

(No Model.)

W. F. WOODRING.
WEATHER STRIP.

No. 568,061.

Patented Sept. 22, 1896.

Fig. 1.

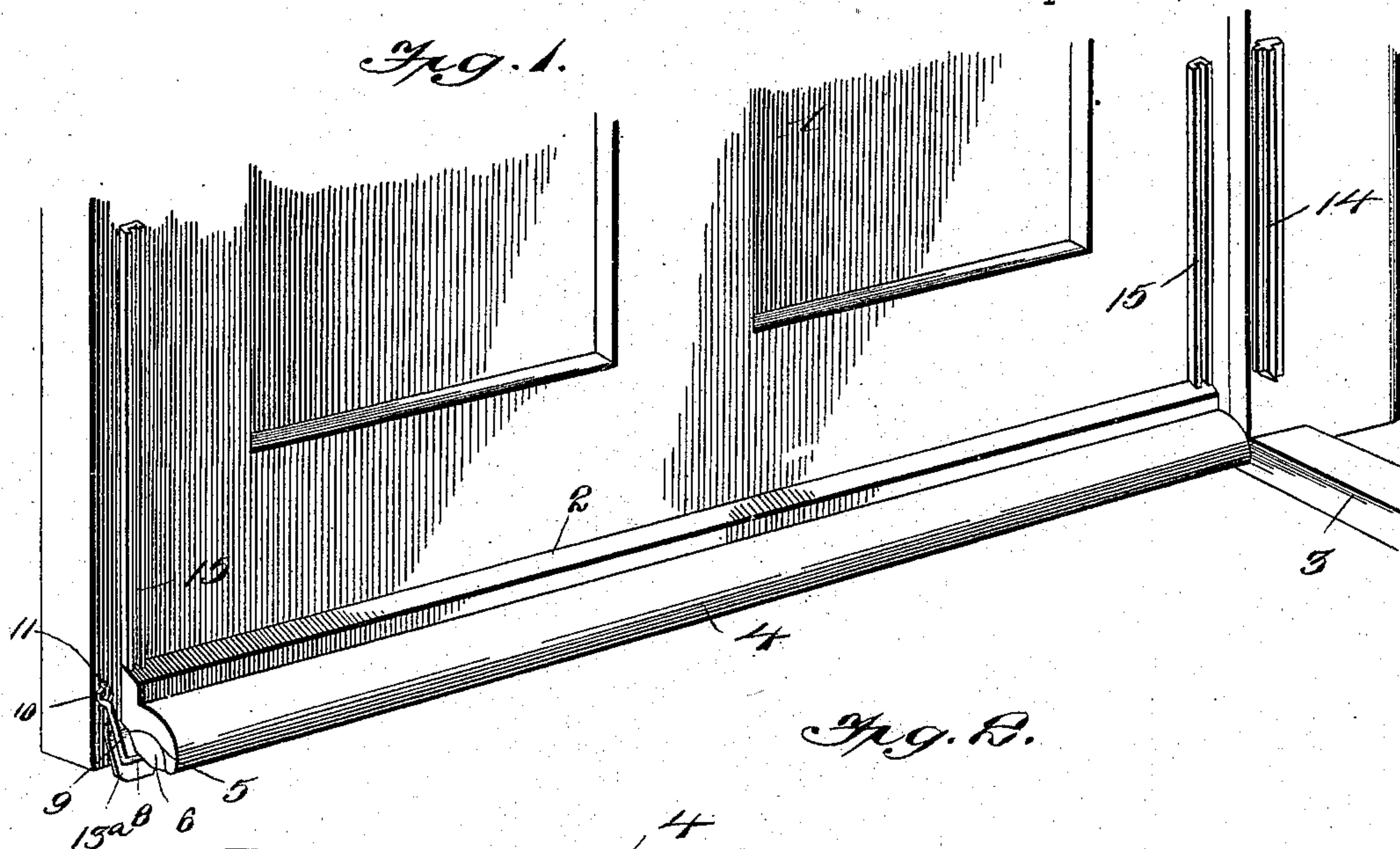


Fig. 2.

