No. 732,852. PATENTED JULY 7, 1903.

P. L. HEDBERG.

WEATHER STRIP FOR WINDOWS, DOORS, OR OTHER STRUCTURES.

APPLICATION FILED MAR. 13, 1903.

NO MODEL.

Fig. 1.

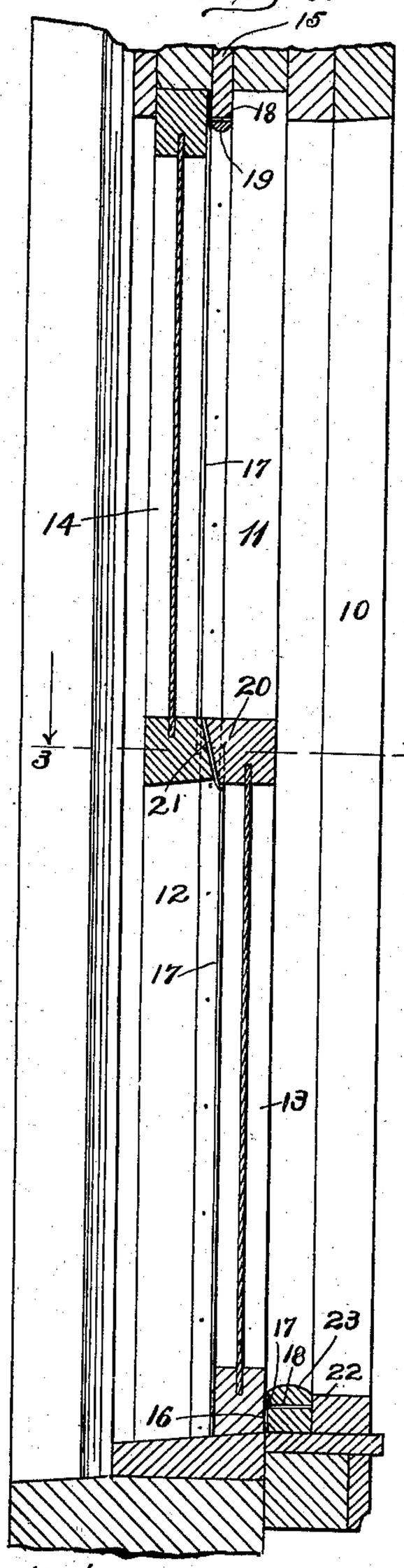


Fig. 2.

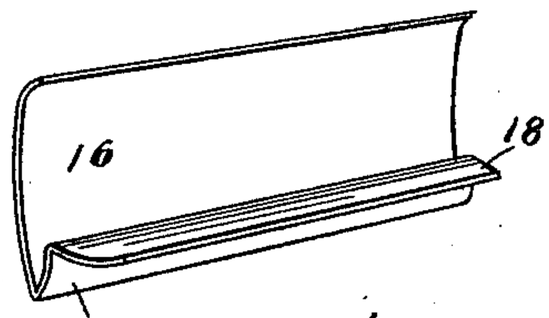


Fig. 4.

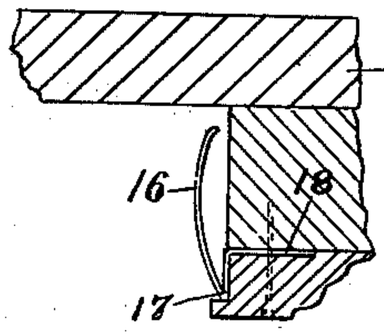


Fig. 3.

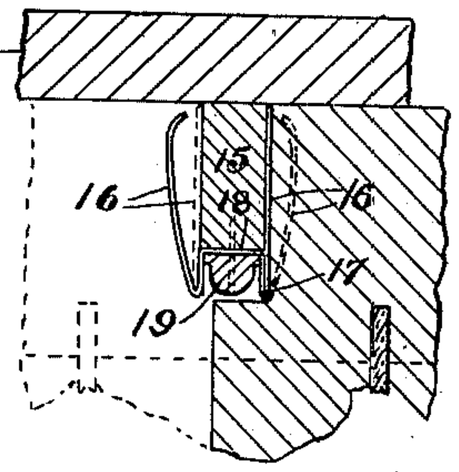


Fig. 6.

