(No Model.)

G. A. BYOR & W. B. MAHAN.

WEATHER STRIP.

No. 574,522. Patented Jan. 5, 1897.

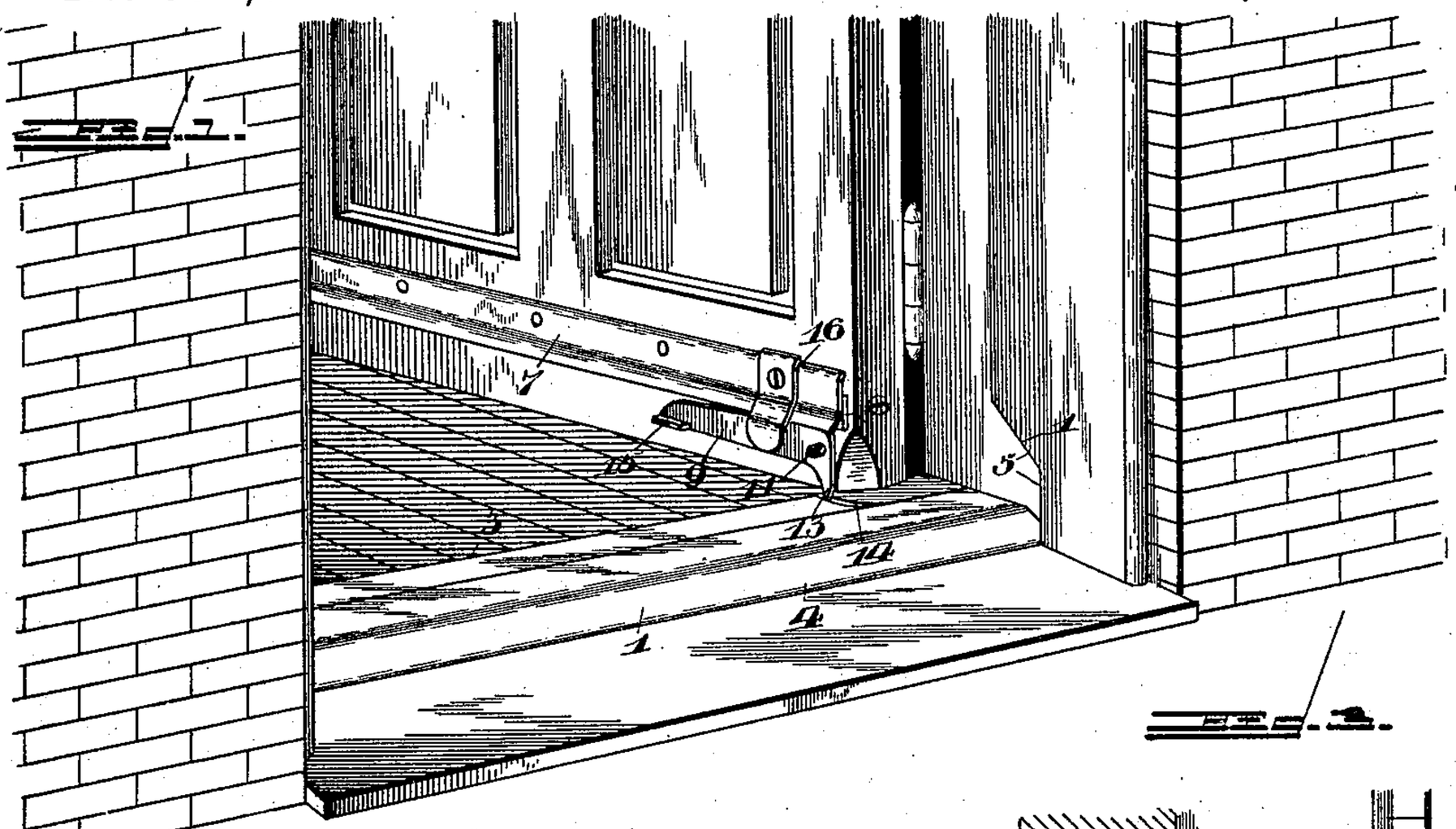

Fig. 1.

Fig. 3.

Fig. 2.

