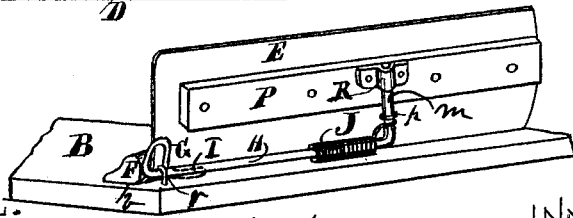
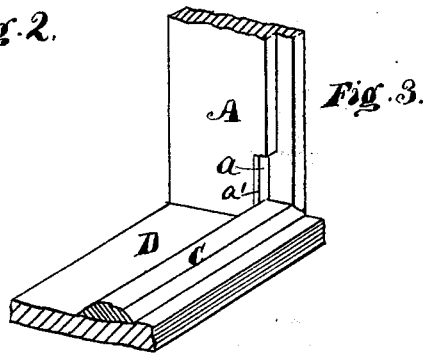
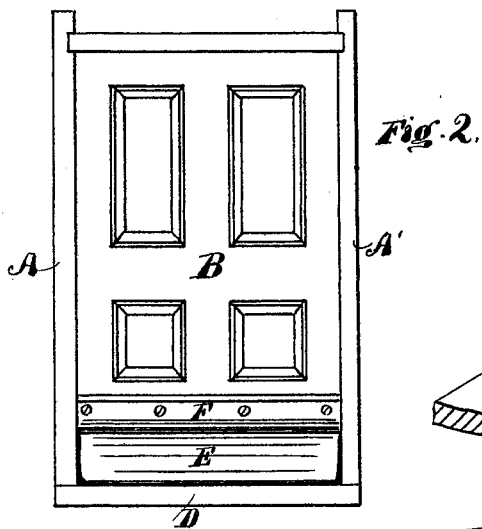
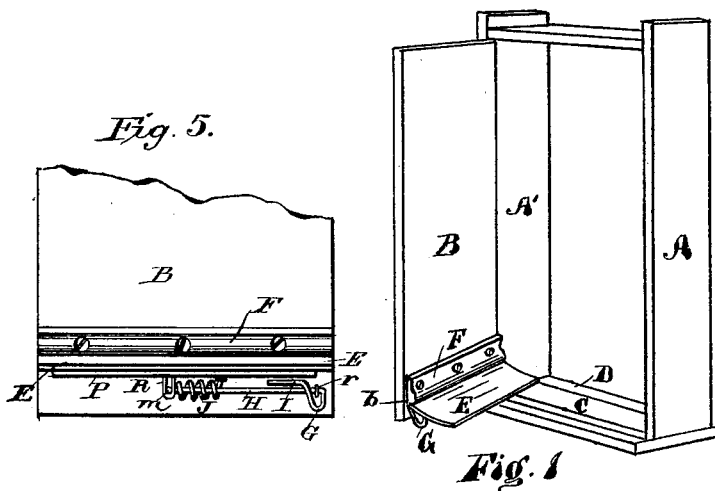


Weather-Strip.

No. 219,822.

Patented Sept. 23, 1879.



WITNESSES;
D. F. Peck,
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UNITED STATES PATENT OFFICE

WILLIAM D. MCKINNEY, OF MARION, INDIANA.

IMPROVEMENT IN WEATHER-STRIPS.

Specification forming part of Letters Patent No. **219,822**, dated September 23, 1879; application filed February 15, 1879.

To all whom it may concern:

Be it known that I, WILLIAM D. MCKINNEY, of Marion, in the county of Grant and State of Indiana, have invented a new and useful Improvement in Self-Adjusting Weather-Strips, of which the following is a description, reference being had to the accompanying drawings.

The object of my invention is to provide a self-adjustable device for preventing the entrance of wind or storms under a door.

Prior to my invention various kinds of weather lips or strips have been used for the same purpose; but I am not aware that any such have been constructed, arranged, and combined having the same mode of operation and producing the same result as that set forth in the following specification.

My invention consists, mainly, in the new construction, arrangement, and application of devices; also, in the new combination of old elements which are deemed essential in my newly-organized self-adjustable weather-strip, as will be hereinafter fully described and set forth.

In the accompanying drawings, in which like letters of reference in the different figures indicate like parts, Figure 1 represents a perspective view of a door and door-frame embodying my invention, showing the door open. Fig. 2 is a front elevation of the same with the door shut. Fig. 3 is a section of one side or jamb and the sill of the door-frame in perspective, showing a notch or recess in the door-jamb. Fig. 4 is a perspective view of the bottom of the door, showing the weather-strip and the general arrangement of devices for operating it. Fig. 5 represents a front view of the door, showing the arrangement of parts for holding the weather-strip elevated while the door is open.

