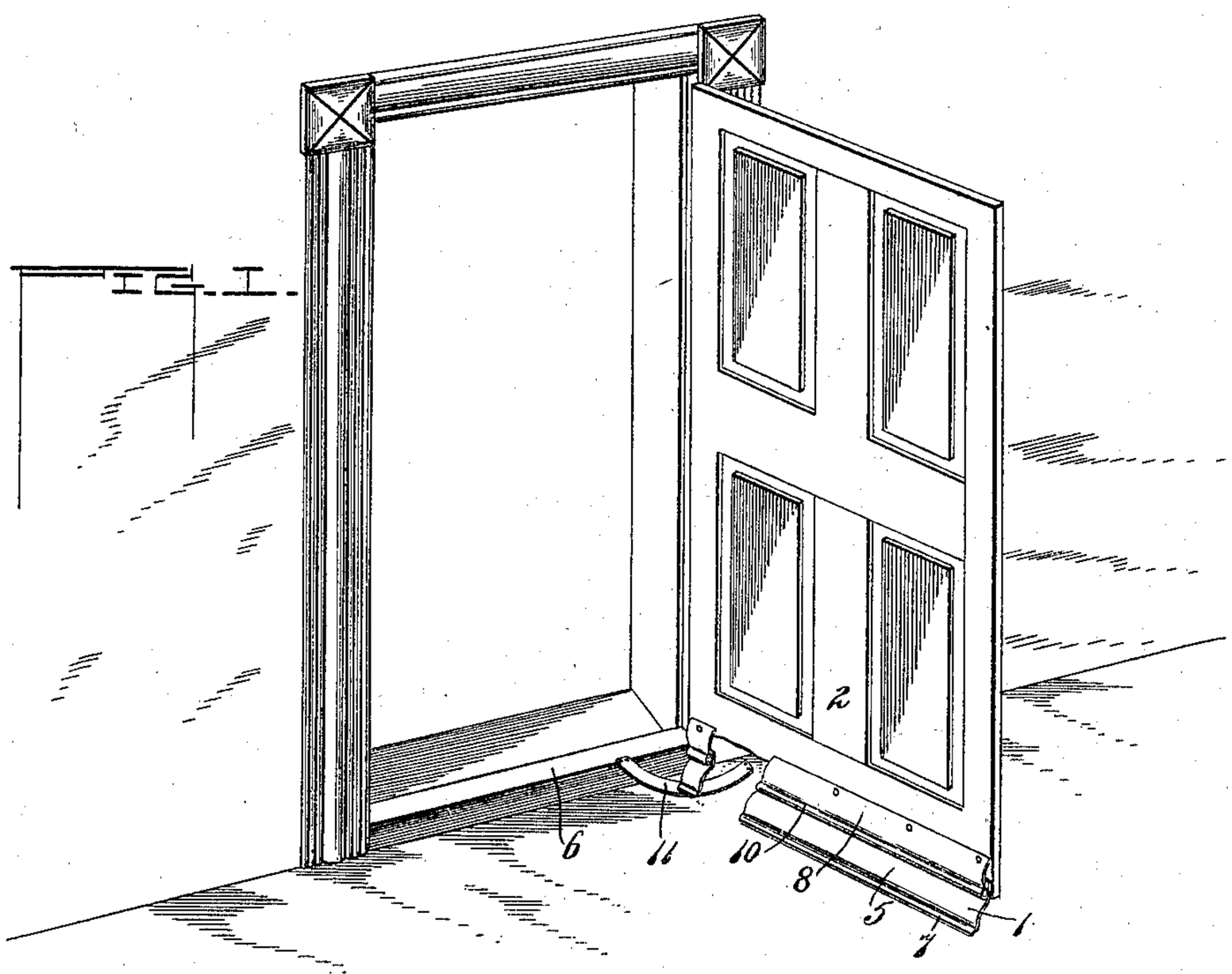
