

June 2, 1931.

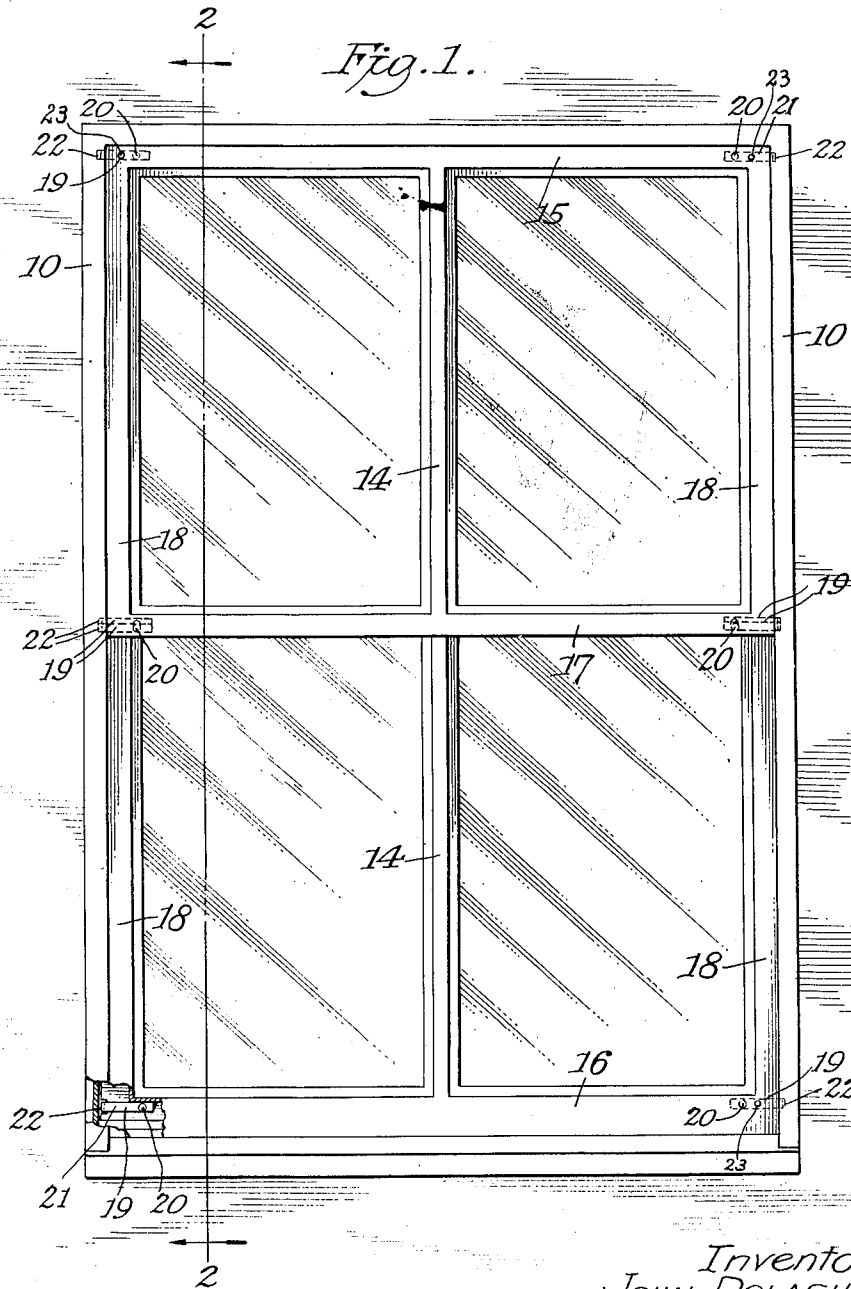
J. POLACHEK ET AL

1,808,609

FLAT SPRING ANTIRATTLING DEVICE FOR WINDOWS

Filed May 24, 1929

2 Sheets-Sheet 1



Inventors,
JOHN POLACHEK,
JULIUS JEPSEN and
EDMUND PEREMI,

By their Attorney *Julius Wirtal*

June 2, 1931.