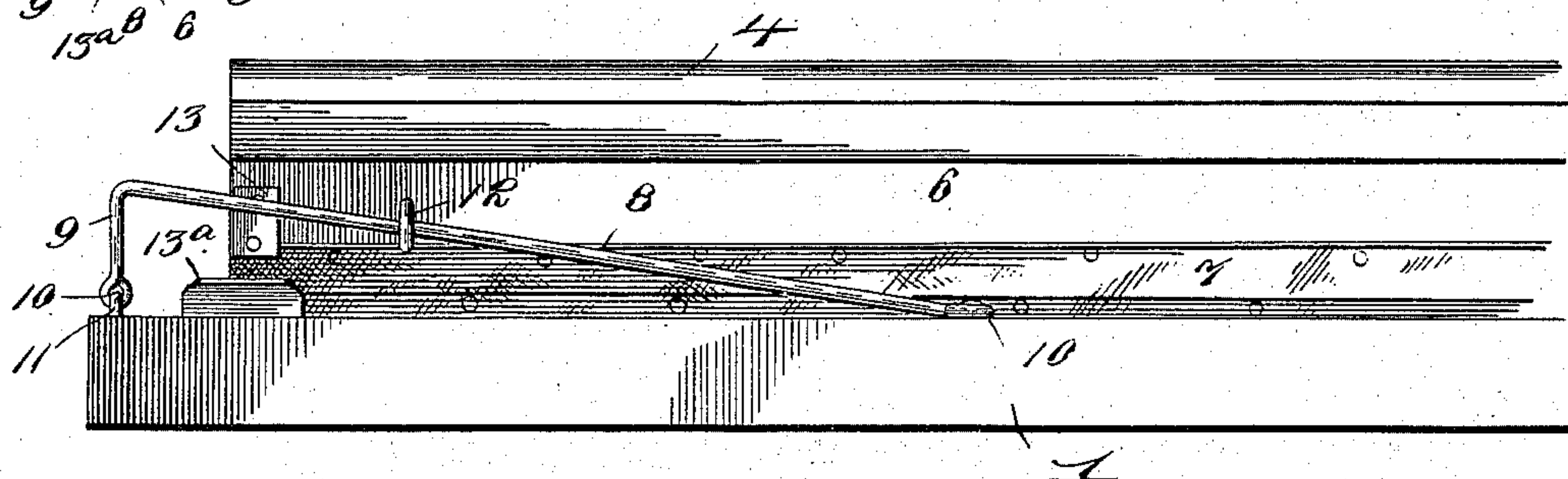


Fig. 3.

