Oct. 17, 1939. F. KUHNE ET AL 2,176,555

METAL WEATHER STRIPPING FOR STEEL CASEMENT WINDOWS AND DOORS

Filed May 4, 1938

Fig. 1.

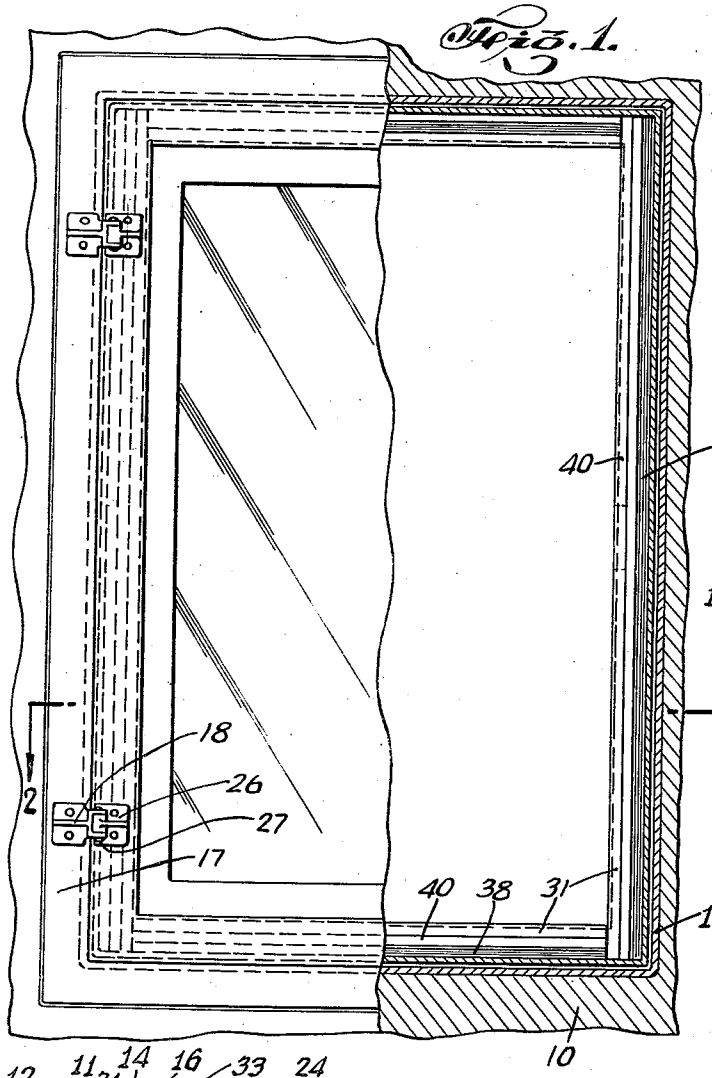
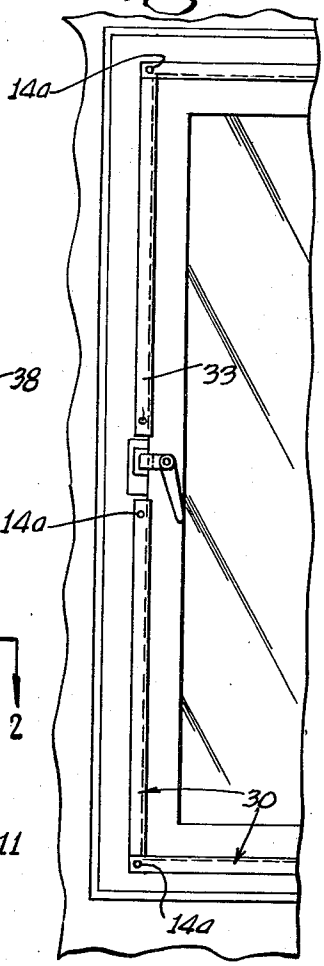


Fig. 3.



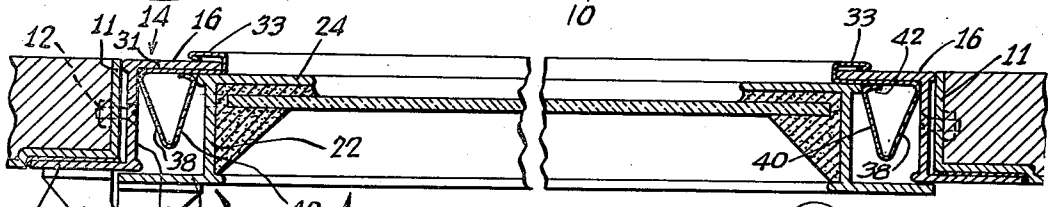


Fig. 2.

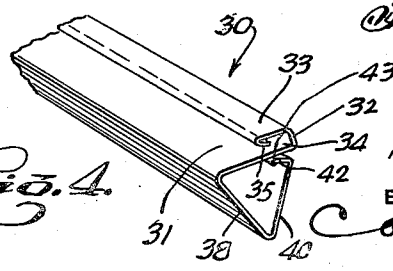


Fig. 4.