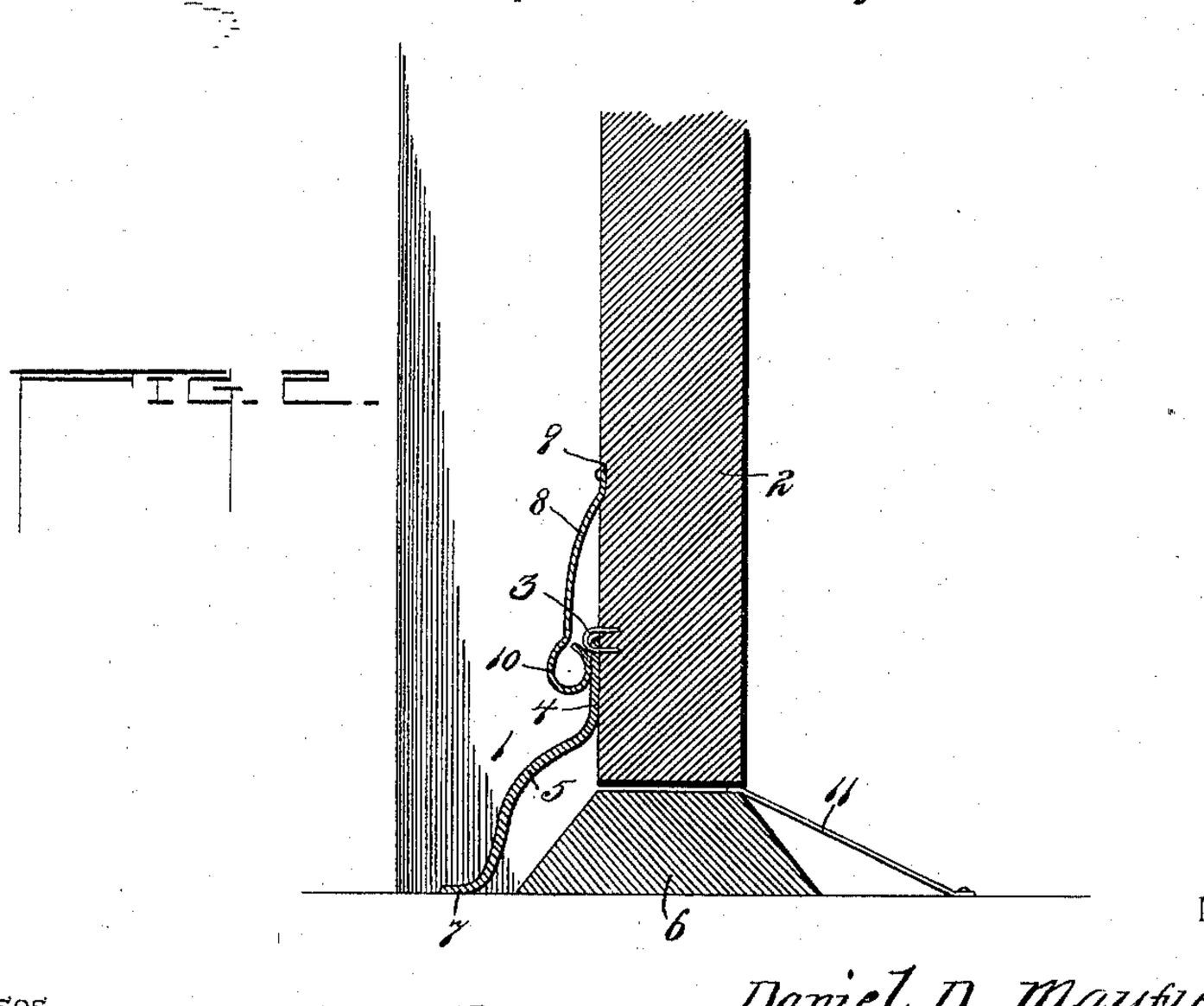
(No Model.)