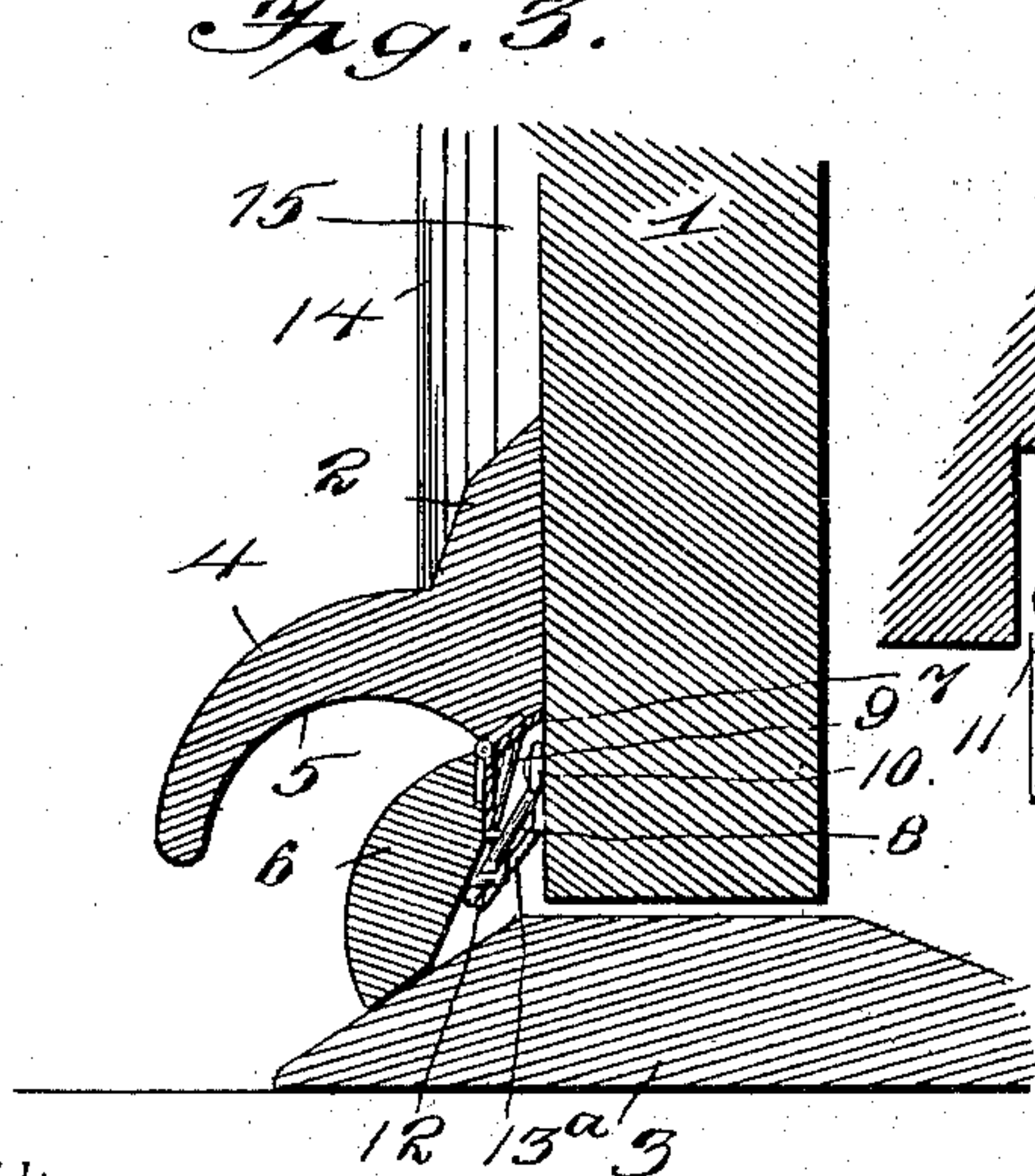