J. POLACHEK ET AL

1,808,609

FLAT SPRING ANTIRATTLING DEVICE FOR WINDOWS

Filed May 24, 1929

2 Sheets-Sheet 2

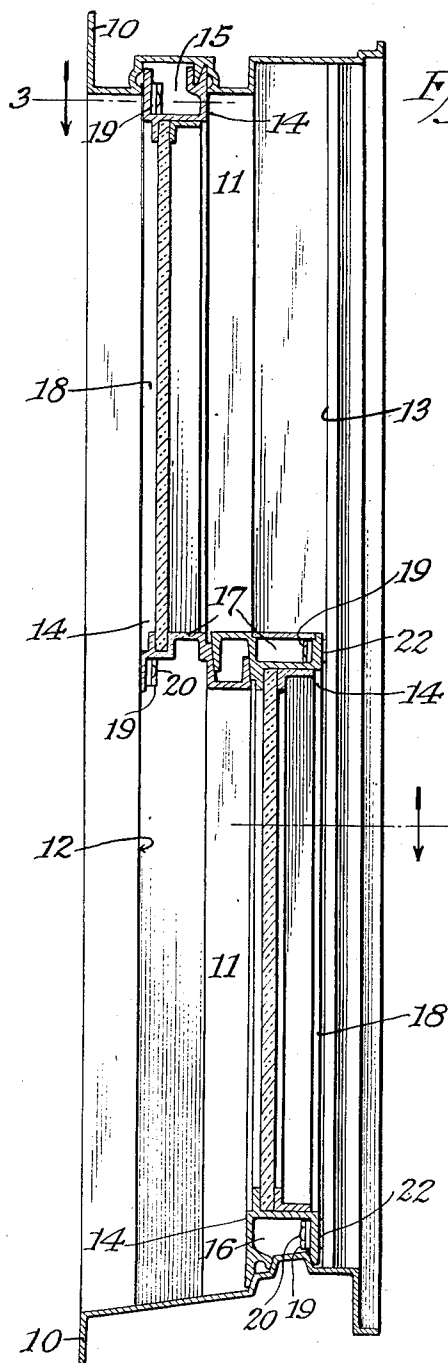


Fig. 2.

Fig. 3.

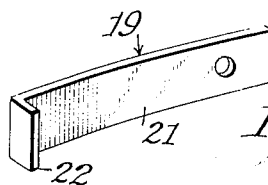
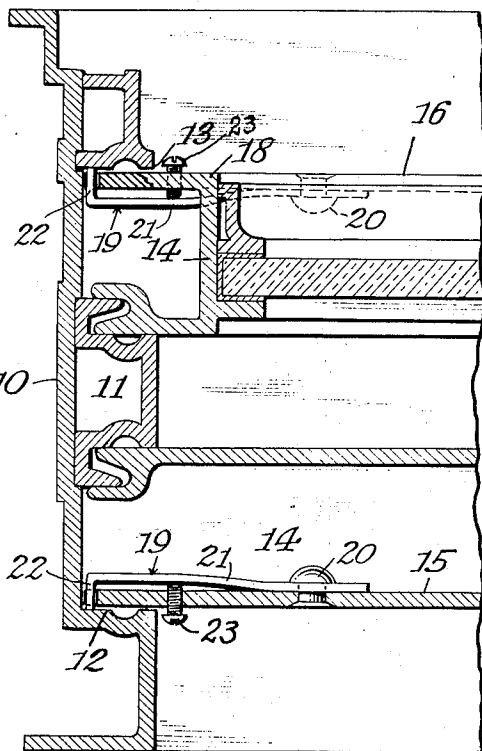


Fig. 4.

Inventors,
JOHN POLACHEK,
JULIUS JEPSEN and
EDMUND PEREMI,
By their Attorney *Julian J. Wittel*

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 LONG ISLAND CITY, NEW YORK, A CORPORATION OF NEW YORK

FLAT SPRING ANTIRATTTLING DEVICE FOR WINDOWS

Application filed May 24, 1929. Serial No. 365,611.

This invention relates to windows and directly to means whereby the movable sashes of windows may be prevented from rattling or moving laterally in their frames.

5 Our invention may be employed in connection with any window construction with slight changes of form, but is especially applicable to the modern bronze or metallic windows now in general use in office and
10 bank buildings and other better class structures.

In these metallic windows there is more or less lateral movement of the sashes in the frames, sometimes causing rattling noises
15 not pleasant to the ear; and further, no matter how carefully the frames and sashes are assembled there often occurs faulty interengagement of the fixed parts and the sashes allowing cold air and dust to enter
20 a room.

