(No Model.)

W. Z. BROWN.

WEATHER STRIP.

No. 566,653. Patented Aug. 25, 1896.

Fig. 3.

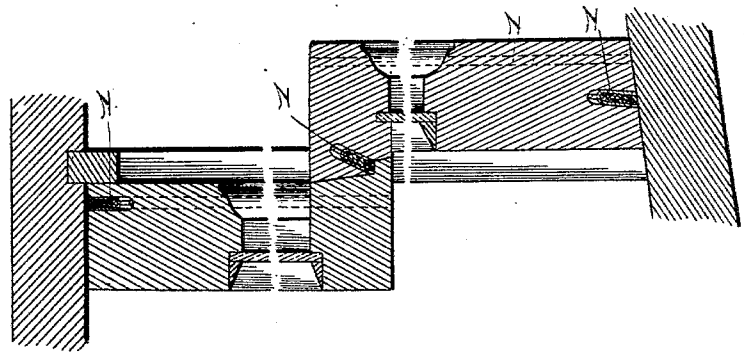


Fig. 2.

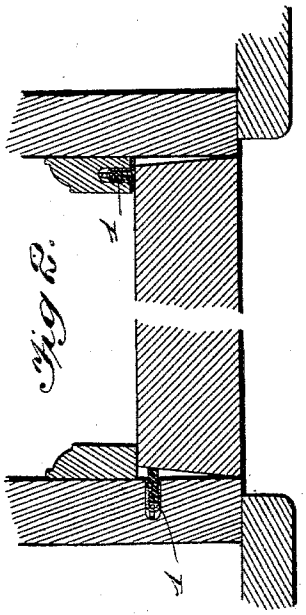


Fig. 4.

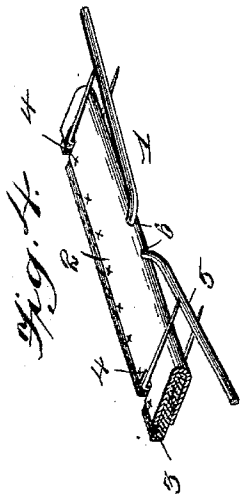


Fig. 6.

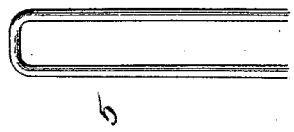


Fig. 5.

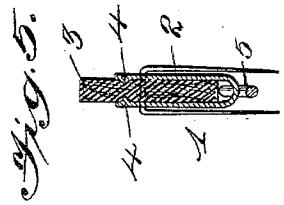
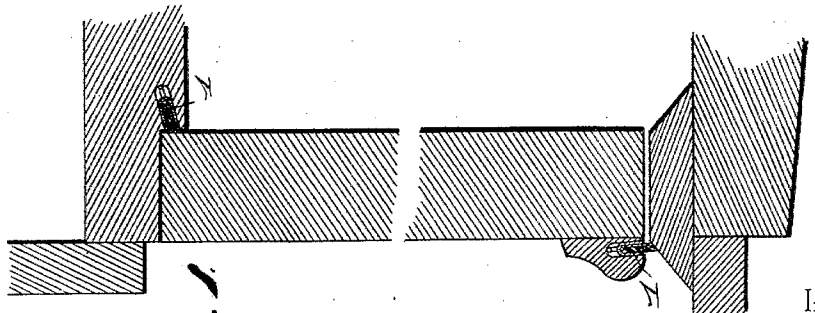


Fig. 1.



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UNITED STATES PATENT OFFICE.

WILLIAM Z. BROWN, OF QUINCY, ILLINOIS, ASSIGNOR OF ONE-HALF TO THE SCHATSIEK-BAECKER BUILDING COMPANY, OF SAME PLACE.

WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 566,653, dated August 25, 1896.

Application filed March 20, 1896. Serial No. 584,168. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM Z. BROWN, a citizen of the United States, residing at Quincy, in the county of Adams and State of Illinois, have invented a new and useful Weather-Strip, of which the following is a specification.

This invention relates to weather-strips, and the object in view is to provide a simple and durable weather-strip which is capable of universal use in and about windows and doors, the said strip, when in place, being entirely concealed from view, thus doing away with the unsightly strip applied to the inner and outer surfaces of windows, doors, &c.