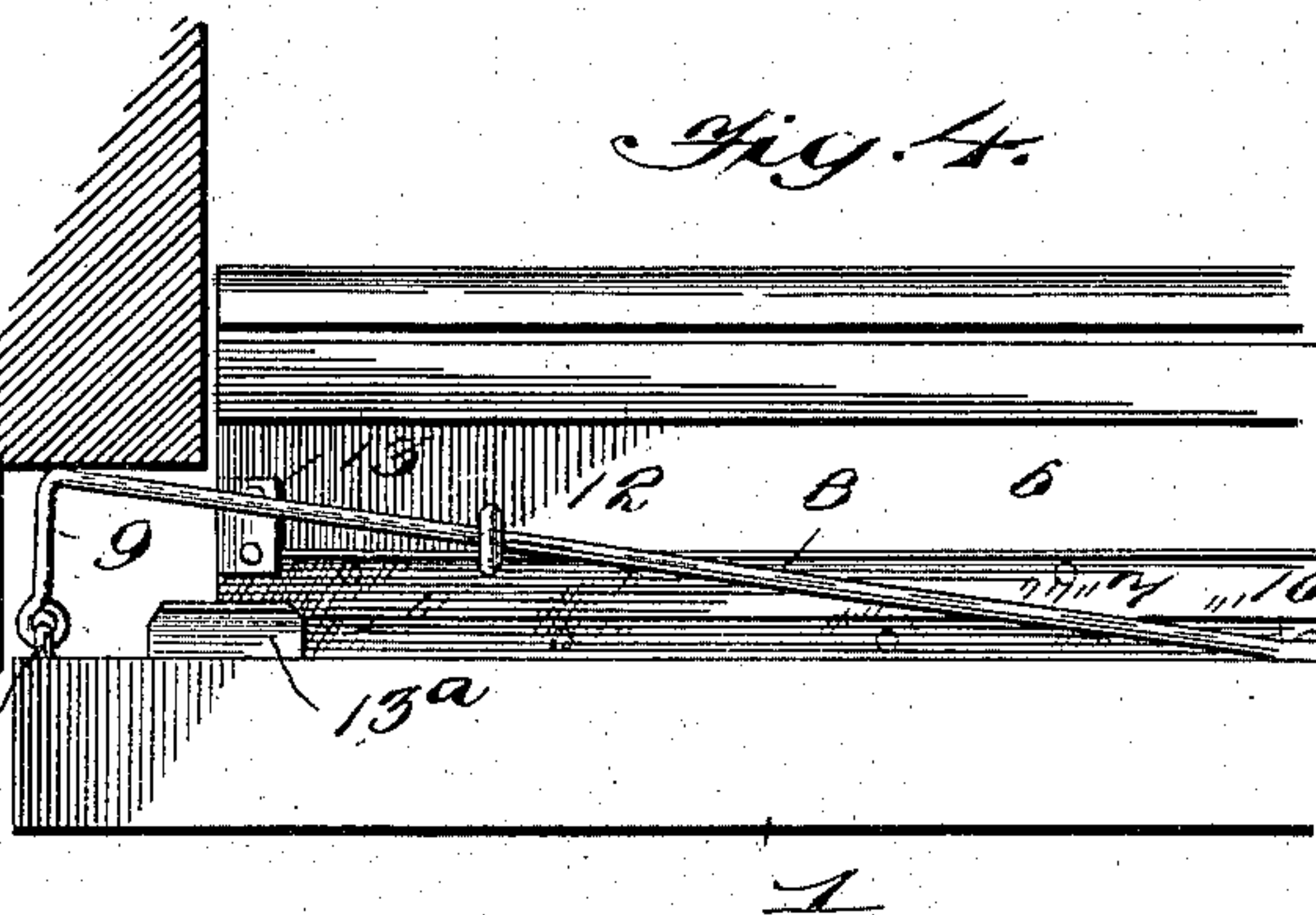


