

PATENT SPECIFICATION

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(54) SEALING STRIP FOR LOWER EDGES OF SIDE-HINGED DOORS

(71) I, KUNIO ISAMATSU, a subject of Japan, of 11-4, 5-Chome, Sekimae, Musashino-Shi, Tokyo-To, Japan, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed to be particularly described in and by the following statement:—

This invention relates to a new and improved device for effectively sealing the gap between the lower edge part of a single or double side-hinged door and the floor surface, in the case where there is no door sill saddle, or stepped door sill, below the door, so as to prevent passage of draughts, water, dust, noise, and heat through the gap.

It is an object of the present invention to provide a device of the above-stated character which is of simple construction and installation entailing low cost, and which, moreover, has other effective features.

According to the present invention there is provided a resilient sealing strip for sealing the lower edges of side-hinged doors against draughts, water, dust, noise, and heat, having a cross-section with an upper part in the shape of an inverted channel, one flange of which constitutes a mounting part and the other flange of which constitutes a cover for concealing the mounting part, a corrugated part extending below the mounting part, and at the free end of the corrugated part and contiguous therewith a bulbous bead for resilient contact against a floor surface.

Two embodiments of sealing strips according to the present invention will now be described, by way of example only, with reference to the accompanying drawing, in which:—

Figure 1 is a sectional plan view showing an example of a sealing strip embodying the invention as applied to double side-hinged doors hinged to the jambs of a door-

way frame;

Figure 2 is an elevational view, in vertical section and in approximately full scale, showing an example of one embodiment of the invention as applied to a door with a lower frame member made of wood or the like; and

Figure 3 is a view similar to Figure 2 showing another example of another embodiment of the invention as applied to a door made of sheet metal.

Referring to Figure 1, double side-hinged doors 2 and 3 are hinged at their outer side edges to respective jambs 1 in a manner such that they can be opened as indicated by arrows. It should be understood that the sealing strip of the invention can be applied with equal effectiveness also to so-called swinging doors which can be swung both inward and outward. The sealing strip 19 of the invention is secured along the entire lower edge part of each door as described below.

One example of the sealing strip of the invention installed along the entire lower edge part of a door with a lower frame member 4 of solid construction such as wood is illustrated in Figure 2. The strip consists, essentially, of a resilient strip with a cross-section as shown, having a mounting part 5 forming one flange of an inverted channel, the web of which is joined to the upper portion of the mounting part 5 and, extending outwardly from the door, joins the other flange 6 constituting a cover which conceals the mounting part 5 and mounting hardware.

The resilient strip is extended below the mounting part 5 to form a V-shaped corrugation 7 and a flap 7a ending at its lower edge in the form of a bulbous bead 8 for resilient contact with the floor surface (not shown). The exposed surfaces of the resilient strip are covered with a pile 9.

The resilient strip is mounted onto the

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lower edge of the door 4 by placing the mounting part 5 against the lower edge, placing a metal strip 10 against the outer side of the mounting part 5, and securing the strip 10 together with the part 5 to the door 4 by means of fasteners such as nails 11 driven into the door 4 at suitable intervals.

In another example of the sealing strip of the invention as shown in Figure 3, the resilient strip is mounted onto a door fabricated from sheet metal. In this case, the resilient strip is provided with two corrugations 7, and screws 12 are used for securing the metal strip 10, together with the mounting part 5 of the resilient strip, to the door.

The other gaps of the doors are sealed by known means as shown in Figure 1. A sealing strip 13 is fixed along the free vertical edge of one of the doors 2 and 3 is used to seal the gap between these two doors when they are closed. The gaps between the doors 2 and 3 and their respective jambs 1 are sealed by strips 14 and 15 fixed vertically to the jambs.

By the construction of the sealing strip according to the present invention as described above, the cover afforded by the flange 6 of the resilient strip not only presents a pleasing appearance by concealing the unsightly metal strip 10 and the heads of the nails 11 or screws 12 but also protects the metal strip 10 and nails 11 or screws 12 from rain and snow.

Furthermore, the provision of at least one corrugation 7 contributes to the flexibility of the resilient strip, whereby the bead 9 is caused to contact the floor in a positive manner under resilient force. Ageing of the resilient strip due to wind and rain, moreover, is retarded by the pile 9 covering the exposed surfaces of the re-

silient strip.

Thus, the sealing strip of the invention, in conjunction with the other sealing strips around the door, thoroughly seals the door against the passage of draughts, water, dust, noise, and heat and is most effective both in cold regions and in extremely hot regions.

WHAT I CLAIM IS:—

1. A resilient sealing strip for sealing the lower edges of side-hinged doors against draughts, water, dust, noise, and heat, having a cross-section with an upper part in the shape of an inverted channel, one flange of which constitutes a mounting part and the other flange of which constitutes a cover for concealing the mounting part, a corrugated part extending below the mounting part, and at the free end of the corrugated part and contiguous therewith a bulbous bead for resilient contact against a floor surface.

2. A sealing strip according to claim 1 wherein the exposed surfaces of the device are covered by a pile.

3. A sealing strip according to claim 1 or claim 2 including means to mount and secure said mounting part on a door, the means constituting a metal strip placed flat against the outer surface of the mounting part of the resilient strip, and nails or screws to secure the metal strip to the door with the mounting part interposed.

4. A sealing strip substantially as hereinbefore described with reference to the accompanying drawing.

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2. A sealing strip according to claim 1 wherein the exposed surfaces of the device are covered by a pile.

3. A sealing strip according to claim 1 or claim 2 including means to mount and secure said mounting part on a door, the means constituting a metal strip placed flat against the outer surface of the mounting part of the resilient strip, and nails or screws to secure the metal strip to the door with the mounting part interposed.

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