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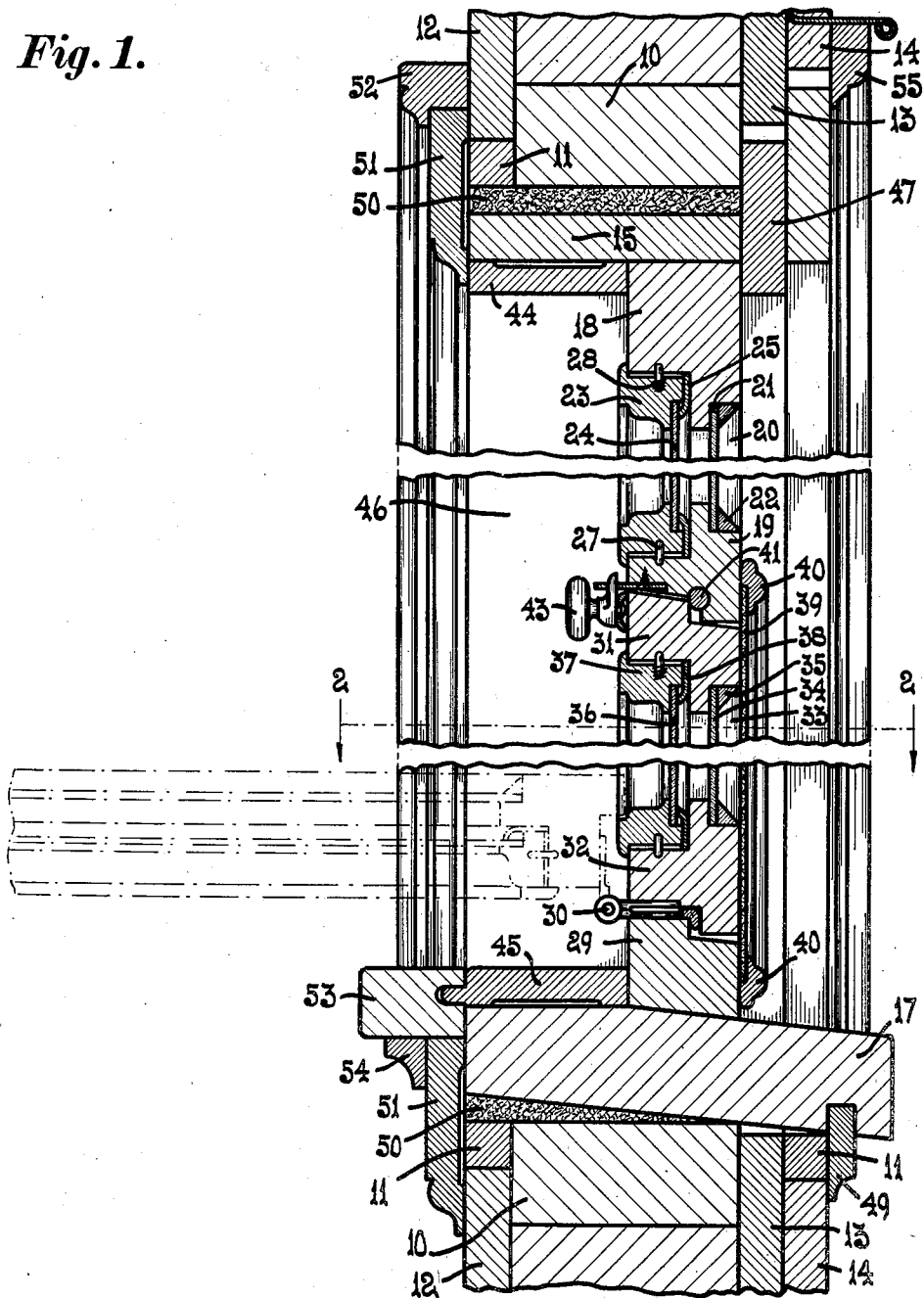
2,106,308

WINDOW

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Fig. 1.



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Fig. 2.