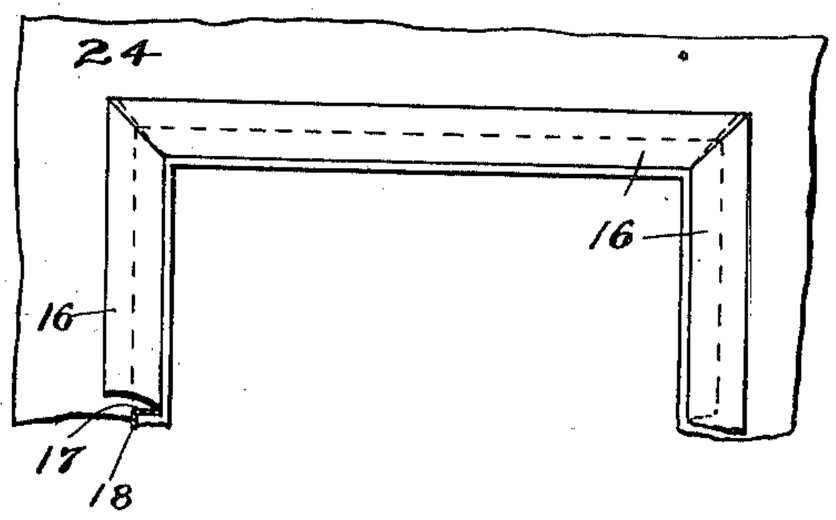
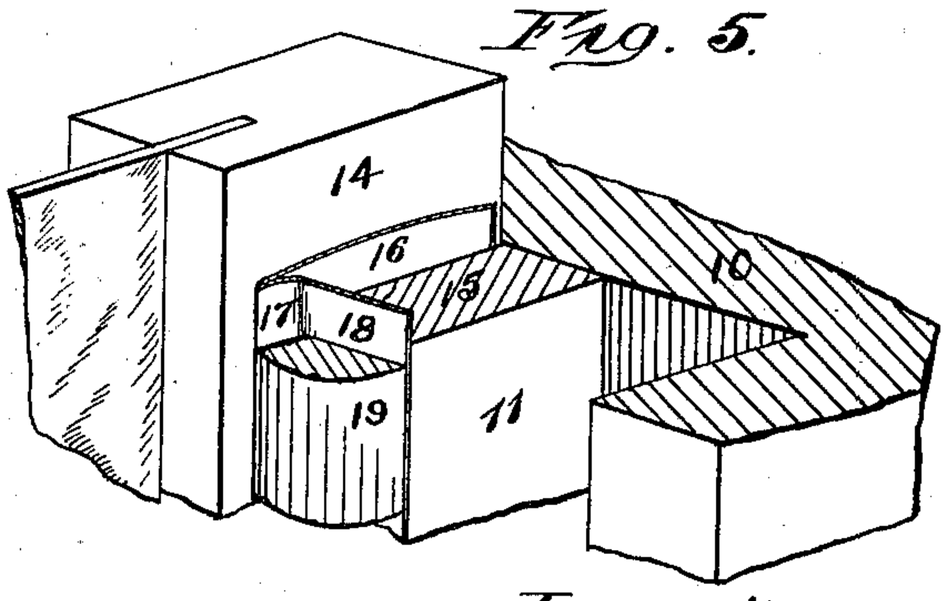


Fig. 5.



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No. 732,852. Patented July 7, 1903.

UNITED STATES PATENT OFFICE.

PETER L. HEDBERG, OF CHICAGO, ILLINOIS.

WEATHER-STRIP FOR WINDOWS, DOORS, OR OTHER STRUCTURES.

SPECIFICATION forming part of Letters Patent No. 732,852, dated July 7, 1903.

Application filed March 13, 1903. Serial No. 147,622. (No model.)

To all whom it may concern:

Be it known that I, PETER L. HEDBERG, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Weather-Strips for Windows, Doors, or other Structures, of which the following is a specification.

This invention relates to improvements in weather-strips for windows, doors, and other structures, and while it is more especially intended to be used in the construction of the windows or doors for buildings, yet it is applicable to car windows and doors, doors of ice-boxes, refrigerators, and other structures where it is desired to have the meeting edges of pieces closely joined; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The main object of the invention is to so construct the window or door as to prevent the admission of air, dust, cinders, and the like around the sashes or between their meeting-rails and around the perimeter of the door.

Another object of the invention is to provide means for the above-named purpose which shall be so located on the window-frame or door-frame as to allow the free movement of the sashes or door, yet will have a tendency to prevent the same rattling, as well as to make them substantially air-tight.

