

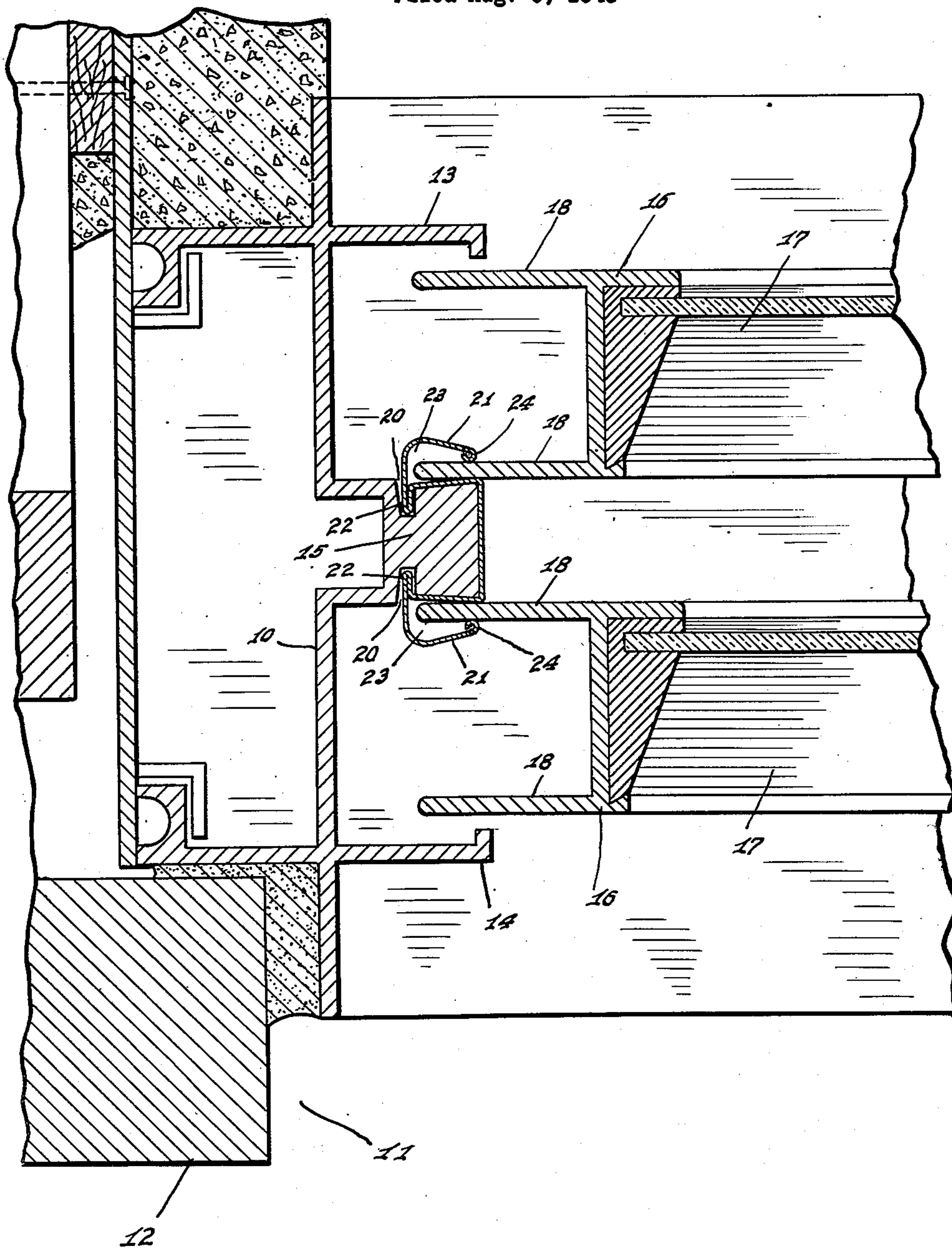
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2,628,392

WINDOW

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## UNITED STATES PATENT OFFICE

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WINDOW

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2 Claims. (Cl. 20—69)

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This invention relates to windows and more especially to windows embodying metal sash and a metal window frame. It is an object of the invention to provide for use in such a window weather stripping which will be effective to prevent passage of air between the sash and the frame. A further object of the invention is to produce a weather strip which can be applied to the window without the use of tools.

