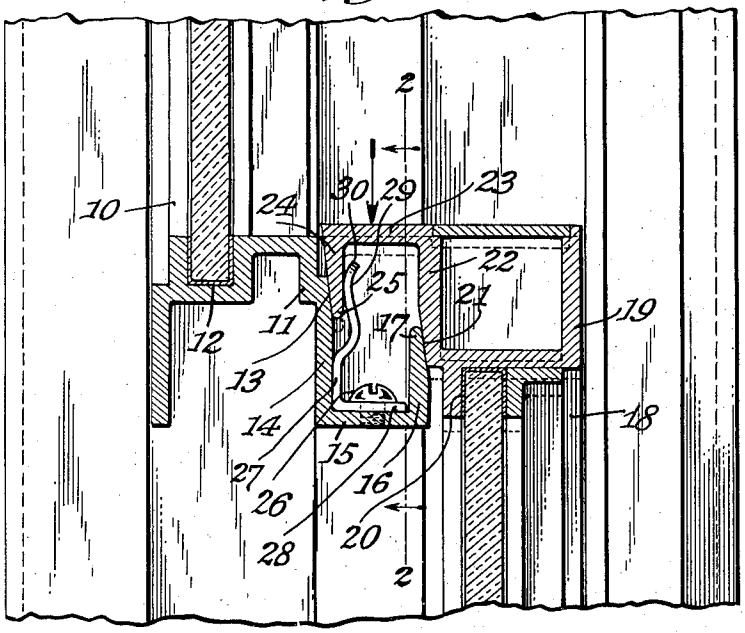
June 2, 1931. J. POLACHEK ET AL 1,808,607

CROSS RAIL SPRING CATCH FOR WINDOWS

Filed May 24, 1929

Fig. 1.



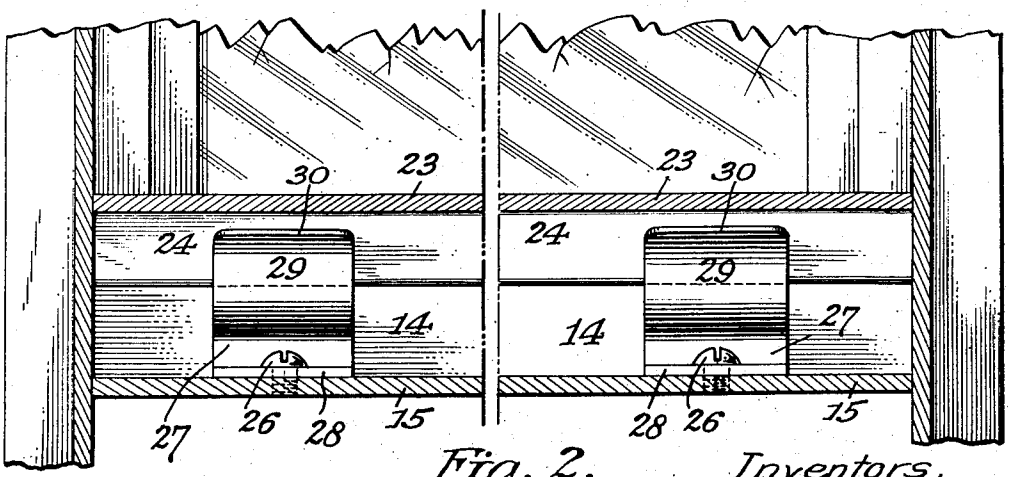


Fig. 2.

Inventors,
JOHN POLACHEK,
JULIUS A. JEPSEN and
EDMUND PEREMI,
By their Attorney Julian J. Wittal

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UNITED STATES PATENT OFFICE

JOHN POLACHEK, OF NEW YORK, AND JULIUS A. JEPSEN, AND EDMUND PEREMI, OF ELMHURST, NEW YORK, ASSIGNORS TO GENERAL BRONZE CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK

CROSS RAIL SPRING CATCH FOR WINDOWS

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In general this invention relates to improvements in devices or means for providing tight, rattleproof and dustproof engaging or contact joints between the meeting rails of sliding window sashes and more particularly to metallic window constructions.

Our present invention is especially adapted for effective operation in connection with the meeting rails of metallic window sashes, wherein said rails are formed with co-operating wedge faces capable of sliding contact when the sashes are moved vertically in their respective side channels at either side of the usual parting strip.

In the window construction to which our invention is most applicable, the meeting rails have oppositely directed extensions terminating in right angular oppositely extending wedge flanges thus forming, when the sashes are closed or nearly closed, a chamber extending from side to side of the window frame.