The invention consists in a weather-strip embodying certain novel features and details of construction, as hereinafter fully described, illustrated in the drawings, and pointed out in the claim hereto appended.

In the accompanying drawings, Figure 1 is a vertical section through a door and door-frame, showing the improved strip applied thereto at top and bottom. Fig. 2 is a horizontal section showing the manner of applying the strip at the side edges of the door. Fig. 3 is a vertical transverse section through a window-frame and the sashes thereof, showing the application of the strip to windows. Fig. 4 is a detail perspective view of a section of the improved weather-strip. Fig. 5 is a transverse sectional view of the same. Fig. 6 is a detail plan view of the spring before its application to the strip.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the accompanying drawings, 1 designates the improved weather-strip, which comprises a metal shield 2, formed from a piece of sheet metal of any desired length. In manufacturing the shield the strip of metal of the desired width and length is creased or folded on a central longitudinal line, thus imparting to the shield, after the folded portions have been pressed into proximal relation to each other, a U shape, as clearly illustrated. Between the leaves or folded portions of the shield is inserted a strip 3, of felt or other soft flexible material, and such strip may be composed of one or more layers of such felt or other material, according to the thickness desired or the breadth of bearing-surface of the strip and the flexibility of such edge. In order to hold the felt or flexible strip in place within the shield, the leaves or folded portions of the shield are indented or crimped or otherwise given an irregular inner surface, such indentations being indicated at 4, thus enabling the shield to grasp and engage the felt and prevent its displacement. Prior to the insertion of the felt, a spring 5 is introduced to the strip. This spring is primarily fashioned into U shape, as indicated in Fig. 6, and composed, preferably, of spring-wire. While in such U shape, the terminals of the spring are passed through perforations 6 in the central crease or fold of the shield 2, and thereafter the terminals of the spring are deflected longitudinally in opposite directions, so that they incline slightly away from the rear or inner edge of the strip, as shown in Fig. 5. The spring is thus held in place with relation to the strip without the aid of solder or other fastening means.

The application of the improved strip above described is illustrated in Figs. 1, 2, and 3, and in each instance it will be noted that the said strip is mounted in a groove in the part to which it is attached, the said groove being of sufficient dimensions to allow of the free movement and lateral reciprocation of the strip therein and the depth of the groove affording sufficient room in rear of the strip to receive and allow of the movements of the spring 5, which it will be understood bears against the base of the groove and operates to automatically thrust the strip outward into engagement with the door or sash or other opposing part. In each instance also the displacement of the strip is guarded against by means of pins or staples or other fasteners which may pass through openings or slots arranged at suitable intervals in the strip, the said fasteners being driven into the surface in which the strip is arranged. In Fig. 1 I have shown the improved strip applied to the lintel of a door and bearing against the top portion of the door when closed, and a similar strip mounted in the bottom edge of the door or in the molding attached thereto, said strip bearing against the carpet or threshold strip for excluding the weather. Fig. 2

shows the application of the strip whereby the side edges of the door are tightly sealed, one strip being shown applied to the jamb at the hinged side of the door and to the vertical stop at the swinging edge of the door. Fig. 3 illustrates the manner of applying the strips to the top and bottom rails of window-sashes and also to the meeting-rails thereof. In the same manner the strips may be applied to the side edges of the sashes and in any other places which may and will suggest themselves.

The weather-strip above described is cheap and durable, is easily applied, will effectively exclude the elements and prevent the rattling of doors and window-sashes, and is entirely concealed from view. The strip also possesses much greater strength than the ordinary weather-strip with the wooden base or shield, and has the additional advantage that there is no glue or cement to soften and thus permit the felt or flexible member of the strip to become displaced. The strips are manufactured in long lengths and sold in such condition and may be divided into sections of a length to suit the requirements.

Having thus described the invention, what is claimed as new is—

A weather-strip comprising a shield formed from a strip of sheet metal, the same being creased or folded upon a longitudinal line and having its folded portions brought into proximal relation to each other, giving to the shield substantially a U shape, a flexible strip inserted therein and a spring having its central portion located within the metal shield and its terminal portions inserted through perforations in the fold of the shield and extended in opposite directions, substantially as and for the purpose described.

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

WILLIAM Z. BROWN.

Witnesses:
JOS. NAUERT,
GEO. NAUERT.