WEATHER STRIP FOR SWINGING DOUBLE DOORS

Fig. 1.

Fig. 2.

Fig. 3.

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This invention relates to weather strips for swinging double doors, and its principal object is to prevent rain, snow or wind from entering a building through the gap between the meeting edges of swinging double doors. Usually one of the pair of such doors is provided with an astragal moulding strip, and in case both of the doors are free to be opened, this strip often interferes with the closing of one of the doors, because the door containing the strip may close first and, consequently, the other door will swing against the strip and will remain partly open. Doors of public buildings, such as schools and the like, are usually provided with door checks for automatically closing the doors, and unless care is taken in allowing the doors to close in their proper order, one is likely to be held partly open by the astragal strip.

In accordance with the present invention, I provide a pair of overlapping contacting rubber or other resilient strips along the two meeting edge portions of swinging double doors, which strips effectively prevent the entrance of rain, snow or wind through the gap between the doors and yet allow either door to be opened first or closed first. The invention consists, therefore, in weather strips for swinging double doors having overlapping contacting resilient portions secured to the meeting edge portions of swinging double doors.

It further consists in the several novel features hereinafter fully set forth and claimed.

The invention is clearly illustrated in the drawing accompanying this specification in which—

Figure 1 is a side elevation of a pair of swinging double doors with a simple embodiment of the present invention applied thereto;

Fig. 2 is a horizontal section taken on the line 2—2 of Fig. 1;

Fig. 3 is a plan of the meeting edge portions of two doors with the weather strips applied thereto and showing the same upon an enlarged scale; and

Fig. 4 is a perspective view of a fragment of one of the strips.

Referring to said drawing, the reference character 5 designates a door frame upon which a pair of swinging double doors 6 and 7 are carried by hinges 8. As usual, the doors swing outward in the direction of the arrows a in Fig. 2. Ordinarily, door checks (not shown) are employed for closing the doors.

Secured to the meeting edge portions of the doors are rubber or other resilient flat strips 9, which extend the full length of the doors and slightly beyond them. The rubber strips 9 are held in U-shaped metal binding members 10 through which nails or screws 11 are driven into the doors to secure the rubber strips thereto. Each binding member is doubled over at one edge, being preferably bent inwardly and forming the doubled edge portion 12, said doubled edge portion being positioned at the outer side of the flexible strip 9 on the door, so as to securely clamp and retain said strip in position and also to form a rounded bead 13 on the outer edge part, in order that said strip will bend and be deflected smoothly on said bead, and the double doors are enabled to swing freely during the opening and closing thereof.

The free edge portions of the rubber strips project beyond the adjacent edges of the doors, and when the doors are closed, said strips overlap each other, the one deflecting the other slightly out of its normal plane. When the strips are in the position seen in full lines in Fig. 3 and the door 7 is opened first, the rubber strip 9, carried thereby, moves away from the rubber strip 9 on the door 6, but in case the door 6 is opened first, the rubber strips are bent, as shown in dotted lines in Fig. 3, until the rubber strip on the door 6 passes the one on the door 7, after which the rubber strips assume their normal flat condition.

If the door 6 is later closed after the door 7 has been closed, the rubber strip on the door 6 will simply deflect the protruding edge portion on the door 7 slightly, although it makes a close contact therewith throughout its entire length, thereby effectively closing the gap between the two doors and preventing the entrance of rain, snow or wind. The metal strip reinforces and protects the rubber strip
and when nailed or screwed to the door holds the rubber strip in position with the protruding edge portion in contact with the protruding edge portion of the other rubber strip.

It will be evident from the above that the gap between the meeting edges of swinging double doors may be effectively closed by the application to such doors of a pair of weather strips embodying the present invention, and that each door is free to close fully after the other one has been closed, thereby protecting the interior of the building against the entrance of rain, snow and wind through the gap between swinging double doors.

I claim as new, and desire to secure by Letters Patent:

1. Weather strips for swinging double doors comprising a pair of flat overlapping rubber strips reinforced by channel-shaped metal binders and secured along the side faces of the meeting edge portions of the swinging double doors, without grooving said edge portions or side faces, each rubber strip being bent slightly out of its normal flat condition by the other strip while the doors are closed, and each metal binder being doubled over at its outer edge to clamp the rubber strip and to form a rounded edge bead, so that each overlapping portion of the rubber strip is capable of being smoothly deflected by the overlapping portion of the other strip in opening and closing the door.

2. Weather strips for swinging double doors comprising a pair of overlapping contacting flat rubber strips which are partly encased and reinforced by channel-shaped metal binders and therewith secured upon the side faces of the meeting edge portions of the swinging double doors with their reinforced portions extending in one and the same plane when the doors are closed, and each rubber strip being bent slightly out of its normal flat condition by the other strip while so contacting with the doors closed, each metal binder being doubled over inwardly along its outer edge to clamp the rubber strip and securely hold it in the binder and also to provide a smooth round outer edge bead, whereby each overlapping portion of rubber strip is enabled to bend smoothly and to be further deflected by the overlapping portion of the other strip in opening and closing the doors.

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