It is the object of our present invention to provide means concealed within the sash structures whereby said sashes are always
25 urged into intimate engagement with appropriate sealing contact faces on the opposite sides of the usual parting strip located centrally of the window frame and stationary therewith.

According to our invention, we preferably
30 arrange a number of resilient devices horizontally within the different cross rails of the sashes and secure them to the inner faces of the outside walls of said rails. The said devices being preferably formed with
35 contact extensions having yielding thrust engagement with the inner faces of the usual outer and inner guide strips or shoulders, thus acting to urge the inner faces of the sash stiles against the parting strip to
40 form a sealed joint therewith to exclude cold air and dust and to prevent rattling or lateral movements of the sash in the window frame.

45 In the drawings illustrating our invention we employ similar reference characters to designate corresponding parts throughout the several views, in which:

50 Fig. 1 is an outside elevation of a window with the elements of our invention applied in operative position, parts being broken

away to show one of said elements in full lines.

Fig. 2 is an enlarged vertical cross sectional elevation of the window, the section being about on the line 2—2 of Fig. 1.

Fig. 3 is a further enlarged horizontal cross sectional plan view through one side of the window about on the skip broken lines
55 3—3 of Fig. 2.

Fig. 4 is a detail perspective view of a
60 form of the resilient element employed.

To clearly illustrate our invention we have shown in the drawings a well known type of metallic window construction embodying a frame 10, parting strips 11, outer
65 and inner guides 12 and 13, sashes 14, an upper rail 15, a lower rail 16, meeting rails 17 and side stiles or rails 16.

To advantageously arrange the resilient elements 19, concealed within the hollow
70 rails of the window to properly function as desired, we place them in a preferably horizontal position within the opposite ends of the top, bottom and meeting rails 15, 16,
75 17 and 17 and secure the inactive ends thereof to the inner faces of the outer webs of said rails by rivets 20 or by other means.

A preferred construction of the resilient elements is shown in detail in Fig. 4 of the drawings and embodies a flat spring comprising a shank 21, perforated to receive
80 a rivet 29 and an angular bent contact extension 22. The shank 21 is preferably pre-curved in a direction opposite to the bend of the extension 22 to erect a constant yield-
85 ing thrust on the inner faces of the guides 12 and 13 against which the extensions 22 of the spring shanks 21 operatively rest to force the window sashes inwardly against the parting strip 11 to provide an air and
90 dust-proof seal and to prevent rattling of the parts in any position, whether the sashes be closed or opened to any degree.

We, finally, may also employ a regulating
95 set screw 23, in connection with our resilient elements 19, being threaded through an outer web of the rail and engaging the element 19, as shown, such set screw being for the purpose of adjusting the tension
100 of the anti-rattling device to relieve the

extreme pressure on metal to metal contact and still have sufficient strength to withhold the wind pressure or any other jar occurring to the window. By means of the application of the adjusting screw the tension of the spring may be regulated for easy or heavier operation of the window, as may be desired.

It is also especially remarked that the anti-rattling device in its preferred embodiment is entirely concealed between the sash and jamb parts of the window.

It is understood that changes and variations may be made in the parts of the invention and we reserve our rights to such changes and modifications as are within the spirit of the invention and the scope of the annexed claims.

For instances, one modification is to insert the flat spring vertically in the vertical stiles of the sashes with the said contact extensions traveling broadside against the said guide faces instead of edgewise.

What we claim as new, is:

1. In a window embodying a frame having outer and inner guides, a centrally positioned parting strip, and sashes having upper, lower and meeting rails and side stiles, resilient elements arranged horizontally within the said rails of the window and having thrust engagement with the inner faces of said guides to move the sashes into intimate contact with said parting strip.

2. In a window embodying a frame having outer and inner guides, a centrally positioned parting strip, and sashes having upper, lower and meeting rails and side stiles, resilient elements arranged horizontally within the said rails of the window and having thrust engagement with the inner faces of said guides to move the sashes into intimate contact with said parting strip, said rails having contact webs and said resilient element being secured to the inner faces of outer webs on said rails.

3. In a window embodying a frame having outer and inner guides, a centrally positioned parting strip, and sashes having upper, lower and meeting rails and side stiles, resilient elements arranged horizontally on the said rails of the window and having thrust engagement with the inner faces of said guides to move the sashes into intimate contact with said parting strip, said resilient elements comprising spring devices having bent contact extensions and pre-curved shanks.

