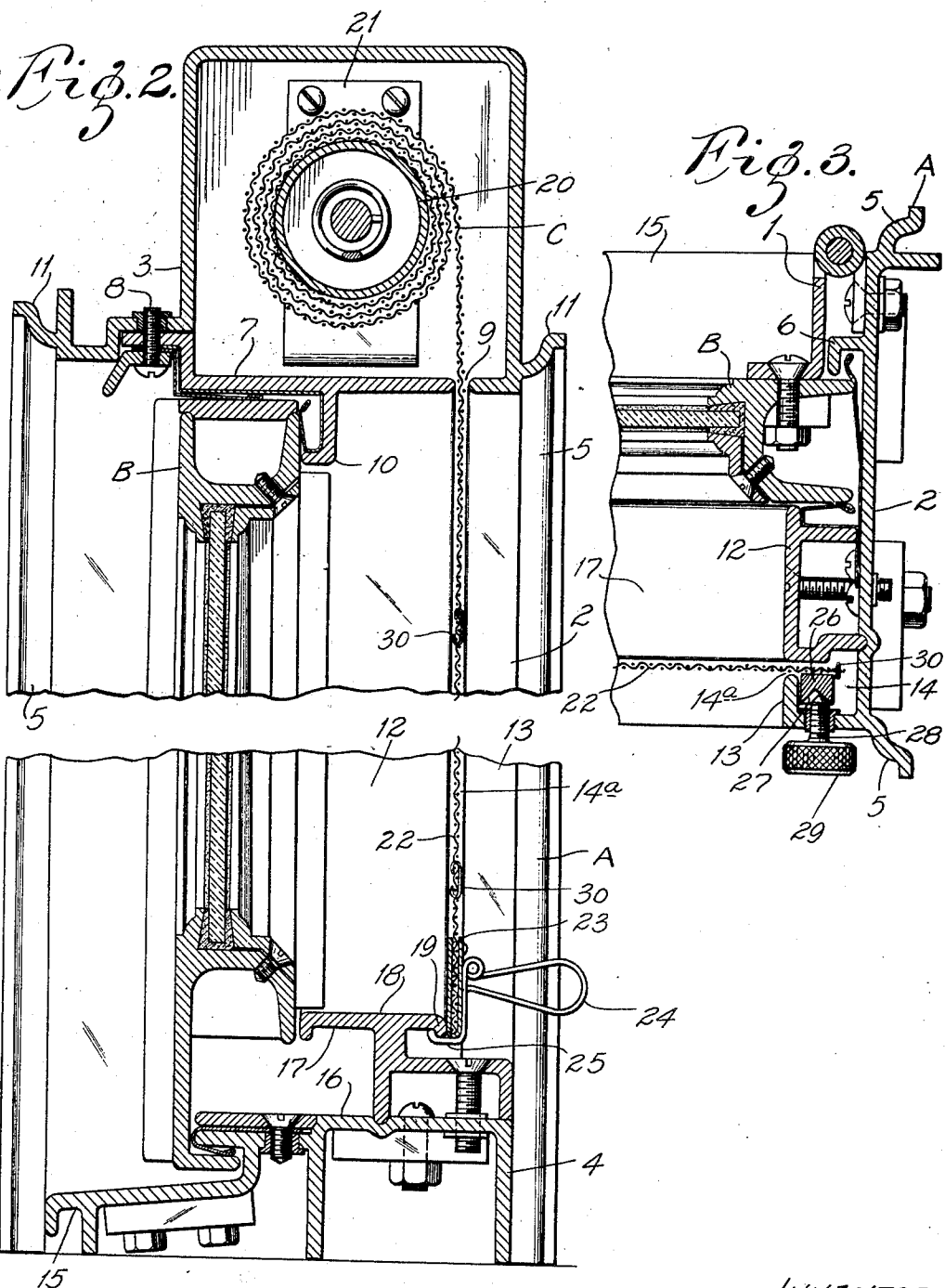
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INVENTOR:
Alfred M. Lane
By [Signature]
HIS ATTORNEYS

UNITED STATES PATENT OFFICE

ALFRED M. LANE, OF ST. LOUIS, MISSOURI

SCREENED WINDOW

Application filed March 8, 1929. Serial No. 345,523.