Other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a vertical sectional view of a window embodying my invention. Fig. 2 is a detached perspective view of a part of one of the strips employed for closing the spaces between the sashes and window-frame or between the door and its frame. Fig. 3 is an enlarged plan sectional view taken on line 3 3 of Fig. 1 looking in the direction indicated by the arrows, showing the lower sash in its normal position and illustrating the upper sash in dotted lines or removed, so as to release the spring-strip. Fig. 4 is a cross-sectional view of a portion of the window-casing, showing one of the weather-strips secured thereto. Fig. 5 is a perspective view of a portion of one side of the casing and a part of one of the sashes therein; and Fig. 6 is a front view, partly in section, of a portion in a door-frame embodying my invention.

Like numerals of reference refer to corresponding parts throughout the different views of the drawings.

The reference-numeral 10 represents a window-casing which in its general construction is of the ordinary kind—that is, it is provided with rabbets or channels 11 and 12 for the lower and upper sashes 13 and 14, respectively. These channels or runways are divided by means of parting stops or strips 15, secured to the inner surface of the frame 10, as usual.

Secured to the inner surface or rather the edge of each of the parting-stops is a weather-strip, which comprises a piece of resilient or yielding material, preferably metal, bent to form diverging members 16 and 17, the latter being narrower than the former and provided with a flange 18, which projects at substantially a right angle from the member 17, as is clearly shown in Figs. 2 to 5, inclusive, of the drawings. The weather-strips used on the parting-stop at the upper portion of the window-frame are located thereon so that the flanges 18 will rest on the inner edge of the stops 15, while the members 16 and 17 will be at the outer surface thereof, so as to impinge the inner surface of the upper sash. The weather-strips for the parting-stops at the lower portion of the window-frame are located thereon so that the members 16 and 17 will be at the inner surface of said stops, while the flanges 18 of the strips will rest on the inner edges of the stops, where they may be secured in place by means of pieces of molding 19, through which are driven small nails, which will also pierce the flanges of the weather-strips.

By reference to Figs. 2 to 5, inclusive, of the drawings it will be seen that the member 16 and flange 18 of the weather-strip are slightly curved in cross-section, so that when they are pressed by the sashes and pieces of

molding they will yield slightly and by reason of their curved shape will form absolutely tight joints between the meeting-surfaces of their respective pieces. Another advantage obtained by curving the member 16 of each of the pieces of the parting-strip is to prevent it marring the surface of the sash, as might occur if the said member were straight or flat.

As is clearly shown at 20 in Fig. 1 of the drawings, the ends of the flanges 18 of the weather-strips meet at the normal location of the meeting-rails of the sashes; but the members 16 and 17 of said strips will be disposed on opposite sides of the parting-stops, as before stated. Secured to one of the meeting-rails of the sashes is a strip 21, which extends horizontally from one side of the window-frame to the other and will serve to close the space between said rails. The inner portion of the sill of the frame is provided with an inner stop 22, on the upper surface of which the flange 18 of a weather-strip is secured by means of a piece of molding 23 or otherwise. The strip located at the bottom of the frame or on the sill thereof is of the same construction as that shown in Fig. 2 of the drawings and above described.

In Fig. 6 of the drawings I have shown a portion of a door frame or casing 24 embodying my invention, which consists in securing to the edge of the rabbet thereof the flanges 18 of the weather-strips, which are of the same construction as shown in Fig. 2 and above described, but are mitered at their corners, as shown.

In using a door-frame constructed according to my invention it is apparent that as the door is closed the member 16 of the strips will impinge its face at about its perimeter and will form a tight joint, thus excluding air, dust, and the like.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a window or door, the combination with the frame or casing having an inwardly-extending strip, of a weather-strip comprising a yielding piece bent to form two diverging members and a flange, one of said members being wider than the other and curved in cross-section, said flange being secured to the strip of the casing so that the diverging members will be located on the side thereof adjacent to the door or sashes, substantially as described.

2. The combination with a window-frame having channels for the sashes, of a parting-stop located between said channels, weather-strips each comprising a yielding piece bent to form two diverging members and a flange, one of said members being wider than the other and curved in cross-section, the said flanges being secured to the inner edge of the parting-stops so that the diverging members of the said strips will be located on the sides thereof adjacent to the sashes, substantially as described.

3. The combination with a window-frame having channels for the sashes, of a parting-stop located between said channels, an inner stop located horizontally on the sill of the casing, weather-strips each comprising a yielding piece bent to form two diverging members and a flange, one of said members being curved in cross-section, the said flanges being curved in cross-section and secured to the inner edge of the parting-stops so that the diverging members of the said strips will be located on the sides thereof adjacent to the sashes, and a weather-strip having its flange secured to the inner stop and its diverging members located at the side thereof to the lower sash, one of said members being curved in cross-section, substantially as described.

PETER L. HEDBERG.

Witnesses:
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