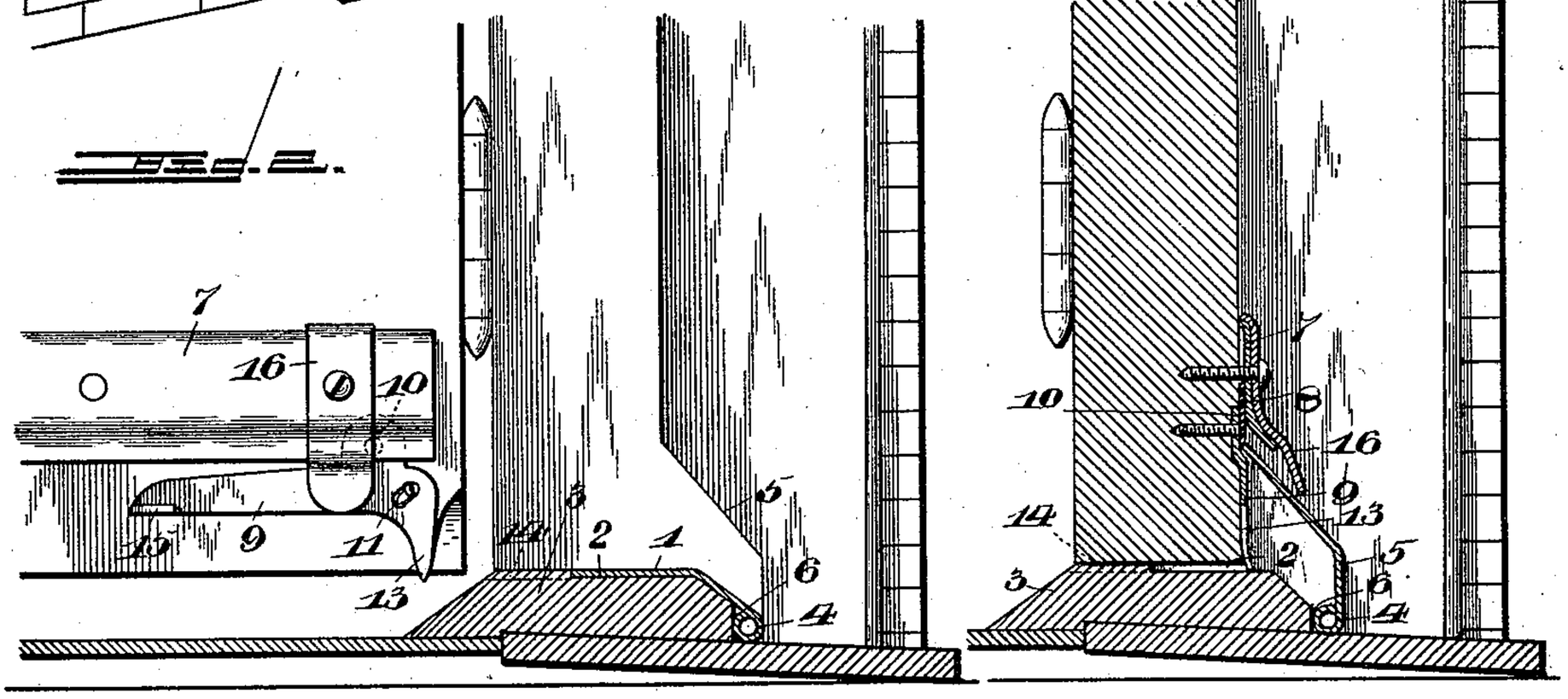

Fig. 5.

