(No Model.)

W. H. SUTHERLAND.

WEATHER STRIP.

No. 423,352. Patented Mar. 11, 1890.

Fig. 1.

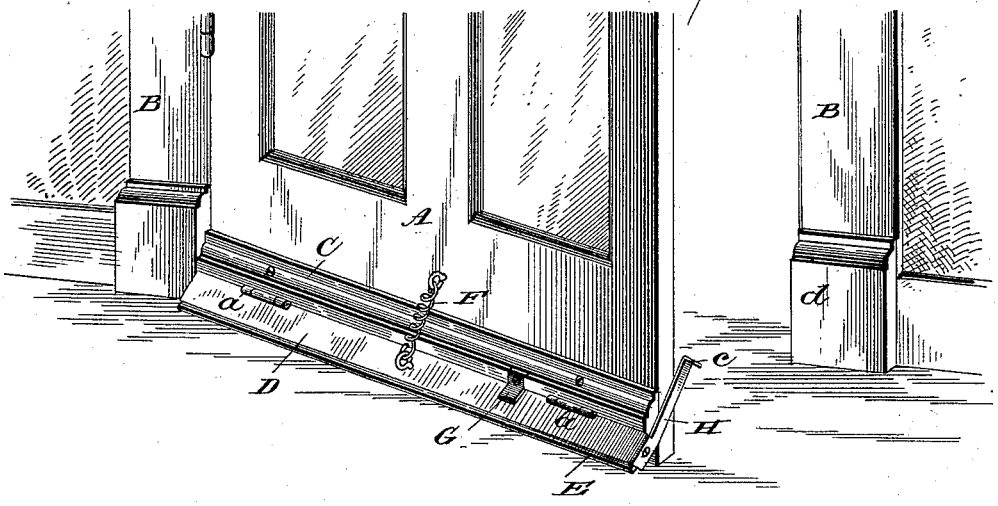


Fig. 2.

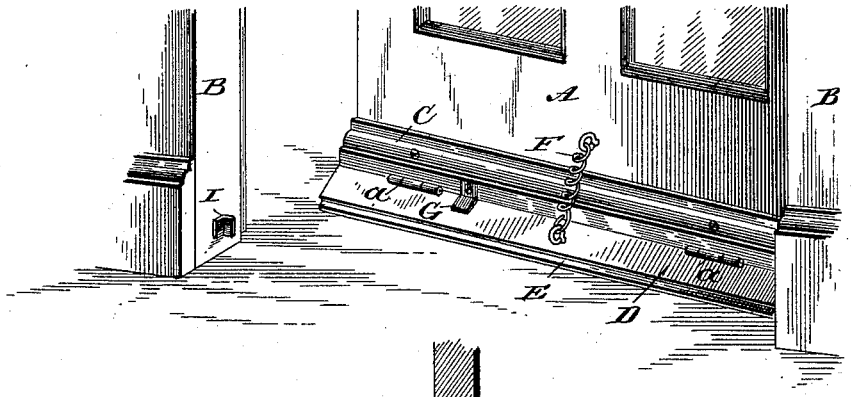
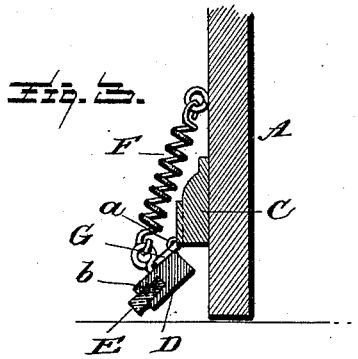


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM H. SUTHERLAND, OF DAVENPORT, IOWA.

WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 423,352, dated March 11, 1890.

Application filed November 8, 1889. Serial No. 329,648. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. SUTHERLAND, a citizen of the United States, residing at Davenport, in the county of Scott and State of Iowa, have invented certain new and useful Improvements in Weather-Strips; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

This invention relates to certain new and useful improvements in weather-strips; and it has for its object to provide an improved device of this character which shall be operated by the opening and closing of the door, and which shall be simple, cheap, and very efficient for the purpose for which it is designed.

The invention consists in the peculiar combinations and the construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed out in the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a perspective view of a lower portion of a door with my improvement shown as applied to the outside thereof, with the door shown partly open. Fig. 2 is a like view with the improvement applied to the reverse side of the door, with the door partly open. Fig. 3 is a section through the lower end of the door, showing my device applied thereto.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates a portion of a door, and B the side frame or casing, both of any known construction. Attached near the lower edge of the door is the strip C, of molding, or it might be a plain strip of wood or metal, preferably, however, a piece of molding, as shown. This strip extends across the door, as shown, and has hinged to its lower edge in any suitable manner—as, for instance, by means of the hinges *a*—the movable portion D of the weather-strip, which is preferably of wood and extends across the door. Across the lower edge this strip D is formed with a groove *b*, in which is seated the strip of felt E, or rubber or other analogous material. This felt strip may be forced into the groove and held there by cement, or in any other desired manner. The felt strip extends beyond the edge of the strip D, so as to be pressed in close contact with the floor when the door is closed.

F is a spring attached at one end to the movable strip or portion D near the center of its length, and at the other end attached to the door, and serves to normally keep the said movable strip away from the floor, as shown in Fig. 3, so that as the door is moved back and forth on its hinges the felt will not contact with the floor. While I have shown but one spring, and that near the center, it is evident that two or more might be employed; but one has usually been found sufficient.

G is a stop of any suitable material, preferably of metal, in the form of an angle-iron attached to the fixed portion C, and serves to prevent the movable portion from being pulled too far up by its spring.

When the device is to be applied upon the outside of a door, as in Fig. 1, I attach to the edge of the movable portion D of the weather-strip an arm H, which embraces the end of the strip D and prevents the separation thereof at the groove and extends upward, as shown in Fig. 1, where it is bent at right angles to its length, as at *c*. As the door is closed this right-angled portion comes in contact with the plinth-block *d* or the casing B and forces the movable portion D down firmly against the floor. As soon as the door is opened the spring F draws the movable portion upward, the arm H of course being removed from contact with the plinth-block or casing as the door is opened. When used upon the inside of a door, as in Fig. 2, the arm H is dispensed with and in its stead is used the arm I (shown in Fig. 2) on the door-frame, and against which the lower portion of movable portion D strikes to close the same. In both cases the spring F serves to draw upward the movable portion as soon as the door begins to open.

What I claim as new is—

The weather-strip described, consisting of

a fixed portion C, a movable portion D, hinged thereto and provided with a longitudinal recess along its lower edge, a felt strip held in said recess, a spring connecting the fixed and movable portions, a stop on the fixed portion to limit the movement of the movable strip, and an arm H, embracing at one end the end of the movable portion and covering the end of the recess therein and the end of the felt strip in said recess and extended upward and formed at its upper end with a portion extended at right angles to the length of said arm, and adapted to contact with a fixed part to force the movable portion of the strip downward, substantially as shown and described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM H. SUTHERLAND.

Witnesses:
EDWIN T. MORGAN,
SEAS. E. LINGAFELT.