This invention relates to windows, and more particularly to the application of roller screens thereto. One of the principal objects of the present invention is to provide roller screens for windows which can be easily and cheaply applied. Other objects are to conceal the roller screen in the raised position thereof; to provide means for stretching the screen to take up the slack therein in the lowered position thereof; and to provide for durability, simplicity and cheapness of construction, ease of assembly and operation and compactness of design. The invention consists in the screened window construction, and in the combination and arrangements of parts hereinafter described.

In the accompanying drawings, which form part of this specification and wherein like symbols refer to like parts wherever they occur,

Fig. 1 is an interior side view of a screened window construction embodying my invention;

Fig. 2 is a vertical section through the window on the line 2—2 in Fig. 1; and

Fig. 3 is a horizontal cross-section through one side of the window frame and the adjacent portion of the sash on the line 3—3 of Fig. 1.

In the accompanying drawings, my invention is shown in connection with an outwardly swinging double casement window; but the invention is applicable to other types of windows having sliding sashes. Said window construction comprises a metal window frame A and two metal casement window sashes B secured to the respective jamb members of said frame by means of hinges 1 so as to swing outwardly.

The window frame A comprises metal jamb members 2 connected at their upper ends by a metal head member 3 and at their lower ends by a metal sill member 4. Each of the jamb members 2 of the window frame A preferably comprises a main body portion of flat section provided at its inside and outside marginal edges with ornamental beads or moldings 5. Each jamb member 2 is also provided on its sash opposing face with an inwardly extending longitudinal flange 6

adapted, in the closed position of the sash hinged on said member, to overlap the outside edge of the inner side rail of said sash.

The head member 3 of the window frame A preferably comprises a hollow casing or housing which extends from jamb member to jamb member and has an opening in its bottom adapted to be closed by means of a closure plate 7 which is removably secured to said head member by screws or other fastening members 8. The inside edge of the closure plate 7 terminates short of the inside edge of the opening in the bottom of the head member, thereby forming a longitudinal slot 9 in the bottom of said head member which communicates with the chamber therein. The closure plate is also provided with a depending flange 10 adapted to form a stop for the top rails of the sashes. The inner and outer lower side edges of the head member are provided with flanges that are shaped to form ornamental beads or molds 11. Metal inside stops 12 of substantially channel-shaped section are secured to the sash opposing faces of the jamb members 2 in position to limit the inward swinging movement of the sashes. The inside edge portion of each jamb member is provided adjacent to the inside face of the inside stop 12 with a flange 13 adapted to cooperate with said stop to form a chamber or recess 14 which extends longitudinally of said jamb member from the head member to the sill member. The flange 13 terminates short of the inside corner of the inside stop 12, thereby forming in the outer face of the jamb member a longitudinal guide slot 14^a which communicates with the longitudinal recess 14.

The metal sill member 4 of the casement window frame A is of substantially inverted channel-shaped section with a downwardly sloping outside portion 15 and a horizontally disposed upwardly offset inside portion 16. An inverted channel-shaped stop 17 rests on and is secured to the upwardly offset inside portion 16 of the sill member 4 and has an upwardly offset portion 18 provided along its inside margin with a depending flange 19.