4. In a window embodying a frame having outer and inner guides, a centrally positioned parting strip, and sashes having upper, lower and meeting rails and side stiles, resilient elements arranged horizontally on the said rails of the window and having thrust engagement with the inner faces of said guides to move the sashes into

intimate contact with said parting strip, said resilient elements comprising leaf springs with angularly bent terminals having their free ends in contact with said guides.

5. In a window, having a vertically sliding sash with horizontal rails, and a guide for said sash, resilient elements horizontally arranged on said rails and engaging said guide to permanently urge the sash in a desired lateral direction.

6. In a window, having a vertically sliding sash with horizontal rails, and a guide for said sash, resilient elements horizontally arranged on said rails and engaging said guide to permanently urge the sash in a desired lateral direction, said rails having webs and said resilient element being secured to the inner faces of outer webs on said rails.

7. In a window having a vertically sliding sash with horizontal rails, and a guide for said sash, resilient elements horizontally arranged on said rails and engaging said guide to permanently urge the sash in a desired lateral direction, said resilient elements comprising leaf springs with angularly bent terminals.

8. In a window embodying a frame having outer and inner guides, a centrally positioned parting strip, and sashes having upper, lower and meeting rails and side stiles, resilient elements arranged on said rails of the window and having thrust engagement with the inner faces of said guides to move the sashes into intimate contact with said parting strip, said rails having contact and outer webs and said resilient element being secured to the inner faces of said outer webs on said rails to thrust said contact webs into intimate contact with the faces of the said parting strip.

9. In a window embodying a frame having outer and inner guides, a centrally positioned parting strip, and sashes having upper, lower and meeting rails and side stiles, resilient elements arranged on said rails of the window and having thrust engagement with the inner faces of said guides to move the sashes into intimate contact with said parting strip and tension members to adjust the tension of the resilient elements and regulate the contacting of the said rails with the said parting strip.

10. In a window embodying a frame having outer and inner guides, a centrally positioned parting strip, and sashes having upper, lower and meeting rails and side stiles, resilient elements arranged on said rails of the window and having thrust engagement with the inner faces of said guides to move the sashes into intimate contact with said parting strip and tension members to adjust the tension of the resilient elements and regulate the contacting of the said rails

with the said parting strip, said tension members being in the form of a set screw for each resilient element threaded through a portion of the rail and resting on the
 5 resilient element.

11. In a window embodying a frame having outer and inner guides, a centrally positioned parting strip, and sashes having upper, lower and meeting rails and side
 10 stiles, resilient elements arranged horizontally within the said rails of the window and having thrust engagement with the inner faces of said guides to move the sashes into intimate contact with said parting strip,
 15 said resilient elements being concealed from view.

12. In a window embodying a frame having outer and inner guides, a centrally positioned parting strip, and sashes having
 20 upper, lower and meeting rails and side stiles, resilient elements arranged on said rails of the window and having thrust engagement with the inner faces of said guides to move the sashes into intimate con-
 25 tact with said parting strip, said rails having contact and outer webs and said resilient element being secured to the inner faces of said outer webs on said rails to thrust said contact webs into intimate contact
 30 with the faces of the said parting strip, said resilient element being concealed from view.

13. In a window construction a frame having longitudinal guide members, a sash slidable between said guide members, and
 35 resilient elements secured at one of their ends to the sash and having their free ends bent to engage certain of said guide members to force the sash against the other of said guide members.

14. In a window construction a frame having longitudinal guide members, a sash slidable between said guide members, and resilient elements secured at one of their
 40 ends to the sash and having their free ends bent to engage certain of said guide members to force the sash against the other of said guide members, the contacting edges
 45 of said elements extending longitudinally of said members.

15. In a window construction a plurality of slidable sash members having meeting rails with co-operating bevelled faces, a plurality of guides for said sash members, and resilient means carried by said meeting rails
 50 adapted to co-operate with said guides to force said bevelled faces together.

16. In a window construction a plurality of slidable sash members having meeting rails with a plurality of pairs of co-operating bevelled faces adapted to enclose an air pocket, a plurality of guides for said sash members, and resilient means carried by said meeting rails adapted to co-operate
 60 with said guides to force said bevelled faces 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.

70

75

80

85

90

95

100

105

110

115

120

125

130