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WEATHER STRIPPING

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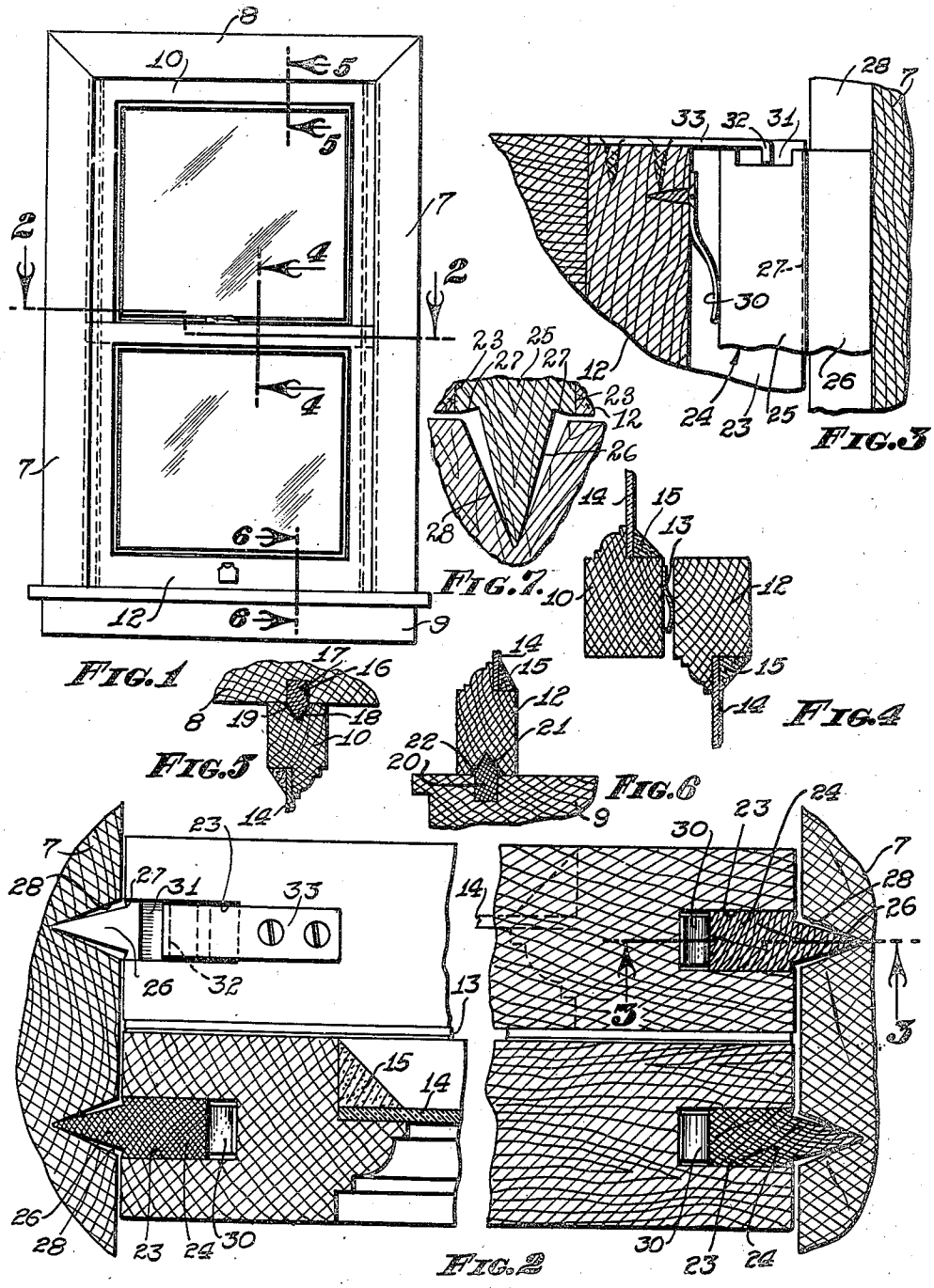


FIG. 1

FIG. 2

FIG. 3

FIG. 4

FIG. 5

FIG. 6

FIG. 7

INVENTOR.
HOWARD H. TURNER
BY Carlos G. Stratton
ATTORNEY.

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WEATHER STRIPPING

Howard H. Turner, Inglewood, Calif., assignor of twenty-four and one-half per cent to C. E. Joslin and twenty-four and one-half per cent to M. E. Joslin, both of Inglewood, Calif.

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7 Claims. (Cl. 20—68)

My invention relates to weather stripping and an important object of the invention is to provide weather stripping that will eliminate sash balances and parting beads.

Another object is to provide weather stripping that will form its own seat, in order to make a better seal between the sashes and the jamb.

The invention also comprises novel details of construction and novel combinations and arrangements of parts, which will more fully appear in the course of the following description.

In the drawing, like reference characters designate similar parts in the several views.

Figure 1 is an elevation of a double-hung window embodying the present invention.

Figure 2 is an enlarged, broken section taken on the offset line 2—2 of Figure 1.

Figure 3 is a section taken on the line 3—3 of Figure 2.

Figure 4 is an enlarged section taken on the line 4—4 of Figure 1.

Figure 5 is an enlarged section taken on the line 5—5 of Figure 1.

Figure 6 is an enlarged section taken on the line 6—6 of Figure 1.

Figure 7 is an enlarged fragmentary detail sectional view.

Referring more in detail to the drawing, the reference numeral 7 designates the jambs of a window. Figures 8 and 9 respectively indicate the lintel and sill of the window. Sashes 10 and 12 are slidable in the frame. Between the frames of the two sashes, at their adjacent sides when the window is closed, is a flat spring 13 which extends from side to side of the sashes. This flat spring tends to maintain the sashes tight in their closed position.

