

Oct. 6, 1931.

R. S. BROGIE

1,826,121

WINDOW CONSTRUCTION

Filed April 13, 1929

3 Sheets-Sheet 1

Fig. 1.

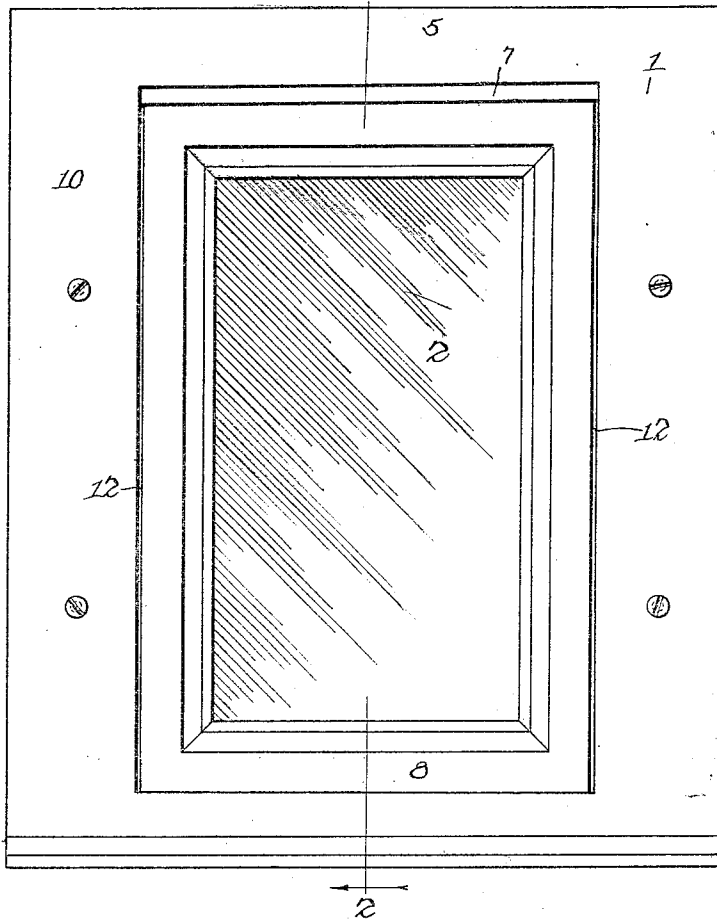


Fig. 2.

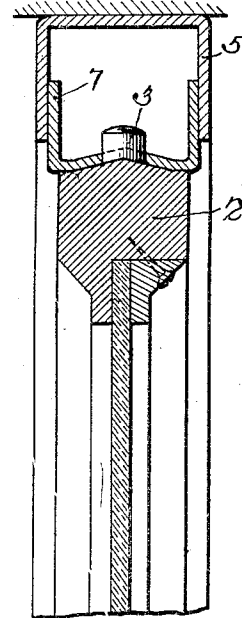
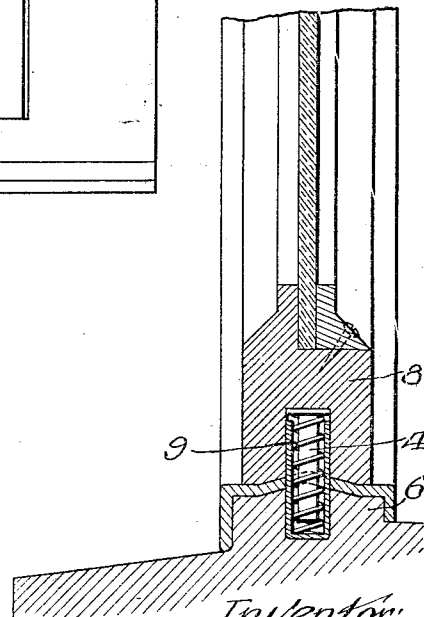
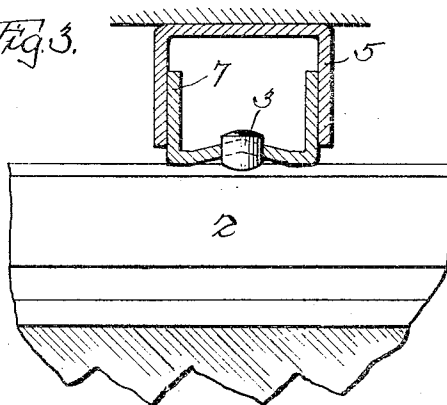


Fig. 3.



