

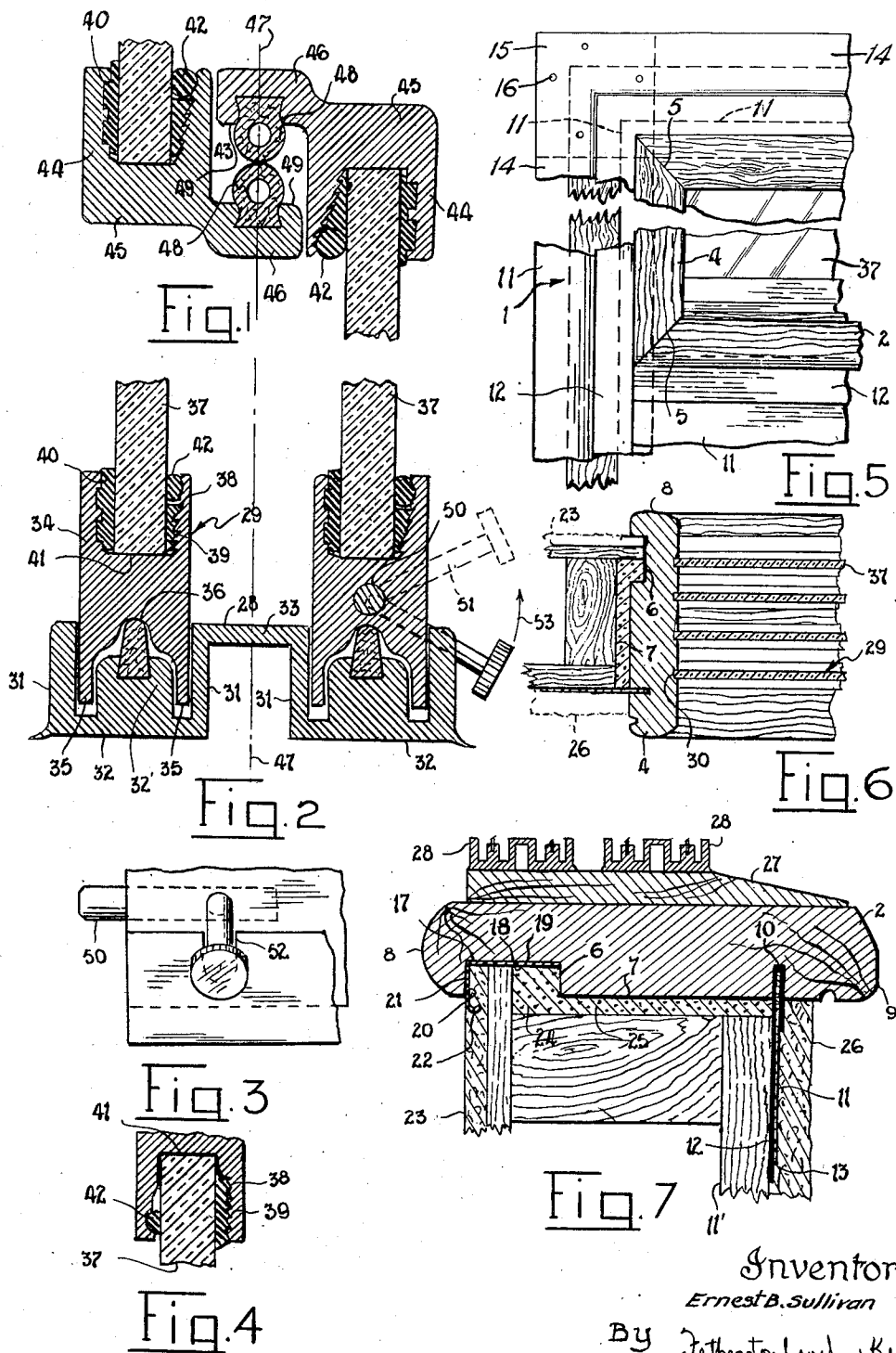
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WINDOW FRAME CONSTRUCTION

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## WINDOW FRAME CONSTRUCTION

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3 Claims. (Cl. 20—11)

My invention relates to new and useful improvements in window frames and sliding windows therefor, the principal object and essence of my invention being to provide a window frame which can readily be set in place within the wall of the building, and which includes a continuous stop strip therearound adapted to seal completely the frame to the wall opening.