Located within the hollow head member 3 of the casement window frame A is a roller

screen C, which is inserted in and removed from said member through the opening in the bottom thereof. Said roller screen preferably comprises a spring roller 20 supported at its ends in suitable brackets 21, which are attached to the portions of the jamb members which close the ends of the hollow head member, and a wire screen cloth 22 secured to and wound on said spring roller. The wire screen works through the longitudinal slot 9 provided therefor between the inner edge of the closure plate 7 for the head member and the adjacent edge of the roller receiving opening therein; and the side marginal portions of said screen extend through the guide slots 14^a into the longitudinal recesses 14 in the opposing faces of the jamb members. The lower or free edge of the wire screen cloth is reinforced and stiffened by means of a strip 23 of sheet metal; and a suitable screen pull 24 is secured thereto for raising and lowering the screen. As shown in the drawings, the screen pull 24 is provided with a hook portion 25 which extends beneath the bottom edge of the screen and is adapted to engage the depending hook flange 19 at the inner edge of the inside stop 17, and thus serves to hold the screen in its lowered or drawn position.

In the lowered or drawn position of the screen, said screen is stretched or tightened in a horizontal direction to take up any slack therein by means of clamping bars 26 mounted within the recesses 14 which slidably receive the side marginal portions of the screen. Each of these clamping bars 26 extends from sill to head of the window frame and has a flat outside face adapted to cooperate with the inside surface of the screen and a longitudinally grooved inside face 27 adapted to cooperate with the pointed end of an adjusting screw 28. The adjusting screw 28 is threaded through the inner wall of the recess 14, within which is accommodated the side marginal portion of the screen, and is provided with a knurled head 29, whereby it may be manipulated from the room-side of the window. Attached to each side marginal portion of the screen, between the opposing faces of the clamping bar and the jamb member, is a series of longitudinally spaced clips 30. By the arrangement just described, the tightening of the adjusting screws 28 causes the pointed ends thereof to engage the inclined surface of the longitudinal V-shaped grooves 27 in the clamping bars 26 and thus cause simultaneous movement of the clamping bars in the direction of the screen and in the direction of the clips 30 at the side margins thereof. Upon engagement of the clips 30 by the clamping bars 26, the clips are forced inwardly towards the jamb members, thereby stretching or tightening the screen in a horizontal direction; and this stretching con-

tinues until the clamping bars force the marginal portions of the screen against the adjacent inside faces of the inside stops 12, thus firmly clamping the screen in its stretched position.

The hereinbefore described screened window construction has numerous advantages. It permits the roller screen to be quickly and easily mounted on and removed from the window; it enables the screen to be concealed in the raised position thereof; and it provides means for quickly and easily stretching the screen to take up slack therein and for rigidly holding the screen in its stretched position.

The device admits of considerable modification without departing from my invention, and I do not wish to be limited to the exact construction shown and described.

What I claim is:

1. In a rolling screen device including the jamb members of a window frame, said screen having a series of abutments along its side margins, said jamb members being provided with longitudinal slots adapted to receive the side marginal edges of the screen and constitute guides therefor; a bar extending longitudinally of each of said slots and having a V-shaped recess therein, and means mounted on the jamb member adapted to cooperate with one side of the V-shaped recess in said bar to shift the bar into engagement with the abutment members of said screen to stretch the screen from side to side and into engagement with the face of said screen to clamp the margin thereof to the guide therefor.

2. In a rolling screen device including the jamb members of a window frame, said screen having a series of abutments along its side margins, said jamb members being provided with longitudinal slots adapted to receive the side marginal edges of the screen and constitute guides therefor; bars extending longitudinally of said slots, and means mounted on the jamb members adapted to cooperate with said bars for shifting the bars into engagement with the abutment members on the side margins of the screen to stretch the screen from side to side and into engagement with the face of said screen to clamp said margin to the guides therefor, said means comprising longitudinal V-shaped grooves in the inside faces of said bars and screws threaded into said jamb members and having pointed ends adapted to bear against the inner walls of said grooves.

3. In a window frame comprising head and jamb members, said head member being adapted to support a roller screen adapted to be drawn across the opening in said frame, said jamb members being provided with longitudinal slots adapted to receive the side marginal portions of said screen and constitute guides therefor; clamping bars loosely mounted in said slots, and means mounted on

the jamb members and co-operating with said clamping bars to shift the same laterally into engagement with said screen to clamp the margins thereof in the guides therefor.