According to the present invention, a resilient element or elements, such as appropriately shaped leaf springs, may be placed in the above described cross chamber and preferably secured to the bottom wall thereof with the free ends of said springs projecting upwardly and properly curved to engage the wedged flange of the free rail and urge both of said flanges into intimate contact with a beveled portion of the respective opposite meeting rails to maintain a tight joint throughout their respective lengths.

The invention, however, is also applicable to windows having meeting rails of other and various cross sectional shapes or contours, as will be obvious.

We clearly illustrate our invention in the accompanying drawings which form part of this specification and in which similar reference characters are employed to designate corresponding parts in the several views, in which:

Fig. 1 is a vertical sectional elevation through the meeting rails of a metal window showing one of the resilient anti-rattling devices in operative position, the lower sash being at near its lowermost closed position.

Fig. 2 is a vertical sectional elevation longitudinally of the meeting rails, the section being taken about on the broken line 2—2 of Fig. 1.

Referring now to the drawings in detail, 10 designates the lower portion of the upper sash provided with a meeting rail 11, formed with a window glass receiving groove 12, a beveled face or portion 13, and a channel extension constituted by a side wall 14, a cross bottom wall or extension 15 and an upwardly directed flange 16, formed with a wedged edge 17.

The upper portion 18 of the lower sash is likewise provided with a meeting rail 19 formed with a window glass receiving groove 20, a beveled face or portion 21, and a channel extension constituted by a side wall 22, a cross top wall or extension 23 and a downwardly directed flange 24 formed with a wedged edge 25.

The wedged edges 17 and 25 normally intimately engage the beveled portions 13 and 21, respectively, of the relatively opposite cross rails to form air and dust proof joints, the angularity of the interengaging beveled faces being at corresponding angles, and providing two abutting surfaces of contact.

Secured, as by screws 26 or other suitable devices, preferably to the bottom wall 15 of the channel extension of the meeting rail 11, are one or more anti-rattling devices, here shown as comparatively heavy leaf springs 27, formed each with a foot portion 28, and a tongue 29 projecting upwardly and formed with an appropriate curve terminating in an outwardly directed lip 30.

The tongues 29, of the anti-rattling devices are of a length to contact with the wedged terminal 25 of the flange 24 prior to the extreme closing movement of the lower sash of the window to prevent lateral rattling movement of the meeting rails even when the windows are not quite closed.

It will be obvious by inspecting the drawings that our resilient catches 27 will prevent any easy lateral movements or rattling of both window sashes as soon as the lips 29 will engage the terminal flange 24. Therefore the sashes may be negligently left somewhat open and still be rattle proof and noise-

proof. As the sashes are fully closed our spring device will cause them to more closely press against one another so that even though the usual lock or latch device (not shown) be not engaged, the window will have been completely sealed against leakage of dust or air.

Changes and variations may be made in the arrangement, combination and construction of the parts, within the limits of the appended claims, without departing from the spirit and scope of the invention.

What we claim as new, is:

1. In a window construction a plurality of sliding sashes with meeting rails embodying contact web portions, a spring device secured to one of said rails and being adapted to engage a web of the other rail when the sashes are substantially in their closing position for drawing said sashes towards one another, said spring device being in the form of a curved leaf spring spaced from the contacting surface of the rail to which it is secured so as to receive the web of the other rail in the space so formed.

2. In a window construction a plurality of sliding sash members, meeting rails carried by the cooperating ends of said sash members, said rails being adapted to provide a tight joint, and resilient means for urging the cooperating faces of said meeting rails together when they are alined.

3. In a window construction a plurality of sliding sash members, meeting rails carried by the cooperating ends of said sash members, said rails being adapted to provide a tight joint, and resilient means carried by one of said rails for urging the cooperating faces of the rails together when they are alined.

4. In a window construction a plurality of sliding sash members, meeting rails carried by the cooperating ends of said sash members, said rails having intimately engaging bevelled faces, and resilient means for urging said faces together as the meeting rails are brought into alinement.

5. In a window construction a plurality of sliding sash members, meeting rails carried by the cooperating ends of said sash members, said rails having intimately engaging bevelled faces, resilient means carried by one of said rails, and a tapered projection carried by the other of said rails cooperating with said resilient means to force the rails together.

6. In a window construction a plurality of sliding sash members, meeting rails carried by the cooperating ends of said sash members, said rails having a plurality of pairs of intimately engaging faces to provide a tight joint, and means for urging said faces together.

7. In a window construction a plurality of sliding sash members, meeting rails carried by the cooperating ends of said sash members, said rails having two sets of intimately engaging faces with an air pocket between the two sets, and means for urging the faces of each set together.

Signed at Long Island City, in the county of Queens and State of New York, this 13th day of May, 1929.

JOHN POLACHEK.
JULIUS A. JEPSEN.
EDMUND PEREMI.