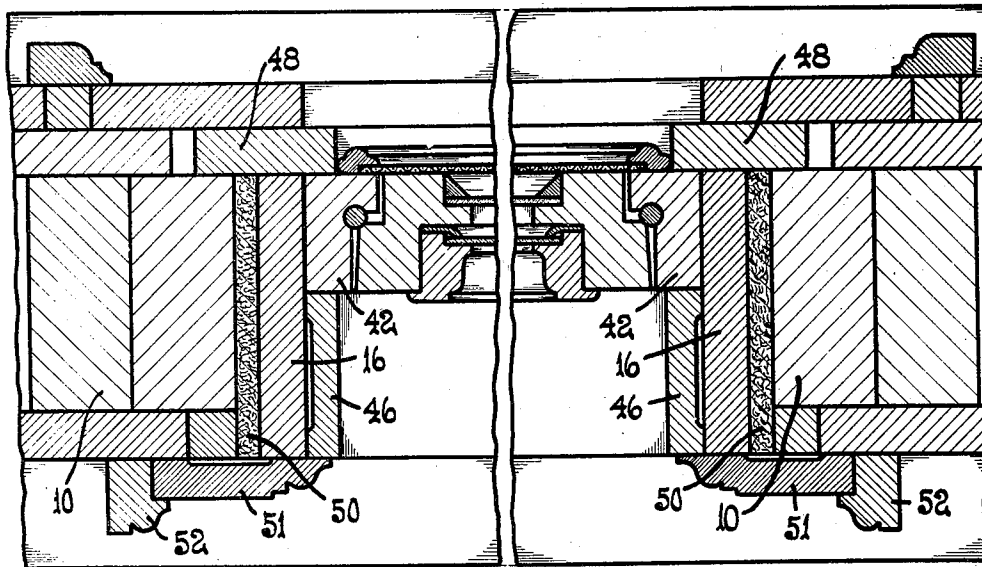
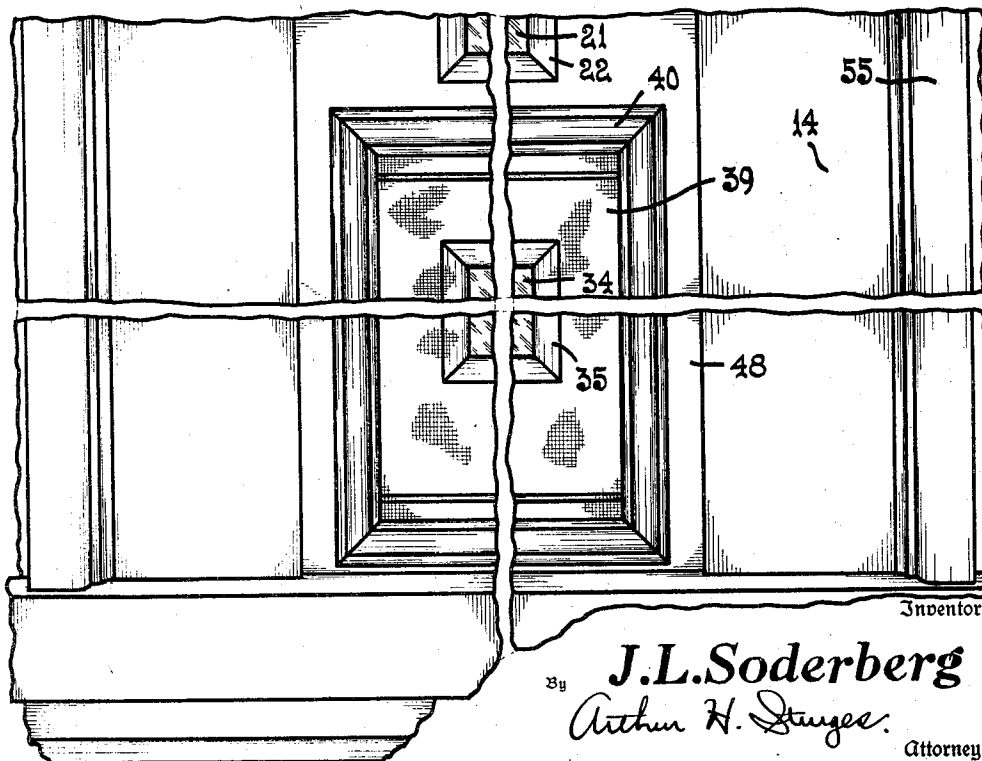


Fig. 3.



