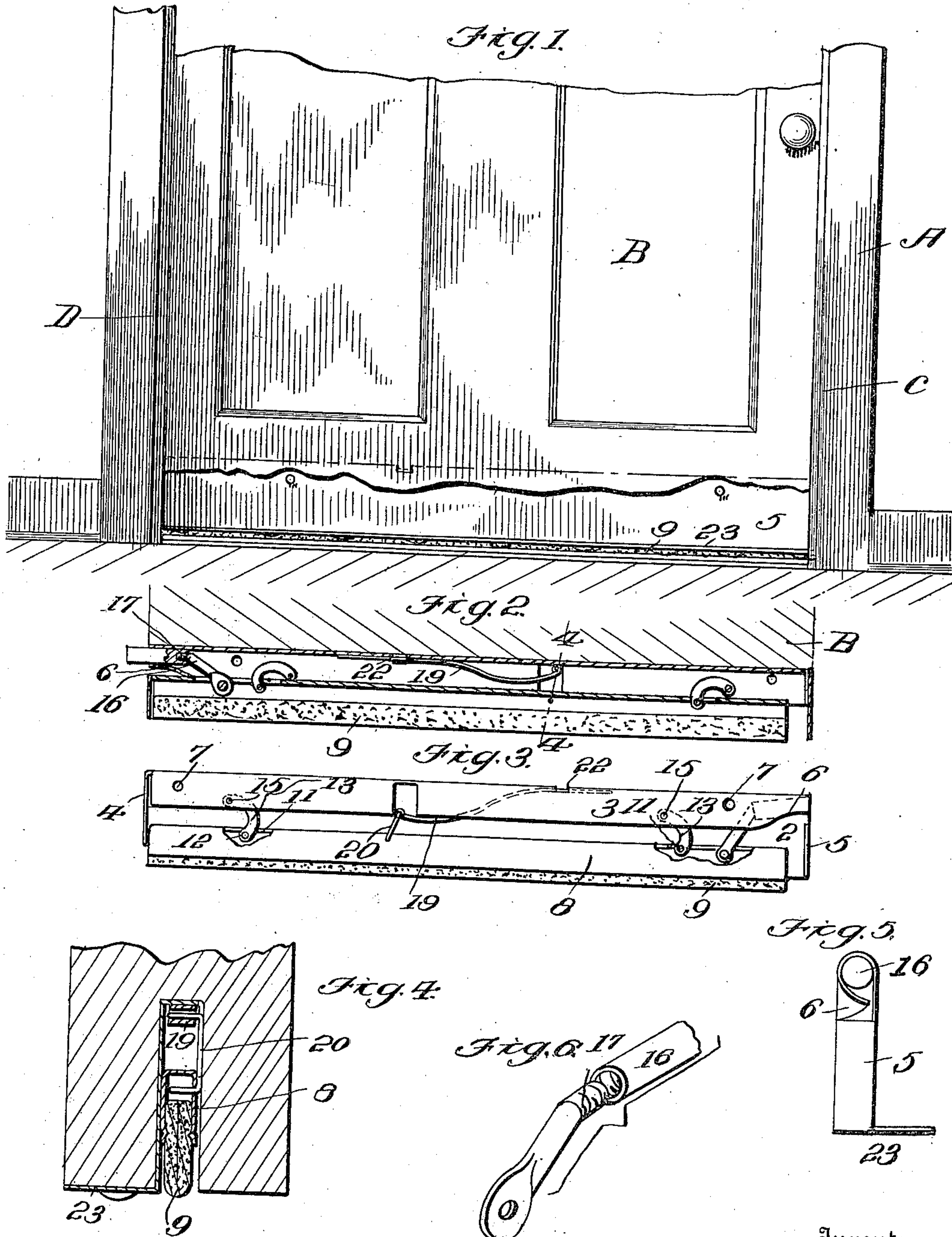


A. F. EWING.
WEATHER STRIP.
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Patented July 11, 1911.



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WEATHER-STRIP.

997,662.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ANDREW F. EWING, citizen of the United States, residing at Asbury Park, in the county of Monmouth and State of New Jersey, have invented certain new and useful Improvements in Weather-Strips, of which the following is a specification.

My invention relates to that class of weather strips in which the weather strip is shiftable and when the door or window is open, is concealed within a casing, but when the door is closed, will be forced outward out of the casing and into engagement with the door frame, thus avoiding any frictional engagement between the door frame and the weather strip, and forcing the weather strip resiliently against the door frame.

The primary object of the invention is to provide a strip of this character, of an exceedingly simple construction, which may be easily attached either to an especially formed door or window, or to an ordinary door or window.

Other subordinate objects will be pointed out in the accompanying specification.

