No. 692,181. Patented Jan. 28, 1902.

J. COOK.

WEATHER STRIP.

(Application filed Apr. 5, 1901.)

(No Model.)

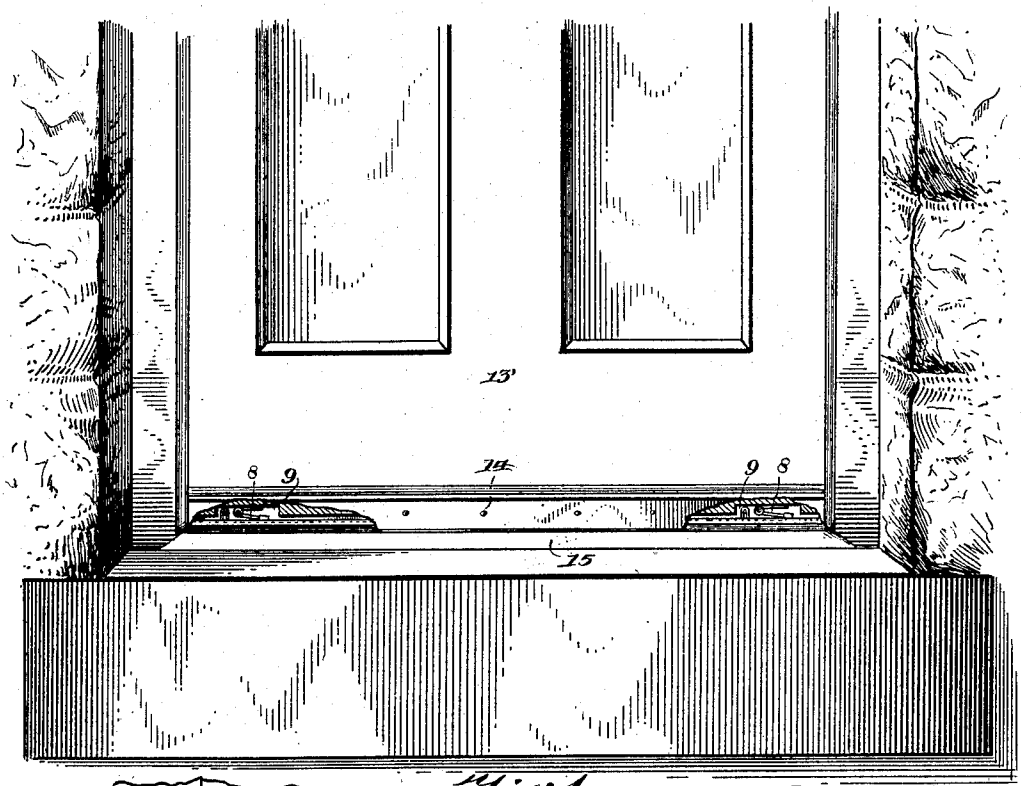


Fig. 1.

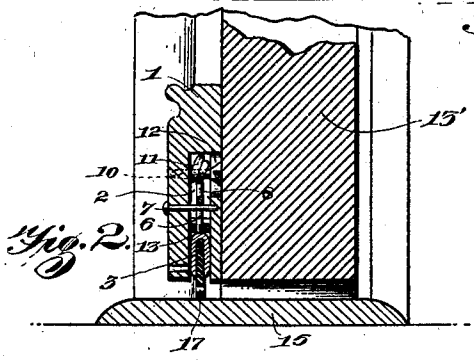


Fig. 2.

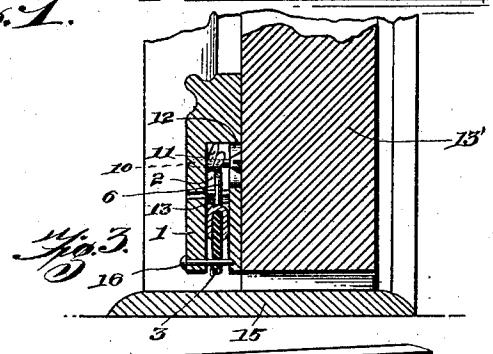


Fig. 3.

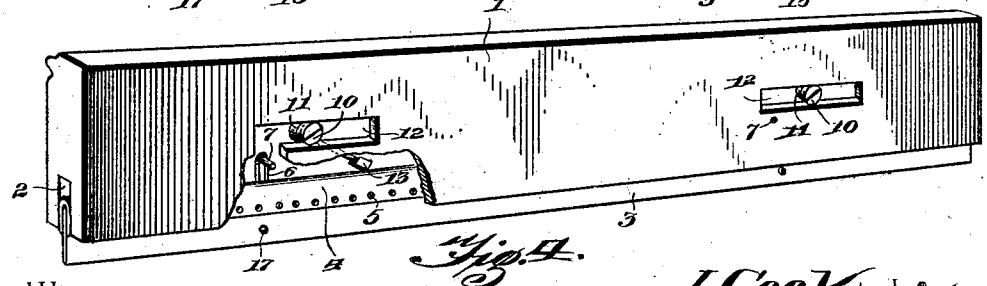


Fig. 4.

Witnesses

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WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 692,181, dated January 28, 1902.

Application filed April 5, 1901. Serial No. 54,491. (No model.)