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Patented Oct. 17, 1939 2,176,555

UNITED STATES PATENT OFFICE

2,176,555

METAL WEATHER STRIPPING FOR STEEL CASEMENT WINDOWS AND DOORS

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Application May 4, 1938, Serial No. 205,948

1 Claim. (Cl. 189—65)

This invention relates to metal weather stripping for steel casement windows and doors. It is particularly directed to weather stripping which may be applied to steel casement windows or doors, and which will grip the same without the use of nails, screws or other attaching means, or the necessity for drilling holes.

An object of this invention is to provide a durable and relatively inexpensive weather stripping which shall be easy to apply, which will positively prevent drafts, and insure a thoroughly weatherproof construction when the sash is closed, and which is nevertheless practical and efficient to a high degree.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the construction hereinafter described, and of which the scope of application will be indicated in the following claim.

In the accompanying drawing, in which is shown one of the various possible illustrative embodiments of this invention,

Fig. 1 is a front, elevational view of a steel casement window provided with weather stripping, embodying the invention, and with parts in cross-section;

Fig. 2 is a cross-sectional view taken on line 2—2 of Fig. 1;

Fig. 3 is a partial, front view of the casement window in closed condition; and

Fig. 4 is a perspective view of a piece of the improved weather stripping.

Referring now in detail to the drawing, 10 designates a building wall provided with a usual metal window frame 11. Bolted to the frame 11, as by bolts 12, is an inner metal casement frame 14. Said frame 14 has top, bottom and side walls 15, perpendicular to the plane of the building wall.

Extending inwardly from the walls 15, and disposed on the inside of the window, are top, bottom and side flanges 16, disposed in a common vertical plane. There also extends outwardly from the walls 15, at the outside of the window, flanges 17 located at the top, bottom and sides of the window and contacting the outside of the building wall.

The flanges 17 carry brackets 18, to which is pivoted a window sash 20. Said sash 20 comprises a metal sash frame 21 having top, bottom and side walls 22 disposed parallel to and inwardly of the walls 15. Extending from the walls 22, on the inside of the window, are flanges 24 adapted to substantially contact the flanges 16 of the frame 14. Extending outwardly from the walls 22, and disposed at the outside of the window, are flanges 25 adapted to overlap the flanges 17. One of the flanges 25 carries brackets 26, pivoted as at 27 to the brackets 18.

The casement frame and sash described are of usual and well known construction. The weather stripping 30, embodying the invention, is secured in suitable lengths, at the inner edges of the flanges 16, as shown in the drawing. Said stripping 30 may be made of usual resilient metal weather strip material, such as stainless steel or the like materials.

The same comprises a flat wall 31, about one-half inch in width, and extending at right angles, and to one side of the plane thereof, is wall 32 about one-eighth of an inch in width. Extending from the wall 32 is a wall 33, parallel to the wall 31 and of substantially half the width of said latter wall, forming a groove 34 therewith. Extending from the wall 33, inwardly, into the groove 34, is a narrow lip 35. It will be noted that the lip 35 is inclined toward the walls 31 and 32.

Extending from the wall 31, to the other side of the plane of said wall, is a wall 38, likewise about one-half inch in width and at an angle of somewhat less than ninety degrees thereto. Extending from the wall 38, at an angle of somewhat more than forty-five degrees, and toward the wall 31, is a wall 40, likewise substantially about one-half inch in width and terminating short of said wall 31.

Extending from the wall 40, toward the walls 38 and 31, is a short wall 42, spaced from the wall 31. The wall 42 is normally inclined toward the walls 38 and 31, and extending therefrom is a relatively narrow lip 43, inclined somewhat away from the wall 31.

The weather stripping 30 is applied to the flanges 16 of the inner frame 14 by inserting the flange into the groove 34 with the wall 33 of the stripping 30 on the inside of the window, and the wall 31 contacting the outer surface of said flange.

It will be noted that the walls 38, 40, 42 and 43 of the stripping are disposed between the walls 15 and 22 of the inner frame 14 and the window sash frame 21, respectively. Upon closing the window sash, the same is adapted to engage the wall 40 and resiliently press the wall 42 against the adjacent surface of the wall 31.

The flange 24 of the casement window con-

tacts the wall 31 of the weather stripping and presses the same against the flange 16 of the inner frame 14. The weather stripping secures itself to the flange 16 due to the engagement of the lip 35 with said flange upon mounting the strip thereon.

It will be noted that the wall 42 resiliently contacts and presses against the sash frame 21 when the sash is closed, to prevent drafts from entering the house. It will be understood that the weather stripping may also be applied to casement doors.

If desired, however, the weather stripping may be fastened to the flange 16 of frame 14 by any suitable fastener as at 14a.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved, and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiment above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:

Weather stripping made of thin resilient sheet metal comprising a wall, a second wall extending to one side of the plane of said first wall, at right angles thereto, a third wall extending from said second wall, parallel to the first wall, and forming a groove therewith to receive the flange of a casement frame, a fourth wall extending from the first wall to the other side of the plane thereof, a fifth wall extending from the fourth wall toward the first wall, at an angle to said fourth wall, a sixth wall extending from said fifth wall toward said fourth wall and adapted to engage said first wall, and a lip extending from said third wall into said groove and being inclined toward said first and second walls.

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