For a full understanding of the invention and the merits thereof, and to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a fragmentary elevation of a door and door casing with my improved weather strip applied thereto; Fig. 2 is a fragmentary section of the lower portion of a door and of the weather strip, showing it in its retracted position; Fig. 3 is a front elevation of the weather strip detached from the door and showing it in its depressed position; Fig. 4 is a section, enlarged, on the line 4—4 of Fig. 2; Fig. 5 is an end view, enlarged, of the weather strip casing; and, Fig. 6 is a perspective view of the sectional pin for operating the weather strip.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to these figures, A designates a portion of the door frame, and B the door hinged thereto, C and D indicating stops against which the door frame abuts when the door is closed. All these parts are of ordinary construction.

My improved weather stripping device

may be attached either to the face of the door or in a groove or channel formed in the lower edge of the door. It comprises a longitudinally extending metallic casing 2 having its upper margin returned upon the body of the casing, as at 3. One end of the casing is formed with the outwardly extending flange 4 closing one end of the casing, while the opposite end of the casing is formed with the like flange 5, which flange, however, is shorter than the depth of the casing. At the same end of the casing, the overturned flange 3 is inwardly bent, as at 6, to form a tubular termination through which the actuating pin passes and by which it is supported. Perforations 7 are formed in the body of the casing and in the overturned portion 3, whereby the casing may be attached to the face of a door, if desired.

The packing strip holder consists of the folded metallic strip 8 between the margins of which the packing strip 9 is held. This strip 9 may be of textile fabric, rubber, or any other material suitable for the purpose. The folded strip 8 is cut away, as at 11, to provide openings through which links 13 may project, these links being attached to the strip 8 by means of the rivets 12 which act as pivots for the links. The links are curved and have the general form shown in Fig. 3. The upper ends of the links 13 are pivoted by rivets 15 to the casing 2. To one extremity of the holding strip 8 is pivoted the actuating pin 16 which extends out through the tubular portion 6. This actuating pin is preferably made in two sections, as shown in Fig. 6, which have screw-threaded connection with each other at 17, thus permitting the pin to be shortened or lengthened as desired so as to adjust the movement of throw of the packing strip and its holder 8. Mounted in the casing 2 is a spring 19 which normally acts to hold the member 8 in a retracted position within the casing 2. While I may use any form of spring for this purpose, and mount it in any desired manner, I preferably use a flat spring, one end of which is attached to the casing and the other end of which is connected by a link 20 which extends through the folded strip 8. Preferably the spring 19 is attached to the casing by forming a pair of spaced slits 22 on the upper edge of the casing, depressing the material between these slits, and forcing the end of the spring through the slits above the depressed portion

of the material, as shown in Fig. 2. This forms a very cheap and convenient means for holding the spring 19. It will be seen that the spring so held will act to retract the weather strip into the casing, and that when thus retracted, the pin 16 will be projected from the end of the casing.

In order to provide means whereby the casing of the weather strip may be supported within a groove or channel formed in the lower edge of the door, I preferably provide the casing with the laterally extending flange 23. Screws may pass through this flange and into the door in order to hold the casing within the groove or channel. It will be obvious also that the device may be attached to the outside face of the door and this flange 23 being removed if desired, which, as the casing is made of sheet metal, is easily accomplished. I thus provide for the weather strip device being attached to a door either especially formed for the purpose by having a groove in its lower edge, or to any ordinary door. While I have shown the device as attached to the lower edge of the door, I do not wish to be limited to this, as it is obvious that it might be attached to the upper edge thereof, or to other portions of the door, depending upon circumstances.

The operation of my invention is obvious from what has gone before. When the door is open, the spring 19 will hold the weather strip 9 and its holder 8 in a retracted position. As, however, the door closes, the jamb of the door will contact with the projecting end of the pin 16 and will force it inwardly, thus forcing the weather strip outward and

into contact with the door jamb. As the door or window is opened, the spring will gradually retract the weather strip so that the weather strip will form no obstruction to the opening of the door.

It will be seen that my invention is of great simplicity and may be very cheaply made and easily applied.

Having thus described the invention, what I claim is:—

A weather strip of the character described, comprising a longitudinally extending casing formed of a strip of metal, the upper edge of which is returned upon the body of the strip, the ends of said strip being inwardly bent, said returned portion of the strip at one end being curved to form a tubular terminal, curved links pivoted to the casing, a weather strip holder comprising a strip of metal, U-shaped in cross section, said strip being slotted for the reception of the lower ends of said links and pivoted thereto, a weather strip supported in said holder, a flat spring attached to the upper portion of the casing and having its end bent to form an eye, a link passing loosely through the eye and connected at its other end loosely to the weather strip holder, and a curved pin pivoted to the weather strip holder, at one end thereof, and extending out through the tubular portion of the casing.

In testimony whereof I affix my signature in presence of two witnesses.

ANDREW F. EWING. [L. S.]

Witnesses:

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