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UNITED STATES PATENT OFFICE

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WINDOW

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2 Claims. (Cl. 20—56.5)

The present invention relates to an improved window and has for an object to provide a structure which can be assembled at a mill and placed in the window opening of a wall with a minimum of expense.

Another object is to provide a window sash which may be readily opened for ventilating and in which the ventilating draft may be directed upward into a room.

A further object is to provide a structure which is completely weather stripped and which carries a fixed screen outside of the window.

Still further objects include a double pane window the innermost of which may be removed for cleaning; the complete construction of a window prior to insertion in the wall so that danger of injuring the window in attaching to the wall is minimized.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views.

Figure 1 is a transverse vertical section taken through the wall and window.

Figure 2 is a horizontal section taken on the line 2—2 of Figure 1, and

Figure 3 is an elevation of the outer side of the window.

The present invention is designed as an improvement over the usual form of two sash window which because of the relative movability of the parts was difficult or impossible to seal. It involves a structure of window where the movable sash is hinged rather than slidably mounted so that the counter-weight systems and side weight boxes in a casement are not needed. The elimination of these parts makes it possible to provide for complete structure and assembly of the window at a mill.

The double pane here employed will be seen to be a decided improvement over the practice of attaching storm sash such as practiced in the prior art. Here the second pane is inserted right into the frame of the window and removably held by a simple structure. The bottom hinged sash is also of great advantage in that it permits directing a ventilating draft either directly into the room, by complete opening of the sash, or any amount of draft may be directed upward into the room by partial opening of the sash and holding in this position by any suitable means.

The invention also contemplates the placing of a permanent window screen over the movable sash by affixing the same to immovable parts of the window frame.

In the old type of French window the window screen was required to be placed inside which was unsightly and impractical in that it required opening the screen to change the adjustment of the window.

As before mentioned one of the most attractive features of the present invention is the small amount of work required to insert the window into a wall opening. In usual practice a great amount of the construction of a window is left to be finished after the casement is attached to the wall. In the present device all that need be done at the building site is the insertion of a completed structure into a wall opening, caulking the space around the structure, and attaching inside and outside retainers and trim. The small number of operations required very materially reduce the danger of damage to the window as those operations which are required are extremely simple and do not require any great amount of skill.

Referring now to Figures 1 and 2 the window is designed for insertion into an opening left in the wall 10. On the inner side of the wall 10 is placed a strip 11 entirely around the window opening and plaster 12 added to the level of the strip 11. On the outside is placed a sheathing 13 over which any desired siding 14 such as stucco, or the like, is placed. This is the condition of the wall before the insertion of the window. As completed at the mill the window comprises a frame having a top piece 15, side pieces 16 and a sill 17. In this frame are inserted the casements. The upper casement which is fixed has an upper cross bar 18, a lower cross bar 19 of special construction, and opposite side bars 20. The top bar 18 and side bars 20 are fixed in the window frame. On its outer face the upper casement structure has a recess formed for the reception of a pane of glass 21 which is held in the recess by means of putty or the like 22. On its inner face a deeper recess is provided to receive the sub-frame 23 which carries the second window pane 24 holding it by means of spring clips 25 or the like. The frame is held in the fixed structure by means of fixed pins 27 along its lower fixed edge, and spring pins 28 along its upper edge, each set of pins fitting into suitable openings made in the fixed structure.

To hold the lower movable sash a block 29 is placed across the sill 17 and serves to hold the

fixed side of the hinge 30. The movable sash then includes the frame with a top bar 31, bottom bar 32 and side bar 33. As in the fixed upper sash the outer face of this frame is recessed to hold a window pane 34 by means of putty or the like 35, and the inner face is recessed to hold the removable window pane 36 carried in the frame 37 by means of these spring clips 38. Extending between the block 29 and the lower bar 19 of the fixed sash is a fixed window screen 39 which completely covers the movable sash. The screen is held in place by means of the trim 40 around its outer edge.