A A' represent the two door-jambs; D, the door-sill, with the ordinary beveled wooden weather-strip C attached thereto. B represents the door, which is hinged to the frame in the ordinary manner.

The adjustable weather strip or lip E is made of rubber, and of sufficient width to fold down over the beveled sill C onto the sill D when the door is closed. The lip E is tacked on the rear side of the beveled wooden strip F, and said strip F is screwed fast to the door, form-

ing a water-tight joint, and far enough up from the bottom to permit the outer edge of the lip E to overlap the beveled sill C and touch the sill D, the flexible nature of the lip allowing it to conform to any irregularities or unevenness of said sill. The strip F is beveled at *b*, to prevent the rubber strip E from chafing at its point of contact therewith as said rubber strip is raised or lowered in opening or closing the door.

The bar P is attached to the under side of the rubber lip E, far enough from the edge to prevent it from coming in contact with the beveled sill C when the outer edge of the lip is down on the sill D. The crank-rod H, that operates the rubber strip E, has an L-shaped bend or crank, *m*, at one end, which fits in a slide-box, R, that is attached to the bar P. The other end of the crank-rod H is bent with a curved loop, G, and a projecting end, I, running a short distance parallel with the rod. The loop G, which also forms a crank-arm, is to strike against the plate *a'* in the notch or recess *a*, formed in the lower part of the jamb A, as the door is closed, and move the rubber strip E down, so that its lower edge will come in contact with the sill D, the parallel projecting end I acting as a stop to prevent the lip E from rising too high when the door is opened.

The spring J is coiled around the crank-rod H, and one end secured to the door by a screw. (Not shown.) The other end is carried up around the crank-arm *m*, at *p*, with a tension adapted to hold the rubber strip or lip E always up, as in Fig. 1, when the door is open. The coil-spring J forms one bearing for the crank-rod H to operate in, and the staple *r* forms a bearing at the other end, as shown in Fig. 4.

Having thus described the manner in which my adjustable weather strip or lip is constructed and arranged, I will now describe its mode of operation, as follows, to wit: When the door is opened, as in Fig. 1, then the spring J raises the rubber strip E until the projecting parallel end I of the crank-shaft comes in contact with the door. Thus the strip E is held at a slight inclination, yet sufficiently high as to clear the beveled sill C and carpets. While in this position the loop end

or crank G of the rod H projects forward from the door, with a slight inclination downward. As the door is closed, the crank G comes in contact with the plate *a'* in the notch or recess *a* of the door-jamb, and the rubber strip E is forced down onto the sill D just as the door is tightly closed, thus forming a double water-tight joint, one at the union of the rubber strip with the bottom of the door, and the other at the sill, where the rubber strip comes in contact therewith, thus preventing wind or storms from driving under the door, and keeping the bottom of the door and beveled carpet-sill dry, and preventing them from swelling or binding.

The loop end or crank-arm G, being bent or rounded, as shown, prevents dresses or clothing from catching in passing through the doorway, and the notch or recess *a* in the door-jamb presents no obstacle for clothing to catch on.

What I claim as new, and desire to secure by Letters Patent, is—

1. The rubber strip E, having the bar P secured on its under side and attached to the beveled wooden strip F, in combination with the door B and shaft H, when said shaft is provided with cranks *m* and G at opposite ends, and a spring, J, whereby said rubber strip is held up above the beveled wooden

strip C of the door, and prevented from contact therewith or with the carpet as the door is swung open or shut, in the manner specified.

2. The shaft H, provided with a crank-arm, *m*, at one end, that operates in a box or guide, R, attached to the rubber strip E, and further provided at its opposite end with a crank-arm or loop, G, and a short arm, I, running a short distance parallel with the main shaft H, as and for the purpose specified.

3. The door-jamb A, provided with a recess, *a*, combined with the crank-shaft G I H *m*, spring *p*, and rubber strip E, attached to the door B, by means of which the strip E is held up free from contact with the carpet and beveled wooden strip C as the door is swung open or shut, and folded down over said beveled strip C onto the sill D as the crank G comes in contact with the rear wall of the recess *a* as the door is closed tightly, thus forming a water-tight joint at the bottom of the door and sill, as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM D. MCKINNEY.

Witnesses:

JAMES A. STRETCH,
W. N. HODGE.