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Fig. 4.

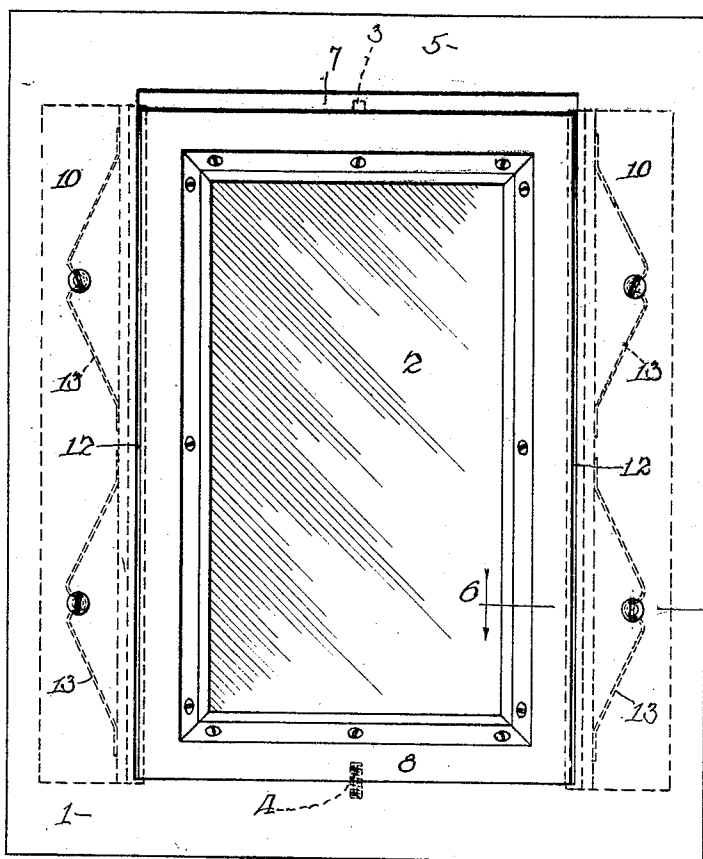


Fig. 5.

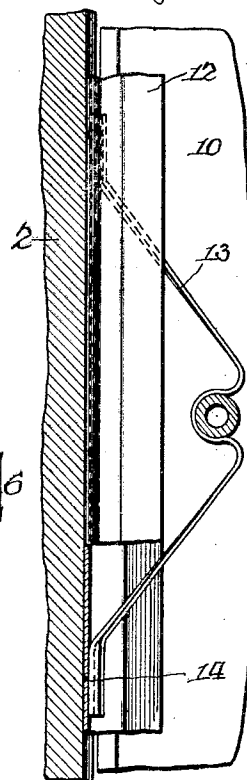
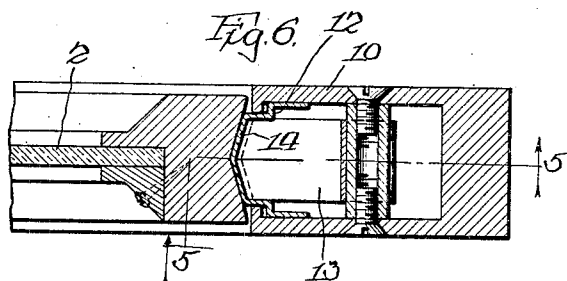


Fig. 6.



