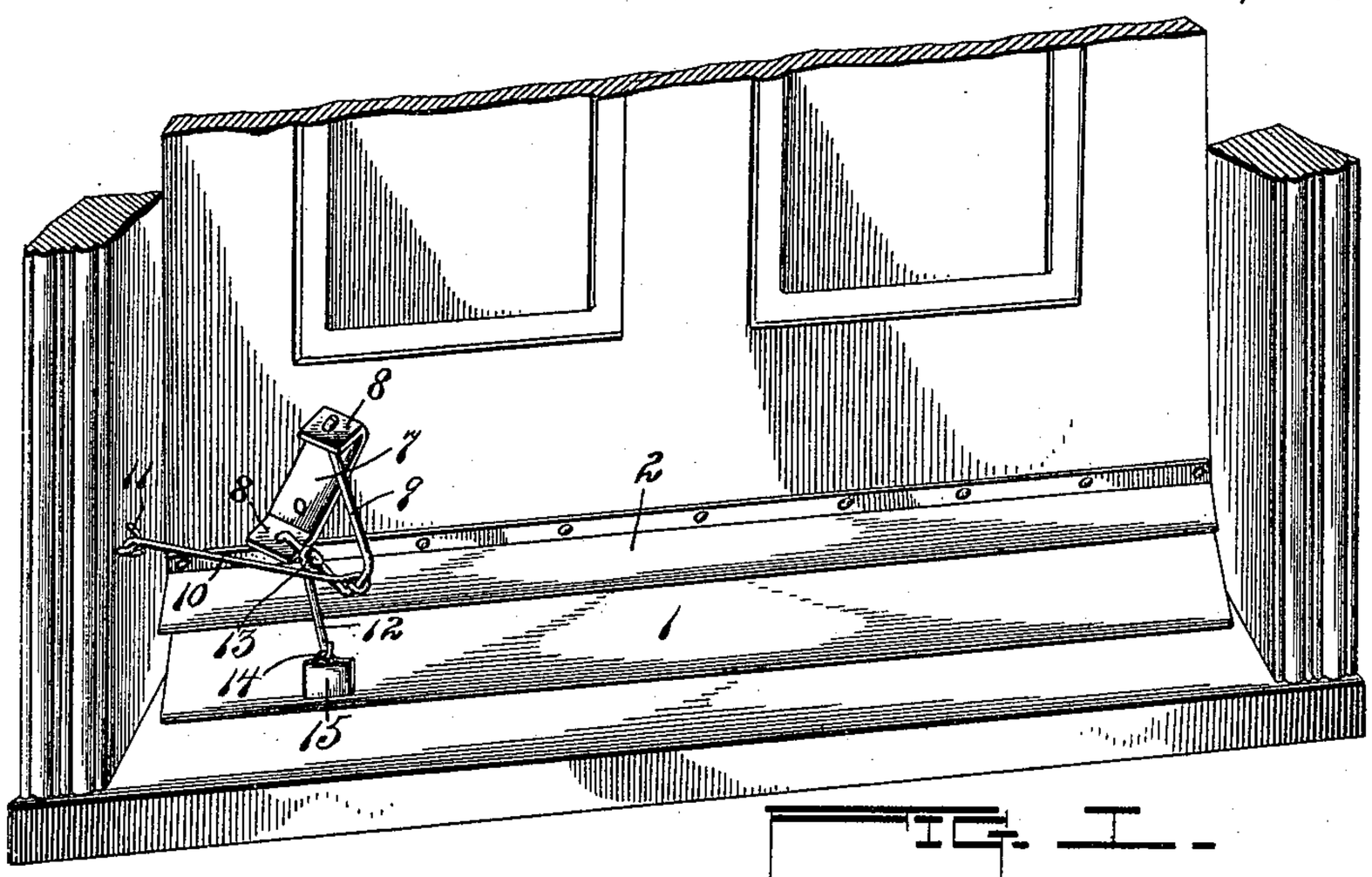
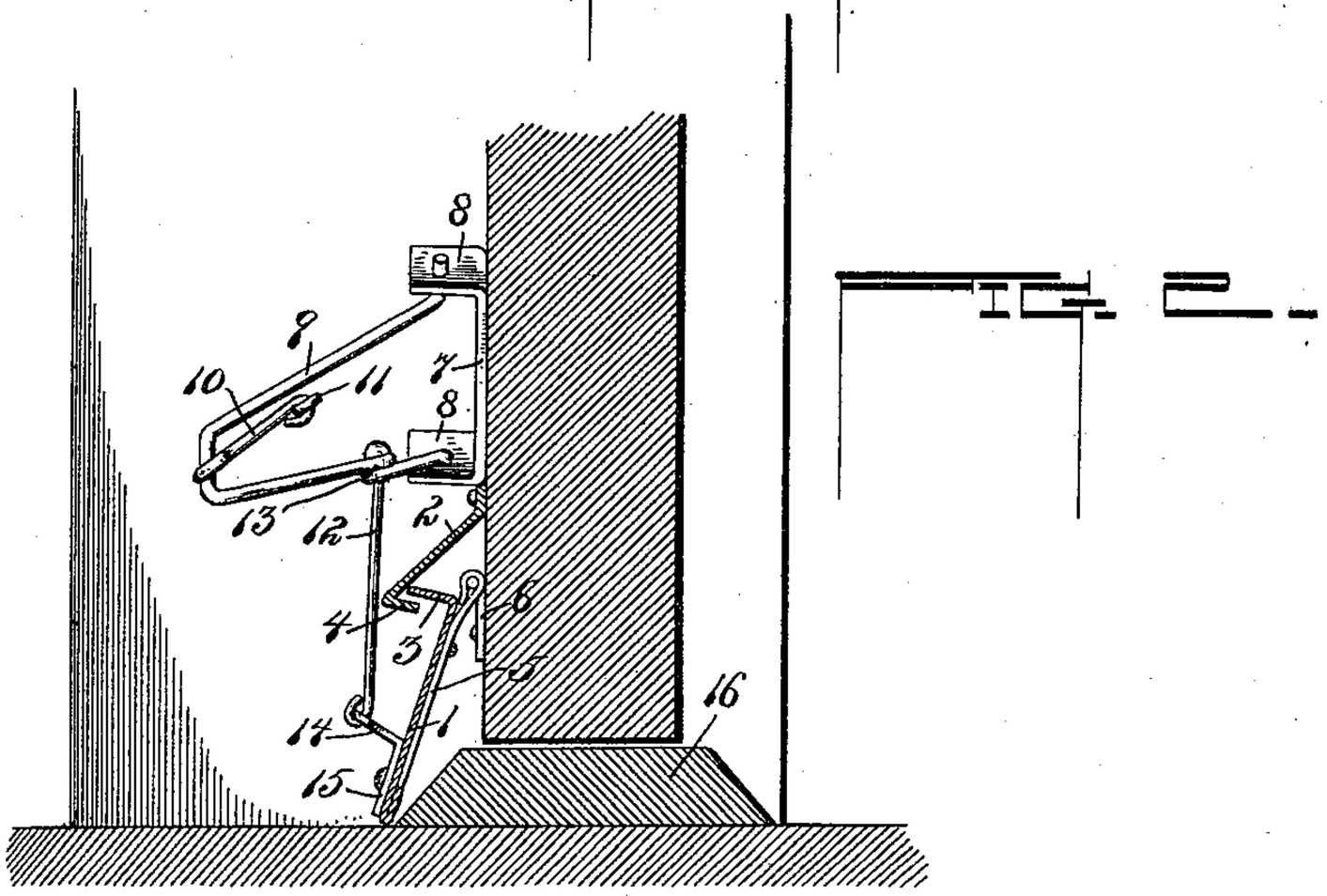
(No Model.)