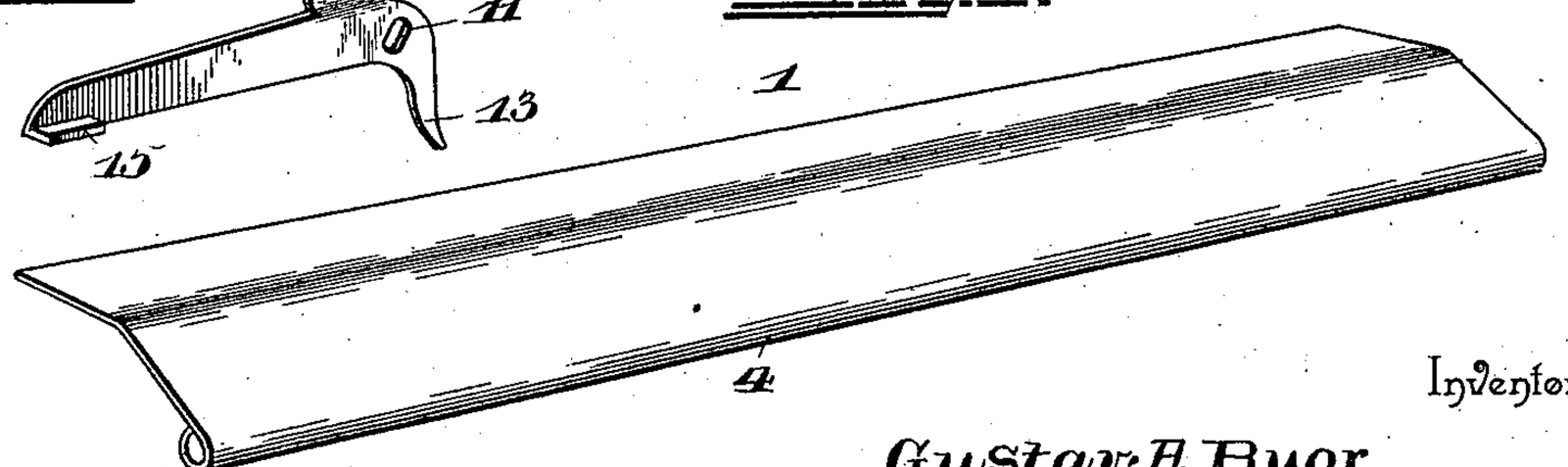

Fig. 4.

Witnesses
W. F. Doyle.
R. M. Smith.

Inventors,
Gustav A. Byor, and
William B. Mahan,
By their Attorneys,
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

GUSTAV A. BYOR AND WILLIAM B. MAHAN, OF PALMYRA, ILLINOIS.

WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 574,522, dated January 5, 1897.

Application filed March 12, 1896. Serial No. 582,914. (No model.)

To all whom it may concern:

Be it known that we, GUSTAV A. BYOR and WILLIAM B. MAHAN, citizens of the United States, residing at Palmyra, in the county of Macoupin 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 practical device of the nature referred to embodying a hinged and folding strip made entirely from a single section of sheet metal and removably fitted in place with relation to the threshold-strip, so that it may be readily lifted out of place for the purpose of removing any dirt or foreign matter which may have accumulated under or around the same or for dispensing with the strip in mild weather when its use is no longer required.

Other objects and advantages of the invention will appear in the course of the subjoined description.

The invention consists in an improved weather-strip embodying certain novel features and details of construction, as hereinafter fully described, illustrated, and claimed.

Figure 1 illustrates in perspective the application of the improved weather-strip to a door. Fig. 2 is a vertical transverse section showing the position of the parts when the door is open. Fig. 3 is a similar view with the door closed. Fig. 4 is a detail perspective view of the sheet-metal weather-strip. Fig. 5 is a similar view of the trip-lever.

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

This invention contemplates the use of a weather-strip proper which may be easily and quickly lifted out of place when required for any reason.

Numerous attempts have heretofore been made to obtain a weather-strip having this advantage; but invariably it has been found necessary to resort to some means for hinging the strip, which, upon the removal of the strip, either presented an unsightly appearance or left some projection upon or adjacent to the threshold-strip. In order to overcome these objections, we form our weather-strip from a single piece of sheet metal, (indicated at 1,) which comprises, when in its folded or downward position, a horizontal portion which is seated in a recess or depressed portion 2 of the threshold-strip 3, also an inclined portion resting against the inclined outer edge of the threshold-strip, and a rolled outer edge 4, forming a continuous longitudinal fulcrum upon which the strip 1 rocks. The door jambs or stops are cut away immediately adjacent to the ends of the threshold-strip, as indicated at 5, to permit of the necessary vibration of the strip 1, at the same time forming shoulders for limiting the outward movement of said strip, and thus causing the strip to press firmly against the door when closed. The strip 1, when the door is open, lies flush with the upper surface of the inner portion of the threshold-strip and renders it difficult for dirt to pass beneath the strip 1 and accumulate between the same and the threshold-strip. At the same time no shoulders or projections are left to retard the action of the broom and catch the dirt. The rolled outer edge 4 of the weather-strip, forming the fulcrum thereof, rests at its extreme end portions between the shallow vertical outer edge 6 of the threshold-strip and the door jambs or stops, as clearly shown in Figs. 2 and 3.