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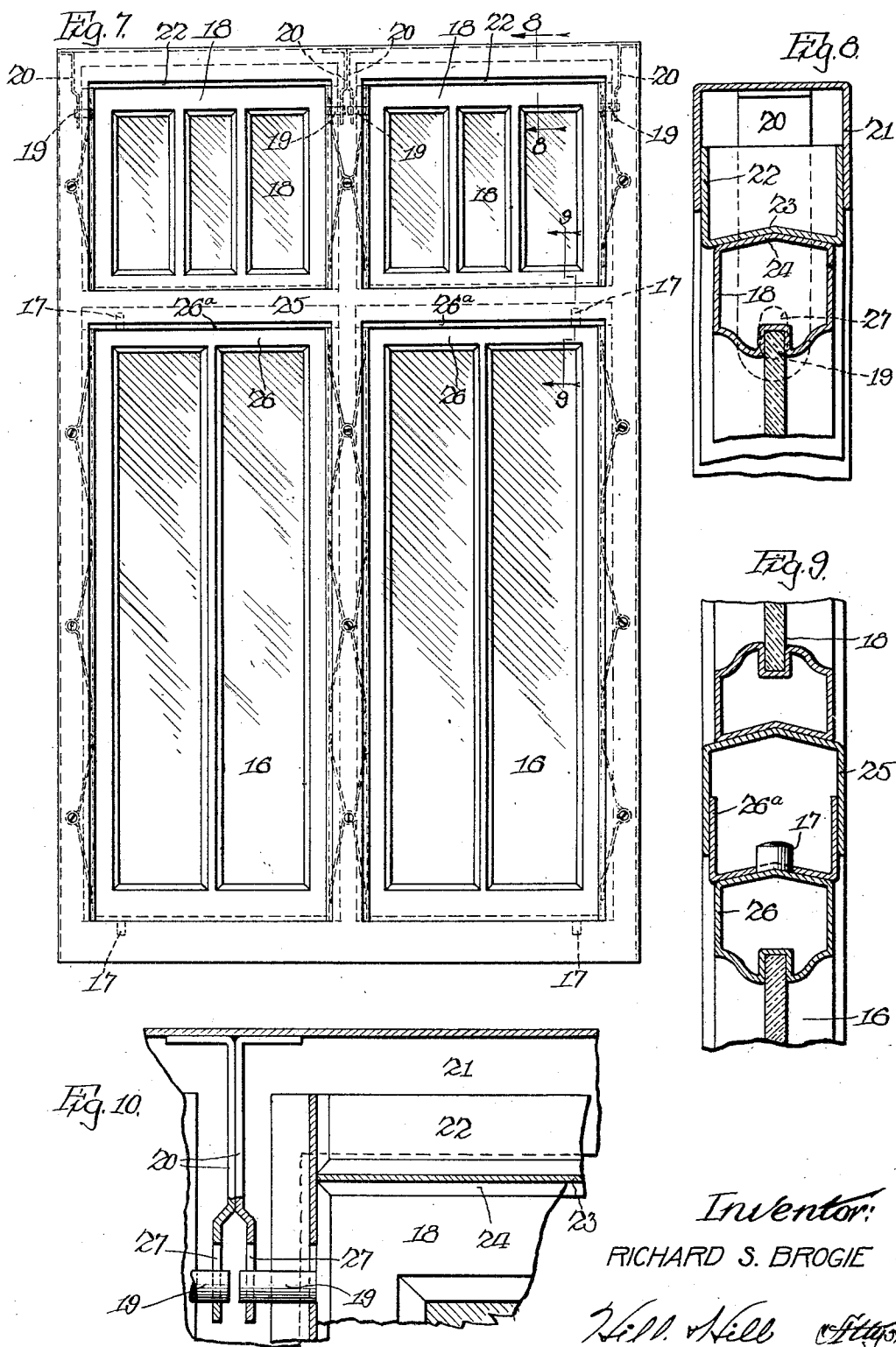
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WINDOW CONSTRUCTION

Filed April 13, 1929.

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UNITED STATES PATENT OFFICE

RICHARD S. BROGIE, OF CHICAGO, ILLINOIS, ASSIGNOR TO BROGIE WINDOW CORPORATION, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS

WINDOW CONSTRUCTION

Application filed April 13, 1929. Serial No. 354,845.

This invention belongs to the general class of windows and has for its object the construction of a window of the pivoted type, that is, preferably pivoted in a vertical line and adapted to swing upon said pivotal support for any desired purpose.

To this end it consists in the novel construction, arrangement and combination of parts herein shown and described and more particularly pointed out in the claims.

In the drawings, wherein like reference characters represent like or corresponding parts;

Fig. 1 is a front view of a window embodying my invention;

Fig. 2 is a central vertical section in line 2-2 of Fig. 1;

Fig. 3 is a fragmentary view partly in section of the top pivotal connection and associated parts when the window is in open position;

Fig. 4 is a view similar to Fig. 1 showing the construction more in detail;

Fig. 5 is a partial section in line 5-5 of Fig. 6;

Fig. 6 is a partial section in line 6-6 of Fig. 4;

Fig. 7 is a front view of a window of the type known as a French window with transoms, embodying my invention;

Fig. 8 is a partial section in line 8-8 of Fig. 7;

Fig. 9 is a section in line 9-9 of Fig. 7; and

Fig. 10 is a fragmentary section showing the construction of the transom hangers.