The movable sash is weather stripped around its edges. At its upper edge this weather stripping is accomplished by a fillister joint between the lower bar 19 of the fixed sash and the upper bar 13 of the movable sash. In the angle of the joint is placed the weather strip 41 completely to seal the upper edge when the window is closed. At its lower edge the movable sash is provided with a similar joint with the fixed block 29 and a like weather strip 41 is placed in this joint. At its opposite sides the lower sash fits into fillistered or rebated joints with the side strips 42 placed against the sides 16 of the window frame. In the joint between the strips 42 and the sides 33 of the movable sash is placed the weather strip 41 similar to the ones used at the upper and lower edges of the sash.

The movable sash is held in closed position by means of the lock 43 one member of which is fixed to the upper sash and the other to the lower in a well known manner.

On the window frame inside of the two sashes just described is placed a top retaining strip 44, a bottom retaining strip 45 of special structure, and opposite side retaining strips 46.

The structure of window described up to now is completely finished at the mill and it is this window which is carried to the building site for insertion into a wall opening. When the window is to be inserted the sill 17 is set on the lower edge of the opening and the window swung into position. At its outside the window is held in position by means of the stop 47 across its upper edge 15, and opposite side stops 48 extending over its side pieces 16 and the strips 42 of the lower sash. The sill 17 is secured at its outer edge by means of a strip 49 secured to the wall and fitting up inside a groove running across the under side of the sill. The spaces between the casement frame and the wall are now caulked with some suitable filling material 50. After the caulking operation inner stops 51 are positioned around the edges of the frame to hold the window against inward movement. Around the edges of the stops any suitable ornamental moulding 52 may be placed according to the decorative effect desired. The bottom retainer 45 has a tongue thereon for supporting an inner sill 53 which extends across the bottom of the window. The inner sill 53 is additionally supported by the cleat 54 fastened to the inside stop 51 across the bottom of the window.

On the outside of the wall an ornamental moulding 55 is usually placed to complete it for the sake of ornamenting the window. This strip may be placed before or after the window is inserted.

It will, therefore, be seen that the only opera-

tions required to attach the window to its wall opening are those which involve only the simplest type of carpentry. It is only necessary to secure certain stops, to caulk the top, bottom and sides and complete the operation by placing further stops over the caulked joints and if desired add an ornamental moulding. There are in these operations no steps which involve handling the window insert itself so that the risk of damage to this member is very slight. In addition to that the insertion may be made in the minimum of time and may be after all other building operations are completed.

The movable sash may now be adjusted to give any desired ventilating effect limited by the completely open position shown in dotted lines in Figure 1 and any desired means may be employed to hold the window in position intermediate of this and the closed position. For cleaning the windows the removable frames and inner panes may be snapped out of the sash frames by pulling the removable frame which will cause the spring bolts 28 to retract, the lower movable sash thus being completely available on all four sides of its glass for cleaning operations. The fixed sash has three sides of the glass available and the third side must be reached from without the building. Of course it will be understood that in case such a course becomes desirable the upper sash may be hingedly secured like the lower.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

What is claimed is:

1. A window comprising a frame including upper, lower and opposite side members, horizontal and vertical rabbeted strips secured to said first members, a screen secured to the outer sides of said strips, a rabbeted sash frame engaging the rabbeted portion of said strips, means hingedly securing said sash frame for inward swinging movement, an outer window pane fixed to said sash frame, said sash frame having an inner rabbeted portion inwardly of said outer pane, a second sash frame engaging in the inner rabbeted portion of said sash frame, and means removably securing said second sash frame in said inner rabbeted portion.

2. A window comprising a frame including upper, lower and opposite side members, horizontal and vertical rabbeted strips secured to said first members, a screen secured to the outer sides of said strips, a rabbeted sash frame engaging the rabbeted portion of said strips, means hingedly securing said sash frame for inward swinging movement, an outer window pane fixed to said sash frame, said sash frame having an inner rabbeted portion inwardly of said outer pane, a second sash frame engaging in the inner rabbeted portion of said sash frame, means removably securing said second sash frame in said inner rabbeted portion, and yieldable means carried by said first sash frame in the inner rabbeted portion thereof engageable with said second sash frame.

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