In carrying out my invention, the window sash is provided along each of its side edges with a flange; and on each side jamb of the window frame there is mounted a weather strip of resilient material formed in cross-section to provide a channel in which the adjacent sash-flange is received. The channel-forming portion of the weather strip is wider at its base than at its open side; and the normal width of the open side of the channel is somewhat less than the thickness of the sash-flange, so that when the window is assembled with the weather strip in place the latter will bear resiliently against both sides of the sash-flange to form, in effect, a double seal. When the weather strip is to be embodied in a double-hung window, each side jamb of the window frame is provided with inner and outer flanges and an intermediate rib which extend laterally into the window opening and define two spaced guideways in which the sash respectively slide. The weather strip is formed along its middle to fit over the intermediate rib of the side jamb, and along its edges to provide the channels which receive the sash-flanges. Desirably, the sides of the intermediate rib are undercut and the weather strip shaped to conform to such undercut sides, thus making it unnecessary in many situations to employ screws or other means for holding the strip in place.

In the accompanying drawing, the single figure is a fragmental horizontal section through the side jamb of a window frame and the adjacent portions of a building wall and sash.

The side jamb 10 shown in the drawing is adapted to be mounted in one side of a window opening 11 in a building-wall 12. The jamb is conveniently an extruded aluminum shape possessing inner and outer flanges 13 and 14 and an intermediate rib 15 which project in parallel relation into the window opening to define channels in which the side rails 16 of the window sash 17 are loosely received for free sliding movement. Each of the particular side rails 16 shown in the drawing embodies a pair of outwardly extending, spaced flanges 18 which overlap laterally the flanges 13 and 14 and the intermediate rib 15 of

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the side jamb 10. The construction as so far described is not new with me.

In embodying my invention in a window of the kind described, the side faces of the rib 15 are undercut to provide re-entrant portions. In the particular structure shown, such undercut portions comprise longitudinally extending grooves 20 located intermediate the horizontal extent of the rib. The weather strip 21 which is employed in association with the intermediate rib 15 is conveniently formed of flat strip stock having its center portion shaped in cross-section to fit over the rib 15 and along the side faces thereof. Opposite grooves 20, the material of the strip is bent inwardly and then doubled back on itself to form flanges 22, which are received within the groove 20. The side edge portions of the strip continue outwardly from the flanges 22 and are bent to extend in opposed relation to the sides of the rib 15 to define channels 23 in which the adjacent sash-flanges 18 are received. The material of which the weather strip is formed is sufficiently resilient in character to permit the elastic deformation required to mount the strip on the rib 15. Longitudinal movement of the strip is prevented, either by its resilient grip on the rib 15, by engagement of its ends with the top and bottom members of the window frame, or by other means.

In order to secure line-contact of the weather strip with the sash-flanges 18, and thus to increase the effectiveness of the seal provided, the open side of each channel 23, through which the associated sash-flange projects, is constructed, and the side faces of the rib 15 and the strip-portions overlying those side faces converge toward the grooves 20. Desirably, the open side of each channel 23 has a normal width slightly less than the thickness of the associated flange 18 so that the flange will be resiliently gripped by the material of the weather strip to form an effective seal against both faces of the sash-flange. The extreme edges of the strip 21 may be rolled inwardly to form a bead 24 to improve appearance and to provide a better bearing surface for contact with the sash-flange.

I claim as my invention:

1. In a double-hung window, a frame having side members provided with guideways slidably receiving window sash, said guideways being separated by a frame-rib, each of said sash having a flange adjacent said frame-rib, the sides of said frame-rib being undercut and provided with longitudinally extending grooves, and a weather strip formed to fit over said frame-rib and



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against the undercut sides thereof and having edge portions embracing said sash flanges, said strip being provided with retaining ribs received in said grooves and being formed of resilient material elastically distortable permit it to be applied 5 to said frame-rib with said retaining ribs in said grooves.

2. In a double-hung window, a frame having side members provided with guideways slidably receiving window sash, said guideways being separated by a frame-rib, and a weather strip of resilient material embracing said frame-rib and having edge portions bearing resiliently against the sash, at least one side face of the frame-rib being provided with a longitudinal groove, said 10 strip having a longitudinal retaining rib received

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in said groove to retain the strip in position on the frame-rib, said strip being distortable to permit removal of the retaining rib from the groove.  
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