A further object of my invention is to provide a frame in which the cross-sectional configuration of the four members making up the frame is similar, thereby permitting the members to be mitred together at the corners, thereby making an economical window frame.

Yet another object of my invention is to provide a device of the character herewithin described which is particularly adapted for use with horizontal sliding window sashes, it being only necessary to secure the rails to the frame whereupon the window sashes are mounted ready for use.

A still further object of my invention is to provide a device of the character herewithin described which includes a novel vertical junction between adjacent sliding sashes which not only is positive in action, but includes resilient means on each sash adapted to register one with the other, thereby effecting an efficient vertical seal therebetween.

A yet further object of my invention is to provide a device of the character herewith described which includes a relatively simple lock to prevent the windows being moved or opened by intruders and the like.

With the foregoing objects in view, and such other objects and advantages as will become apparent to those skilled in the art to which this invention relates as this specification proceeds, my invention consists essentially in the arrangement and construction of parts all as herein-after more particularly described, reference being had to the accompanying drawings in which:

Figure 1 is a fragmentary, horizontal section of the junction between two adjacent sliding sashes.

Figure 2 is a fragmentary vertical section of one of the sash rails together with portions of an inner and outer sash in position.

Figure 3 is an enlarged fragmentary front elevation of the lock stop device.

Figure 4 is an enlarged fragmentary section of part of one of the window sash frames showing an alternative method of securing the glass therewithin.

Figure 5 is a fragmentary front elevation of part of my window frame showing a portion of a sliding sash there-within.

Figure 6 is a fragmentary cross-sectional view of one side member of the frame and window sashes, and is substantially a plan view of Figure 5.

Figure 7 is an enlarged fragmentary vertical section through the sill frame member of the frame, together with a pair of sash rails in situ, and showing the frame in position upon a part of the wall of the building.

In the drawings like characters of reference indicate corresponding parts in the different figures.

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Proceeding first to describe the window frame collectively designated 1 and shown in Figures 5, 6 and 7, it will be seen that it consists of a rectangular frame including a still frame member 2, a top frame member 3 and a pair of side frame members 4, one of which only is shown.

The cross-sectional configuration of these members is best shown in Figures 6 and 7, and it will be seen that this cross-sectional configuration is similar for all of the four sides of the frame. This not only simplifies manufacture, but permits the corner joints 5 to be mitred together, thus making a very strong sound frame construction. Each of the members 2, 3 and 4 are provided with a relatively wide, open, rectangular recess 6 within the outer surface 7 and adjacent the inner edge 8 thereof. Also formed upon the outer surface of these members but adjacent the outer edge 9 thereof is a slot 10 adapted to receive a planar metal strip 11 which constitutes a stop strip. These metal strips are provided with moisture repelling material such as building paper 12 wrapped around the strip which is then held within the slot 10 by friction. It will be seen from Figure 7 that the stop strip 11 extends beyond the outer surface 7 of the member and terminates at a point 13. Due to the symmetrical construction of the frame, the ends 14 of adjacent strips 11, over-lap at the corners 15 thereof, and may be joined together by spot welding 16 or similar means, thus forming a continuous stop strip around the entire window frame, which makes an efficient seal against the ingress of moisture.

A metal screed 17, having a right angular cross-sectional configuration, is adapted to be positioned within the recesses 6 so that one flange 18 thereof bears against the inner surface 19 of the recess, and the other flange 20 bears against the outer wall 21 of the recess, as clearly shown in Figure 7. The flange 20 extends beyond the surface 7 of the frame members and terminates in a curved end 22 which acts as an efficient plaster key for the interior finishing plaster 23.

Figures 5, 6 and 7 show details of the mounting of the frame within the wall opening, and it will be observed that a space 24 is provided between the members and the edges of the wall opening within which insulation 25 may be placed. Furthermore, exterior stucco 26 may be placed on the outer wall thereby covering and sealing the stop strip 11.