5 4. In a window frame comprising head and jamb members, said head member being adapted to support a roller screen adapted to be drawn across the opening in said frame, said jamb members being provided with longitudinal slots adapted to receive the side
10 marginal portions of said screen and constitute guides therefor; clamping bars loosely mounted in said slots, and means mounted on the jamb members and co-operating with said
15 clamping bars to shift the same laterally into engagement with said screen to clamp the margins thereof in the guides therefor, said means comprising screws threaded into said jamb members with their inner ends in abut-
20 ting relation to said clamping bars.

5 5. In a window frame comprising head and jamb members, said head member being adapted to support a roller screen adapted to be drawn across the opening in said frame, said jamb members being provided with longitudinal slots adapted to receive the side
25 marginal portions of said screen and constitute guides therefor; clamping bars mounted in said slots and having recesses therein, and means mounted on the jamb members and
30 cooperating with the recesses in said clamping bars to shift the same laterally into engagement with said screen to clamp the margins thereof in the guides therefor.

35 6. In a window frame comprising head and jamb members, said head member being adapted to support a roller screen adapted to be drawn across the opening in said frame, said jamb members being provided with longitudinal slots adapted to receive the side
40 marginal portions of said screen and constitute guides therefor; clamping bars mounted in said slots and having recesses therein, and means mounted on the jamb members and
45 cooperating with the recesses in said clamping bars to shift the same laterally into engagement with said screen to clamp the margin thereof in the guide therefor, said means comprising screws threaded into said jamb
50 members with their inner ends in engagement with the recesses in said clamping bars.

55 7. In a window frame comprising head and jamb members, said head member being adapted to support a roller screen adapted to be drawn across the opening in said frame and having abutment members along its side margins, and said jamb members being provided with longitudinal slots adapted to receive the side marginal portions of said
60 screen and constitute guides therefor; bars loosely positioned in said slots, and means mounted on said jamb members for shifting said bars into engagement with the abutment members of said screen to stretch the screen
65 from side to side.

8. In a window frame comprising head and jamb members, said head member being adapted to support a roller screen adapted to be drawn across the opening in said frame and having abutment members along its side
70 margins, said jamb members being provided with longitudinal slots adapted to receive the side marginal portions of said screen and constitute guides therefor; bars loosely positioned in said slots, and means mounted on said jamb members for shifting said bars into
75 engagement with the abutment members of said screen to stretch the screen from side to side and into engagement with the face of said screen to clamp the side margins thereof to the guides therefor.

9. In a window frame comprising head and jamb members, said head member being adapted to support a roller screen adapted to be drawn across the opening in said frame and having abutment members along its side
80 margins, said jamb members being provided with longitudinal slots adapted to receive the side marginal portions of said screen and constitute guides therefor; clamping and stretching bars mounted in said slots and having V-shaped recesses therein, and means mounted on the jamb members and cooper-
85 ating with one side of the V-shaped recesses in said bars to shift the bars into engagement with the abutment members of said screen to stretch the screen from side to side and into engagement with the face of said screen to clamp the margins thereof to the guides
90 therefor.

10. In a window frame comprising head and jamb members, said head member being adapted to support a roller screen adapted to be drawn across the opening in said frame and having abutment members along its side
105 margins, said jamb members being provided with longitudinal slots adapted to receive the side marginal portions of said screen and constitute guides therefor; clamping and stretching bars mounted in said slots and having V-shaped recesses therein, and screws
110 mounted on the jamb members and having taper end portions cooperating with one side of the V-shaped recesses in said bars to shift the bars into engagement with the abutment
115 members of said screen to stretch the screen from side to side and into engagement with the face of said screen to clamp the margins thereof to the guides therefor.

Signed at St. Louis, Missouri, this 5th day
of March, 1929.

ALFRED M. LANE.

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