Window glass is indicated at 14 and putty at 15 in the several views.

The lintel 8 is routed to provide an angular groove 16 in which is fitted a weather strip 17 having a correspondingly shaped base. The strip 17 has a ridge 18 that is V-shaped in section, which fits in a correspondingly shaped groove 19 in the upper member of the sash 10. The recess 19 is of a wider angle than the angle of the ridge 18. The sill 9 is similarly routed to receive a weather strip 20 that has a V-shaped ridge 21 that fits in a correspondingly shaped recess 22 in the lower member of the lower sash 12. The recess 22 is of a wider angle than the angle of the V-shaped ridge 21.

The sashes have routs 23 extending lengthwise of their side members. Weather strips 24 are movable inward and outward in the routs 23. The strips comprise base members 25 that are substantially rectangular in cross section and have edge members 26 that are V-shaped in cross section. Shoulders 27 along the outer edges of the body member 25 and at the inner sides of edge member 26 are at right angles to the faces of the edge member 26 and not at right angles to the side faces of body 25 of the strip, to produce swirling motion of air that blows in between the sashes and the frame.

The jambs 7 have recesses 28 that are wider angled than the angle of the edge members 26. The mouth of the recess 28 is preferably narrower than the width of the rout 23, as best shown in the upper right hand portion of Figure 2, to allow the shoulders 27 to close the recesses 28 as the edges 26 become worn.

The weather strips 17, 20 and 24 are preferably of harder wood than the sashes 10 and 12, and jambs 7 respectively, in order that the harder wood may form its own seat in the softer wood.

Flat springs 30 behind the weather strips 24 tend to urge the latter into the recesses 28, to hold the sashes in adjusted positions without balances and to tend to prevent rattling of the sashes. Ends of the weather strips 24 are notched, as shown at 31, to receive the hooked end 32 of a plate 33 which is bolted to upper and lower faces of the sashes. Where the recess 23 does not extend the full length of the sash, the plate 33 may be omitted at the inner end of the weather strip. The hooked plates eliminate vertical movement of the weather stripping but permits movement of same inward and outward with respect to the recesses in the jambs.

While I have illustrated and described what I now regard as the preferred embodiment of my invention, the construction is, of course, subject to modifications without departing from the spirit and scope of my invention. I, therefore, do not wish to restrict myself to the particular form of construction illustrated and described, but desire to avail myself of all modifications which may fall within the scope of the appended claims.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. In a window, a frame part and a sliding sash part therein, one of said parts having a weather strip provided with a projecting ridge that is angular in cross section and the other part having an angular recess that is of a wider angle than the angle of said ridge, means engaging the ends of the weather strip for limiting lateral movement of the weather strip and preventing lengthwise

displacement thereof in all positions of the sash in the frame, and resilient means tending to move the weather strip in a direction that the projecting ridge seats in the angle of the recess, the wider angle of the recess preventing interference of the sides of the recess with the sides of the strip.

2. In a window, a frame part and a sash part therein, one of said parts having a weather strip provided with a projecting portion and a shouldered portion at the inner side of said projecting portion and the other part having a recess into which said projecting portion extends, the shouldered portions being arranged opposite the recess and being wider than the recess, and resilient means normally tending to move the projecting portion of the weather strip into the recess.

3. In a window, a frame part and a sash part therein, one of said parts having a weather strip provided with a projecting ridge that is angular in cross section and the other part having an angular recess, the strip having a shoulder adjacent, and at right angles to, a face of the angular, projecting ridge, and resilient means tending to move the weather strip in a direction that the projecting ridge seats in the angle of the recess.

4. In a window, a frame part, a sliding sash part within the frame, one of said parts having a V-shaped groove, a weather strip laterally shiftable in connection with the other part and having a V-shaped rib presenting a wooden edge to slidingly seat in the groove, and spring means urging seating of the rib, the part having the groove being of softer material than the wooden edge of the rib, and the angle of the groove being wider than that of the rib whereby the edge of the latter will, in its sliding movements, wear a uniform air excluding and sash centering channel at the bottom of the groove.

5. In a window, a wooden frame part, a wooden sash part slidable therein, one of said parts having a V-shaped groove extending longitudinally along the line of sliding movement of the sash, a wooden weather strip laterally shiftable in connection with the other part and having a V-shaped rib seating in slidable relation in said groove, and spring means behind the weather strip urging said rib into the groove, the part having the groove being of softer wood than the rib of the weather strip, and the angle of the groove being wider than that of the rib whereby the latter will, in its sliding movements, wear a uniform air excluding and sash centering channel in the bottom of the groove.

6. In a window, a frame part, a sash part slidable within the frame part, one of said parts having a V-shaped groove extending longitudinally along the line of sliding movement of the sash, a weather strip laterally shiftable in connection with the other part and having a V-shaped rib seating in slidable relation in said groove, and spring means behind the weather strip urging said rib into the groove, the material in which the groove is formed being of material capable of being worn away by sliding movements of the rib in the groove, and the angle of the groove being wider than that of the rib, whereby the edge of the rib in its sliding movements will wear a substantially uniform channel in the bottom of the groove.

7. In a window, a frame part and a sliding sash part therein, one of said parts having a weather strip provided with a projecting ridge that is angular in cross section and the other part having an angular recess that is of a wider angle than the angle of said ridge, means engaging the ends of the weather strip for preventing lengthwise displacement thereof in all portions of the sash in the frame, and resilient means tending to move the weather strip in a direction that the projecting ridge seats in the angle of the recess, preventing interference of the sides of the recess with the sides of the strip.

HOWARD H. TURNER.