D. D. MAYFIELD.

WEATHER STRIP.

No. 591,048. Patented Oct. 5, 1897.





Witnesses
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UNITED STATES PATENT OFFICE.

DANIEL D. MAYFIELD, OF ROBINSON, ILLINOIS.

WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 591,048, dated October 5, 1897.

Application filed October 12, 1896. Serial No. 608,617. (No model.)

To all whom it may concern:

Be it known that I, DANIEL D. MAYFIELD, a citizen of the United States, residing at Robinson, in the county of Crawford 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 has for its object to provide a simple, cheap, and efficient weather-strip which is especially designed for use upon doors and which will effectually exclude moisture and cold air, provision being made whereby the strip is automatically raised and lowered as the door is swung open or closed and whereby said strip is prevented from wearing out the carpet or matting adjacent to the threshold.

The invention consists in an improved weather-strip embodying certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and incorporated in the claim.

In the accompanying drawings, Figure 1 is a perspective view showing the improved weather-strip in use. Fig. 2 is an enlarged vertical cross-section through a door and threshold-strip, also showing the weather-strip, &c., in section.

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

The improved weather-strip is shown at 1, and is composed of a strip of sheet metal having its upper edge pivotally connected to the outer surface of a door, (indicated at 2,) preferably by means of staples 3, which are driven into the door, the lower terminals of the staples passing through perforations along the top edge of the strip 1 and forming the fulcrums upon which the strip rocks. The strip 1 adjacent to its upper edge is straight and bears flatly against the door, as shown at 4, and limits the rocking movement of the strip toward the door. Near the bottom edge of the door the strip 1 is deflected outward and then downward to provide the same with a concaved lower side, as indicated at 5, which will adapt it to embrace the threshold-strip 6, the free edge of the strip 1 being extended to form a horizontal portion 7, which bears flatly against the door-sill, as shown in Fig. 2.

Above the strip 1 is arranged a spring-strip 8. This is constructed of spring sheet metal and has its upper edge secured in a groove 9 in the outside of the door, as shown in Fig. 2, whereby moisture is prevented from getting behind such edge. In cross-section the strip 8 is bowed, being given an outward convexity, and the lower or free edge of such strip is rolled, as indicated at 10, to give a rounded bearing-surface which presses firmly against the upper flattened portion of the strip 1 just below its fulcrum-point, thereby serving to maintain the weather-strip normally in the position indicated in Fig. 2, but allowing the free edge 7 thereof to yield upward for passing over the threshold-strip 6. The outward convexity of both the hinged strip and the spring-strip serves to shed the water therefrom and prevent the same from entering beneath the edge of the door.

11 designates a combined guard and deflector, which is also made of metal and curved, as shown in Fig. 1, to approximate a quarter-circle. The inner edge of the piece 11 is secured to the carpet, matting, or floor just inside of the threshold-strip 6, and the outer end thereof is inclined upward, as shown in Fig. 2, and secured at its outer end to the top of the threshold-strip. The guard 11 is curved in the arc of a circle of which the hinge of the door is a center, and is located in position to form a bearing for the inner lower corner of the strip 1. As the door is closed the strip 1 rides upon the guard 11 and is elevated so as to pass onto the top of the threshold-strip 6, the hinged strip thereafter riding upon the threshold until its free edge passes beyond the same, when the spring-plate 8 will force the strip 1 downward into close contact with the door-sill, thus excluding the weather. In opening the door the inclined outer side of the threshold-strip acts to lift the hinged strip, and the latter, upon the further opening of the door, bears upon the guard 11, and is thus prevented from contacting with or wearing the carpet or matting adjacent to the door.

It has already been explained that the outward convexity of both the hinge-strip and the spring-strip serves to shed the water therefrom and prevent the same from entering beneath the edge of the door, and in order to

insure this result, as well as to provide for a perfect weather-tight fit of the two strips, and especially of the strip 1, against the door and the floor, it is important that the strips 1 and 8 are continuous, so that the portions 4, 5, and 7 of the strip 1 will extend longitudinally from end to end thereof, and the rounded bead 10 of the strip 8 will have a continuous bearing on the strip 1 to hold the portion 4 thereof flat against the adjacent surface of the door. This construction provides an efficient weather-tight fixture for the door and a noiseless and easy movement of parts during the opening and closing of the door.

The improved weather-strip may be manufactured entirely from sheet metal, may be applied to any door, is exceedingly cheap, and will be found efficient in practice.

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

A weather-strip attachment for doors, consisting of a main continuous sheet-metal strip 1, hinged at its upper edge to the door, and formed with a vertically-disposed flat upper portion 4, adapted to closely contact flat against the adjacent surface of the door, a flat outturned foot portion 7, adapted to lie flat against the floor, and with an intermediate bowed portion 5, adapted to engage the threshold, said portions 4, 5, and 7 extending longitudinally from end to end of the strip, a separate continuous spring-strip 8, secured fast along its upper edge to the door, and extending down to form a lower edge rolled inward in a continuous rounded bead extending the full length of the strip and bearing against the upper flat portion 4 of the main hinge-strip, and a combined guard and deflector secured at its opposite ends respectively to the threshold and floor, substantially as set forth.

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

DANIEL D. MAYFIELD.

Witnesses:
JNO. S. ABBOTT,
THOS. S. PRICE.