

J. W. H. DOUBLER.
Weather Strip.

No. 202,007.

Patented April 2, 1878.

Fig. 1.

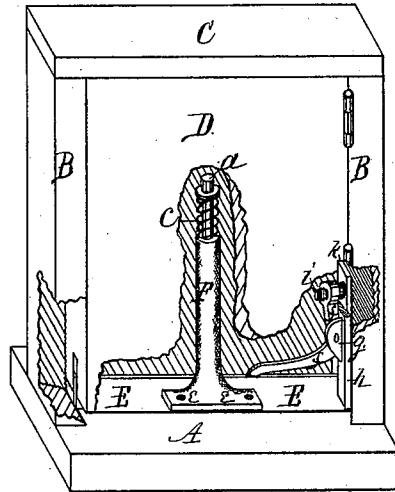
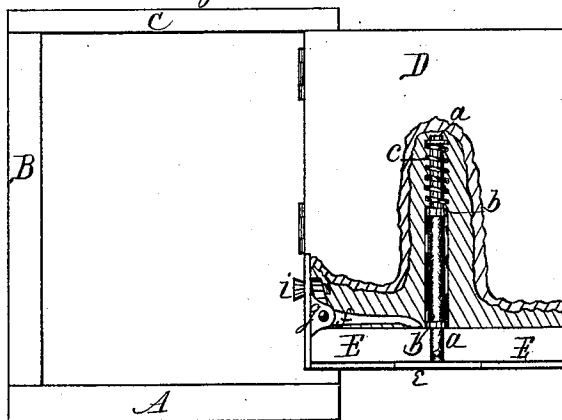


Fig. 2.



Witnesses:
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JOHN W. H. DOUBLER, OF ROCKFORD, ILLINOIS.

IMPROVEMENT IN WEATHER-STRIPS.

Specification forming part of Letters Patent No. **202,007**, dated April 2, 1878; application filed September 1, 1877.

To all whom it may concern:

Be it known that I, JOHN W. H. DOUBLER, of the city of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Weather-Strips, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is an isometrical representation of a door-frame and door, with portions broken away, showing my improved weather-strip in place in the door. Fig. 2 is an elevation with door open, with portions broken away to more clearly show the parts in place in the door.

The object of my invention is to provide a weather-strip designed to be used on either outside or inside doors, with or without carpet-strips, and when so used can be readily adjusted, by means of a single adjusting-screw, to shut close on the threshold, carpet-strip, or carpets of different thicknesses, and, on opening the door, will suddenly rise to clear the carpet on swinging.

In the drawings is represented a frame composed of a sill, A, stiles B, and head C, which are secured to each other, forming a door-frame.

D represents a door, hinged to one of the stiles, to swing on its hinged connection, in the usual manner. A sufficient space is left between the door and sill, floor, or carpet-strip to permit it to swing clear of carpeting.

E is a weather-strip, of plate material, fixed centrally to the lower end of the vertical shaft *a*, constituting a weather-strip of T form. F is a semi-cylindrical socket, spanned on its concave side, near its ends, with semi-cylindrical rings *b*, forming a complete socket to receive the shaft *a*, to permit it to slide freely lengthwise in the socket. A spiral spring, C, surrounds the upper end of the shaft *a* above the socket F, the spring action of which holds the weather-strip up against the socket. The lower end of the socket F is provided with a transverse foot-plate, *e*.

The lower end of the door is slotted lengthwise vertically to receive the weather-strip E, and is bored vertically in the center of the width of the door to receive the socket F. These parts are held in place in the door by screws passing through the foot-plate into the door.

A bell-crank lever, *f*, is pivoted between the ears *g*, which project from the inner face of the ear-plate *h*, and its short arm is fitted with an adjusting-screw, *i*, which projects through the upper end of the plate. This device is let into the lower end and back edge of the door in such a manner that the forward end of the long arm of the lever *f* will rest on the upper edge of the weather-strip, near the center of its length, and is secured in place by screws passing through the ear-plate *h* into the door, in such a manner that pressure on the projecting head of the adjusting-screw *i* will force the weather-strip E downward below the door, and in contact with the door-sill, carpet-strip, floor, or carpet.

A strike-plate (represented at *k*) is let in and secured to the frame, fixed in place by screws, in position to receive the head of the adjusting-screw *i* when the door is closing, which will act upon the bell-crank lever and depress the weather-strip and close the opening below the door.

From the foregoing it will be seen that as the adjusting-screw is turned in or out it changes the downward movement of the carpet-strip, causing it to descend more as the screw is turned outward, and less as it is turned inward.

By means of these devices I am enabled to adjust my improved weather-strip to outside and inside doors, with or without carpet-strips, and in every instance cause it to shut close, to exclude storms or currents of air, and, when desired, can be opened to admit of free circulation under the door.

In this instance I have represented my improvement with the bell-crank lever applied to the back edge of the door, and the strike-plate on the hanging stile, and this I prefer; but it can be applied to the front edge of the door, and an inclined strike-plate secured to the latching-stile will operate my improved weather-strip.

When it is desired to employ an elastic weather-strip, I attach a strip of rubber to the lower edge of the weather-strip on one side, or, if the rubber is light, I double it over the lower edge of the strip and secure it to both sides. In such cases I usually enlarge the groove in the end of the door to receive the

rubber on the lower edge of the strip, and in some cases I simply shorten the door sufficiently to permit the rubber edge to stop below the door.

I claim as my invention—

1. The combination of the T-formed weather-strip, the cylindrical socket, and the spiral spring, as herein described, adapted to be inserted in the lower end of a door, as and for the purpose hereinbefore set forth.

2. The combination, with a weather-strip, a socket adapted to receive and guide the stem

of the strip, and spring connected therewith, serving to guide and uphold said strip, of a bell-crank lever, one end of which rests on the weather-strip, while the other end is provided with an adjusting-screw, which projects from the door, and operates to depress the strip when the door is closed, substantially as described.

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Witnesses:

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