In the Figs. 1 to 6, inclusive, 1 shows a window frame provided with a suitable sash opening, and 2 indicates the sash positioned between the jambs of the window frame.

Fig. 2 shows the window sash pivotally supported as at 3 and 4 within the head jamb 5 and 6 base, by means of which the sash may be swung wide open for the purpose of cleaning the sash or for any other purpose desired.

7 is a vertically sliding element cooperating with the pivot 3, which element is loosely supported in the head jamb 5 so as to readily move upward and downward therein, preferably by gravity. The lower end of the window is pivotally mounted upon the pivot

4 which extends into the base 6 in a downward direction and upward into the lower end 8 of the sash. The spring member 9 may be employed to ease or aid vertical movement of the sash and functions as a counterbalance or cushion.

The operation of this device as thus described is that upon pushing the sash open the sliding member 7 will move up in the jamb 5 a sufficient distance to permit the lower end of the sash to pass over the lower end of the base as shown, sufficiently so to permit the sash to be placed at right angles to its original position or, if desired, even more. The construction of the upper part 2 of the sash and of the lower part 8 of the sash is such as to cooperate with a reverse construction in the jambs so as to make a tight joint, and to aid in the operation described. When the sash is returned to normal position substantially as shown in Fig. 2, these parts will coact as shown, the sliding part 7 moving with the sash so as to make a tight joint.

The position of the top of the sash and its cooperating parts when the window is open is clearly shown in Fig. 3.

Referring now to Figs. 4 and 5, inner edges of the side jambs 10 and the top jamb 11 are grooved in a longitudinal direction substantially their full length, and in said grooves, as shown in Fig. 5, are positioned movable strips 12 which are normally held at the limit of their movement toward the sash member and cooperate therewith. Suitable resilient members, as 13, tend to hold the strips in the side jambs to their limit of movement, as stated, while similar resilient means or their equivalent may be employed in the top jamb. Ordinarily, however, gravity will be sufficient to hold that strip at its downward limit of movement in position to cooperate with the top of the sash, as indicated at the top of Fig. 2. However, resilient means may be employed there also if desired.

The edges of the side strips 12 and the marginal side edges of the sash 2 are formed to cooperatively serve to hold the sash in proper position with relation to the jamb members as described. As shown, the re-

movable strips 12 are provided with a slightly angular or crowning extension as shown at 14 in Fig. 6, cooperating with a corresponding groove 15 in the marginal edges of the sash also as shown in Fig. 6. The construction of the top of the sash member, as before described is of the same general character. Desiring to open the window when it is otherwise free and unlocked, pressure upon the side of the sash will cause the sash to move vertically to the position substantially as shown in Fig. 3, and will free the side strips from the edges of the sash, together with the top strip, and the window sash will swing as desired to a right angular position or, if preferred, may have a full movement of three hundred and sixty degrees. In closing the window it is only necessary to move it back to its original position, when the cooperating parts will reverse their action as described and the sash will snap back into its original position and be securely held in such position.

As shown in Fig. 7, a slightly different construction is shown while still embodying the same idea. As here shown, French windows 16—16 are supported upon suitable pivots 17—17, preferably positioned off the center of the sashes, and at a suitable point to permit the operation of the sash in its opening and closing movement. 18—18 are transom members provided with pivots 19—19 positioned in hangers 20—20, the lower edges closing down on the port 25, above the windows 16. The upper portion of the transom connection is shown in Fig. 8 in which 21 indicates the top or head jamb and 22 the movable member provided with a depression 23 in the working face thereof. The cooperating face of the transom 18 is shown with a protruding part or crown 24 cooperating with the depression 23. The operation of this device is substantially as heretofore described. The lower part of the transoms and the window 16 and cooperating parts is shown in Fig. 9. Upon swinging the transom up, the top edge of the transom sash forces up the sliding member 22 and the edge of the transom passes by that member and the port 25. Upon opening a window 16, the top edge 26 forces up the sliding member 26a and the window 16 moves upward with the pivots 17 to permit the swinging of the parts as described. In closing the transom and windows 16—16, the reverse movement of the port occurs. As shown in Fig. 10, the hangers 20 for the transoms are provided with slots 27 which permit the lifting of the transom sufficiently to allow the parts to assume their desired positions. It is obvious that the transoms 18 may be mounted on vertical pivots if desired, operating substantially in the same manner as the sash so shown. The lower pivots 17 are preferably constructed like the above described pivot 4.