By the construction described the weather-strip, by reason of its being of slightly less length than the distance between the side members of the door-frame, can be lifted and entirely removed from place, there being no end pintles, pivots, or other devices which have to be primarily detached, loosened, or gotten rid of before the strip can be displaced. At the same time, when the strip has been removed, the threshold-strip presents no obstruction, there being nothing to mar the otherwise smooth upper surface of such threshold-strip except the extremely shallow recess which receives the horizontal portion or swinging end of the weather-strip.

The door has secured to its outer surface a horizontal metallic strip 7, having its upper edge inclined to shed water and offset below the inclined portion to form a housing for a strip of rubber or other soft resilient material 8, and the lower pendent edge of the strip 7 is deflected outward and downward, so as to overhang the weather-strip 1 when the door is closed and carry the drip outside of the swinging edge of the strip 1. The hinged

weather-strip 1 is engaged in the closing of the door by a trip-lever 9, fulcrumed on the door, and is lifted and forced outward against the stops of the door-frame, its upper edge engaging against the resilient strip 8 on the door and passing behind and beneath the lower pendent edge of the strip 7, thereby effectively excluding air and water.

The trip-lever 9 is in the form of an elbow-lever and is provided adjacent to its elbow with a perforated ear 10, which is offset slightly from the plane of the lever and seated in a shallow mortise in the outer surface of the door and arranged behind the resilient strip 8 and the metal strip 7. The trip-lever 9 is also provided adjacent to its elbow with a segmental slot 11, through which is passed a headed screw or pin which enters the door. The short pendent arm 13 of the trip-lever, when the latter is vibrated in one direction, extends below the bottom edge of the door and as the door is being closed engages beneath the swinging edge of the hinged strip 1 and lifts the latter. The threshold-strip 3 is provided with a facial groove 14, in which the extremity of the arm 13 travels. The long arm of the trip-lever is provided with an outwardly-projecting lip 15, adapted to be engaged by the hand for the purpose of vibrating the trip-lever and depressing or elevating the extremity of the short arm thereof, so as to bring the same either into or out of the plane of the hinged strip 1.

16 designates a trip which is secured to and carried by the door. It is in the form of an angular piece of metal, corresponding in shape to the metal strip 7 and secured against the outer surface thereof and projecting at its lower end below the bottom edge of the strip 7 sufficiently to engage positively the swinging edge of the hinged strip 1 when the door is opened. The trip 16 serves, in case the strip 1 has become frozen while the door is closed, to break down the weather-strip and allow it to descend to its normal position.

It will be apparent from the foregoing description that the trip-lever, by means of which the weather-strip may be thrown into or out of action, is located entirely beneath the stationary strip 7, where it is completely concealed from view when the door is closed, and this also affords another important advantage—viz., that the strip 7 may be made and is shown to be made continuous from end to end, thus obviating the necessity for any opening or aperture through which might pass an operating connection of the trip-lever, and which would also admit water, &c. The greatest advantage of the invention, however, resides in the feature of the removability of the strip 1, the facility with which it may be removed and the simplicity of such strip, and the manner in which it is seated.

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

1. A weather-strip formed from a sheet-metal blank of rectangular shape, bent to conform to the threshold and having one edge rolled upon itself to form a fulcrum terminating at the ends of the strip, the said strip being removably seated between the door-jambs, its ends being received in recesses in the door-stops, and the rolled edge being removably fitted between the threshold and door-stops, in combination with an adjustable trip-lever mounted on the door and adapted to be moved into and out of the normal plane of the free edge of the weather-strip, whereby said strip may be thrown into and out of action, substantially as described.

2. A weather-strip formed from a sheet-metal blank of rectangular shape, bent to conform to the threshold and having one edge rolled upon itself to form a fulcrum terminating at the ends of the strip, the said strip being removably seated between the door-jambs, its ends being received in recesses in the door-stops, and the rolled edge being removably fitted between the threshold and door-stops, in combination with an adjustable trip-lever mounted on the door and adapted to be moved into and out of the normal plane of the free edge of the weather-strip, and a horizontal strip on the door forming an overhanging water-table, the free edge of the weather-strip being received under said strip and the trip-lever being located entirely beneath the same when the door is closed, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

GUSTAV A. BYOR.
WILLIAM B. MAHAN.

Witnesses for Gustav A. Byor:
G. C. BAILEY,
C. W. BENSHOOF.
Witnesses for William B. Mahan:
S. BERRY,
JOHNSON LINDE.