To all whom it may concern:

Be it known that I, JAY COOK, a citizen of the United States, residing at Coldwater, in the county of Branch and State of Michigan, have invented a new and useful Weather-Strip, of which the following is a specification.

This invention relates to weather-strips, and has for its object to provide an improved device of this character which is applicable to doors, windows, and similar movable parts where it is desirable to exclude wind, dust, rain, &c., from passing through the joint at the free edge of the door or the like. It is furthermore designed to provide a yielding of the device, so as to automatically accommodate itself to uneven surfaces, and thereby insure a tight closure of the joint, and, finally, to arrange for conveniently adjusting the device so that it may be thrown out of its normal position in order that the strip may be protected against wear during the summer-time or when not required to exclude the weather.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claim, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claim without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is an elevation of the lower portion of a door having the improved weather-strip applied to the bottom edge thereof, parts of the strip being broken away to show the mounting of the yieldable portion. Fig. 2 is a transverse detail sectional view showing the strip in its operative position. Fig. 3 is a similar view showing the active or yieldable portion of the strip adjusted so as to lie out of contact with the door-sill. Fig. 4 is a detail perspective view of the strip, parts being broken away to show the mounting of the movable portion thereof.

Like characters of reference designate corresponding parts in all of the figures of the drawings.

Referring to the drawings, and particularly to Fig. 4 thereof, it will be seen that the present device comprises a wooden strip of molding 1, having its lower edge provided with a longitudinal rabbet 2, which extends for the entire length of the strip. A weather-strip 3, formed of rubber, felt, or similar flexible material, is housed within this rabbet and has its outer edge normally projected beyond the adjacent edge of the molding or body strip. The inner edge of the flexible strip is stiffened by means of a metallic back 4, which is folded into substantially **U** shape in cross-section, so as to snugly embrace the inner edge of the flexible strip, to which it is connected by means of a plurality of fastenings 5, preferably formed by punching the metal back, so as to force portions thereof into the material of the weather-strip. By this arrangement the weather-strip maintains its flexibility and at the same time is stiffened and strengthened.

At suitable intervals throughout the length of the weather-strip slotted guides 6 extend transversely from the back 4 and engage suitable transverse guide-pins 7, that are driven into the wooden strip and transversely across the rabbet thereof. These guides are preferably formed by inverted substantially **U**-shaped wire loops, and the transverse portions thereof are designed to rest upon the pins, so as to limit the outward movement of the weather-strip.

To yieldingly hold the flexible strip in a normally-projected position, there are provided two or more substantially **U**-shaped springs 8, which are mounted in sockets or lateral enlargements 9 of the rabbet, so as to bear in opposite directions against the back of the socket or rabbet and the back of the flexible weather-strip. Each spring is held in place by means of a transverse fastening 10, which is set into the wooden strip from the back thereof, and the intermediate portion of the spring is coiled or bent into an eye 11 for the reception of the fastening. It is preferable to provide the back of the body-strip with a longitudinal slot or opening 12, intersecting each enlargement of the rabbet, so that the fastening may be readily engaged with the coil or eye of the adjacent spring, which has been previously inserted through the open edge of the rabbet. The outer or free arm of the spring is provided with a weighted head

13 to frictionally bear against the metallic back of the flexible strip, so as to normally force the latter outwardly.

In the application of the device, as shown in Figs. 1, 2, and 3 of the drawings, it is secured to the lower edge of a door 13 by means of suitable fastenings 14, driven through the wooden strip and into the door, the bottom edge of the body-strip being substantially flush with the edge of the door, so that the flexible strip may project beyond the latter and bear against the door-sill 15, as best shown in Fig. 2, thereby to close the joint between the door and the sill and exclude rain, wind, dust, &c. By reason of the yieldable mounting of the flexible strip the latter will accommodate itself to any unevenness of the sill or shrinkage of the door.

When it is not desirable to have the flexible strip in use, it may be forced entirely within the rabbet and held therein by means of removable pins, one of which has been shown in Fig. 3 of the drawings, as at 16, which is passed through an opening or perforation formed in the outer wall of the rabbet or groove in the wooden strip, and then through a corresponding opening 17 in the flexible strip, as shown in Fig. 4, whereby the flexible strip may be conveniently housed within the rabbet and out of contact with the door-sill, thereby preventing wear of the strip when it is not needed to exclude wind, &c.

It will of course be understood that the present form of weather-strip may be employed upon the top and side edges of the door and also to windows. Moreover, it is applicable to sliding doors as well as to swinging doors, and in view of the adjustment of the flexible strip the entire device may remain upon the door or window-sash for the entire year, as it may be conveniently thrown into and out of operation to suit the conditions of the weather.

What is claimed is—

A weather-strip, consisting of a body having a longitudinal groove formed in one edge thereof, and opposite openings formed through the back of the strip or body and intersecting the groove, a flexible strip loosely mounted in the groove, and provided at its inner edge with opposite loops projected inwardly of the groove, guide-pins driven through the body and through the respective loops, and springs inserted through the respective openings in the back of the body, each spring having opposite arms bearing in opposite directions against the back of the groove and the inner edge of the flexible strip, and an intermediate eye, and fastenings driven through the respective openings and eyes to hold the springs in place, the openings being normally closed by the part to which the device is secured, and the flexible strip-engaging spring-arms bearing frictionally against the strip to prevent endwise movement of the latter.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAY COOK.

Witnesses:

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B. D. PADDOCK.