After having thus described my invention,

it is obvious that various immaterial modifications may be made without departing from the spirit of my invention; hence I do not wish to be limited further than as set forth in the claims.

What I claim as new and desire to secure by Letters Patent is:

1. In a window structure, a frame provided with a sash opening with the top and side edges of the frame jambs longitudinally recessed, movable strips loosely located in the recesses, resilient means normally holding the strips at the limit of movement toward the sash opening, the sash being pivoted on a line permitting it to swing on said pivots, in combination with a pivot transom member, positioned in the frame above the sash, the jambs in proximity to the transom being likewise recessed with cooperating movable strips in said recesses substantially as described.

2. In a window structure, a frame provided with a sash opening with the top and side edges of the frame jambs longitudinally recessed, movable strips loosely located in the recesses, provided with resilient means normally holding the strips at the limit of movement toward the sash opening, and vertical pivots supporting the sash, in combination with a transom member located above the sash, the frame jambs in proximity thereto being likewise recessed and with movable strips therein, said transom member being pivoted on horizontal lines.

3. In a window structure, a frame provided with a main sash opening and a transom sash opening, the top and side edges of the frame jambs being longitudinally recessed with movable strips loosely located in the recesses, resilient means normally holding the strips at the limit of movement toward the openings, the sash of the main window being pivoted on a vertical line and the sash in the transom member being pivoted on a horizontal line, slotted hangers for the transom bearings permitting a slight vertical movement, and means provided to permit a slight vertical movement of the sash member.

4. In a window structure, a frame provided with a sash opening, the top and side edges of the frame being longitudinally recessed, a sash in said opening pivotally movable about a vertical axis, laterally movable strips closely fitting in the side recesses of the frame, each having an outwardly projecting crown member cooperating with a corresponding groove in the adjacent marginal edge of the sash, resilient means normally holding said strips at the limit of movement toward the sash opening, a movable strip closely fitting in said top recess, the top of said sash having an outwardly projecting crown member cooperating with a corresponding groove in said top strip, a pivot pin mounted in the top of said sash and projecting upwardly along said vertical axial line into a recess in said top

strip, said frame base having an upwardly projecting crown member cooperating with a corresponding groove in the lower edge of the sash, a pivot pin mounted in the frame base and projecting upwardly along said vertical axis into a recess in the bottom of the sash, and spring means positioned in said recess forming a cushion support for the sash, the said spring remaining compressed under the weight of said sash.

In witness whereof, I hereunto subscribe my name this 30th day of March A. D. 1929.

RICHARD S. BROGIE.

5. In a window structure, a frame provided with a sash opening, the top and side edges of the frame being longitudinally recessed, a sash in said opening pivotally movable about a vertical axis, laterally movable strips closely fitting in the side recesses of the frame, each having an outwardly projecting crown member cooperating with a corresponding groove in the adjacent marginal edge of the sash, resilient means normally holding said strips at the limit of movement toward the sash opening, a movable strip closely fitting in said top recess, the top of said sash having an outwardly projecting crown member cooperating with a corresponding groove in said top strip, a pivot pin mounted in the top of said sash and projecting upwardly along said vertical axial line into a recess in said top strip, said frame base having an upwardly projecting crown member cooperating with a corresponding groove in the lower edge of the sash, a pivot pin mounted in the frame base and projecting upwardly along said vertical axis into a recess in the bottom of the sash, and spring means positioned in said recess forming a cushion support for the sash, the said spring remaining compressed under the weight of said sash, the mountings for said pivot pins permitting a limited vertical movement of the sash sufficient to enable the sash, in opening and closing, to ride over the projection in said frame base.
6. In a window structure, a frame provided with a sash opening, the top and side edges of the frame being longitudinally recessed, a sash in said opening symmetrical and pivotally movable about a vertical axis, laterally movable strips fitting in the side recesses of the frame, each having an outwardly projecting symmetrical crown member cooperating with a corresponding groove in the adjacent marginal edge of the sash, resilient means normally holding said strips at the limit of movement toward the sash opening, a movable strip fitting in said top recess and supported by the top of the sash, said sash having an outwardly projecting symmetrical cross member cooperating with a corresponding groove in said top strip, a pivot pin mounted in the top of said sash and projecting upwardly along said vertical axial line into a recess in said top strip, the base of said frame having an upwardly projecting symmetrical crown member cooperating with a corresponding groove in the lower edge of the