Fig. 4.



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Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM F. WOODRING, OF BETHLEHEM, PENNSYLVANIA.

WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 568,061, dated September 22, 1896.

Application filed April 15, 1896. Serial No. 587,715. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. WOODRING, a citizen of the United States, residing at Bethlehem, in the county of Northampton and State of Pennsylvania, 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 efficient weather-strip having a hinged connection with the door and adapted upon the closing of the door to swing downward into close contact with the threshold-strip for excluding air, moisture, &c.

The specific object of the invention is to provide in connection with the hinged strip an improved spring, which, while it serves to normally uphold the strip, also acts in conjunction with one of the stops of the door-jamb to move the strip downward against the threshold. Strain is thus removed from the hinged strip itself, and yet the latter is adapted to yield freely to accommodate itself to the threshold-strip, thus insuring a close fit.

To this end the invention consists in a weather-strip embodying certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and finally pointed out in the claims hereto appended.

In the accompanying drawings, Figure 1 is a perspective view of the lower portion of a door, showing the improved weather-strip applied thereto. Fig. 2 is a bottom plan view thereof. Fig. 3 is a vertical cross-section through the door, threshold-strip, &c., showing the weather-strip in operation. Fig. 4 is a detail horizontal section through one of the door-jambs, taken about in line with the bottom edge of the door and looking upward, the door being shown just ajar.

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

Referring to the accompanying drawings, 1 designates a door to which the improved weather-strip is applied.

2 indicates a molding secured along the bottom portion of the door just high enough to clear the threshold-strip 3 on the sill, said molding comprising a water-table 4 and being provided in its under side with a longi-

tudinal cove 5 of substantially semicylindrical shape. Arranged within the cove is the weather-strip proper, 6, which extends the entire length of the molding and is of substantially semicylindrical shape in cross-section, so as to fit snugly within the cove 5, said strip being hinged at its inner edge to the molding 2, preferably by means of a strip of fabric 7, tacked along its edges to the molding and strip 6.

8 designates a combined spring and lever, which is composed of a suitable length of stout spring-wire, the same being given a right-angular bend intermediate its ends to form a long spring-arm 8 and a shorter lever-arm 9. The terminals of this combined spring and lever are looped to form eyes 10, the eye of the long arm being secured to the door immediately beneath the molding 2, while the eye of the shorter arm is secured near the swinging edge of the door and in a plane beyond the end of the molding and weather-strip by means of a staple 11, the connection at this point being a loose one, so as to allow the short arm 9 to vibrate for a purpose that will appear.

The long arm 8 extends through a loop or staple 12 on the under side of the hinged strip 6 and plays loosely therein, and said long arm also bears against a wear-plate 13, secured to the under side of the hinged strip near the outer end thereof, said plate preventing the long arm of the combined spring and lever from wearing into said hinged strip.

13^a indicates a spring-plate secured at its upper edge to the door near its swinging edge and beneath the molding 2. This spring-plate inclines away from the door at its lower free edge and receives the combined spring and lever against it when the door is closed. In the sudden opening of the door the spring-plate 13^a serves to thrust the hinged strip quickly upward, combining its force with that of the arm 8.

Upon closing the door the lever-arm 9 strikes against the stop or jamb of the door at that side of the frame and is thereby pressed inward toward the door, whereupon by reason of its connection through the staple 12 with the hinged strip 6 the latter is forced downward in such manner as to bring its swinging edge with a yielding pressure against the

threshold-strip. The hinged strip is thus enabled to slide laterally upon the threshold-strip and accommodate itself freely thereto, and the swinging edge of the strip is also
5 chamfered where it meets with the threshold-strip, so as to afford an increased bearing between the meeting surfaces of said strips, thus insuring the exclusion of air and moisture. In order to exclude the weather be-
10 tween the side and top edges of the door and the door-frame, tongue-and-groove strips 14 and 15 are attached, respectively, to the door and door-frame and arranged in such manner that when the door is closed the tongues and
15 grooves of such strips will interlock and effectively break the joints where they are located.

The device above described is very simple in construction, may be manufactured at
20 slight cost, and is applicable to any door and perfectly reliable in operation. It will be apparent that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or
25 sacrificing any of the advantages of this invention.

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

1. The hinged horizontal strip connected to the door, in combination with an L-shaped 30 spring one arm of which extends beneath the strip and connects rigidly with the door, the other arm being located outside of or beyond the end of the strip and extended upward and connected at its upper end loosely to the door, 35 the elbow or bend in said spring being located at a distance from the door and adapted to contact with the door-frame, for actuating the strip, substantially as described.

2. The hinged horizontal strip connected 40 to the door, and the combined spring and lever for actuating said strip, in combination with the supplemental spring secured to the door and located in the path of movement of said spring, whereby the latter is adapted to 45 assist the said spring and lever for giving a quick movement to the strip at the initial part of its upward movement, substantially as described.

In testimony that I claim the foregoing as 50 my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM F. WOODRING.

Witnesses:

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J. B. KEMERER.