Upon the sill frame member 2, a run-off board 27 is secured, said run-off board being adapted to carry a pair of sash rails 28 within which sliding sashes collectively designated 29 may run. Similar sash rails (not illustrated) are secured to the under surface of the top frame member 3 and the side edges of these sashes are adapted to register within slots 30 formed within the side members 4 as shown in Figure 6. Figures 1 to 4 inclusive show details of the configuration and construction of the sash rails and the sliding sashes, Figure 2 showing the cross-sectional configuration of the rail 28. In this embodiment, each rail consists of two pairs of side plates 31 mounted upon an up-standing shoulder base 32 and secured together by bridging strip 33, it being understood that the entire rail is preferably extruded. Each sliding sash 29 includes a base frame member 34, having a configuration shown in Figure 2 from which it will be seen that the flanges 35 are adapted to register upon each side of the base shoulder 32' and that the sash slides on a plastic runner 36 secured to and extending upwardly from the shoulder 32'.

The glass pane 37 is secured within the frame member 34 by means of a relatively hard compressible locking wedge 38 having barbs 39 engaging within corresponding grooves in the frame, said wedge 38 forcing the glass against a non-hardening semi-adhesive and sealing strip 40 within the other side of the glass recess 41. Finally

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a flexible locking bead 42 is inserted thereby preventing the glass from tipping within the recess 41. Figure 4 shows an alternative construction which is very similar, but cheaper to manufacture.

The sliding windows are designed to be used in pairs or more and therefore a seal has to be provided at the vertical junction 43 between adjacent windows when same are closed. In this embodiment, the vertical inner sides 44 of adjacent sashes are provided with members 45 having an off-set vertical flange 46 formed integrally therewith, these flanges overlying the centre line 47 of the rails 28. These off-standing flanges are adapted to engage one with the other when the windows are closed, as clearly shown in Figure 1, and in order to provide an efficient seal therebetween resilient buffers 48 are set in the inner surfaces 49 of the flanges 46, said buffers adapted to engage one with the other when the windows are closed, thus sealing off this vertical junction effectively.

It is also desirable to prevent the windows from being opened by intruders and the like, and in this connection a shot bolt 50 is provided within the lower sash frame member 34, said bolt having an off-standing portion 51 extending through an aperture (not illustrated) in the member 34, and adapted to engage a recess 52 formed in the side wall 31 of the rail. Therefore when in the down position, as shown in Figures 2 and 3, the window cannot be moved sideways at all until the portion 51 is rotated in the direction of arrow 53 to the position shown in phantom in Figure 2.

Finally it should be mentioned that the window frame 1 can be secured to the wall opening by means of nails (not illustrated) extending through the blind stop 11 into the sheathing 11', thus holding the frame securely in position.

Since various modifications can be made in my invention as hereinabove described, and many apparently widely

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different embodiments of same made within the spirit and scope of the claims without departing from such spirit and scope, it is intended that all matter contained in the accompanying specification shall be interpreted as illustrative only and not in a limiting sense.

What I claim as my invention is:

1. A frame for windows and the like comprising in combination an open rectangular frame adapted to be secured within the wall of a building, said rectangular frame including a sill frame member, side frame members, and a top frame member, secured together at the corners thereof, each of said members having a relatively wide, open, continuous, rectangular recess formed on the outer surface thereof and adjacent the inner edge thereof, and a slot also formed on the outer surface adjacent the outer edge thereof, a planar stop strip frictionally held in said slot and extending outwardly therefrom, each strip on each of said members overlapping at the ends thereof and being secured by welding to form a continuous stop strip around said frame, and a metal screed adapted to be positioned within said recess and extending therefrom.

2. The device according to claim 1, which includes a layer of moisture repelling material lapped around said stop strip and being secured within said slot.

3. The device according to claim 2, in which said metal screed is right angular when viewed in cross-section, one flange of said screed adapted to register against the inner surface of said recess, the other flange of said screed resting against the outer wall of said recess and extending therefrom, and a curved edge on said last-mentioned flange adapted to act as a plaster key.

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