C. S. ADAM.

WEATHER STRIP.

No. 583,834. Patented June 1, 1897.





Inventor

Witnesses
Milton O'Connell,
R. M. Smith.

Christopher S. Adam,
By his Attorneys,
Cachow & Co.

UNITED STATES PATENT OFFICE.

CHRISTOPHER S. ADAM, OF WHEATON, MINNESOTA.

WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 583,834, dated June 1, 1897.

Application filed July 22, 1896. Serial No. 600,122. (No model.)

To all whom it may concern:

Be it known that I, CHRISTOPHER S. ADAM, a citizen of the United States, residing at Wheaton, in the county of Traverse and State of Minnesota, 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, in connection with a hinged door, a swinging weather-strip hinged thereto and having connections interposed between it and the door and also between it and the door-jamb, the said connections being of such nature that as the door is swung open the weather-strip will be lifted clear of the threshold, so as to swing over the latter.

It is a further aim of this invention to so hinge and mount the weather-strip upon the door that when the door is closed said strip will be forced down against the sill with a spring-pressure, thus affording a close contact and effectually excluding moisture, &c.

A still further object of the invention is to provide means whereby the amount of lift or degree to which the strip may be elevated may be adjusted to suit uneven or worn thresholds or thresholds of different heights.

With the above objects in view 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 pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view showing the improved weather-strip applied to a door. Fig. 2 is an enlarged cross-section through the same.

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

1 designates the weather-strip proper, which is preferably formed from a strip of sheet metal having its bottom edge recurved upon itself to reinforce and stiffen the free edge of the strip. The upper edge is deflected outward at an acute angle to the main body of the strip, so as to interlock with and engage the similarly-bent lower edge of a stationary strip 2, secured fixedly to the door. The strip 2 is preferably made of spring metal, whereby it is adapted to act upon the outwardly-bent upper edge or flange 3 of the hinged strip 1 in such manner as to force the free edge of the strip 1 against the door-sill when the door is closed. At the same time the inbent edge or flange 4 of the strip 1 interlocks with the flange 3 and prevents the displacement of the hinged strip. The strip 1 is hinged directly to the door by means of metal bands or straps 5, which connect pivotally with plates 6 on the door, as shown.

Near the hinged edge of the door and located immediately above the stationary strip 2 is a bearing plate or bracket 7, having the ears 8, which are formed with openings to receive the oppositely-bent extremities of a U-shaped lever 9. A rod 10 connects at one end pivotally with the free end of said lever and is attached loosely at its opposite end by means of a staple or other suitable fastener 11 on the inner surface of the adjacent jamb of the door-frame.

12 indicates a link which connects at its upper end with the lever 9 at a point intermediate its fulcrum and free end, the said link being slidingly mounted in an eye 13 of the lever 9 and provided above said eye with a head for preventing the displacement of the link. At its lower end the link 12 passes through the perforated ear 14 of a plate or clip 15, attached to the hinged strip 1. The lower end of the link 12 is also hooked so as to engage the ear 14 when the link is lifted. The plate or bracket 7 is set obliquely, so as to adapt the lever 9 to swing on an oblique axis. By this arrangement as the lever is rocked it moves in a partly horizontal and partly vertical path and thereby lifts upon the link 12, causing the latter to elevate the free edge of the strip 1.

Upon opening the door the rod 10 serves to swing the lever 9, and the latter, as it swings, draws the link 12 upward and elevates the strip, so as to enable the latter to clear the threshold-strip 16. Upon closing the door after the free edge of the strip 1 has passed the threshold-strip the stationary strip 2 acts by its elasticity against the upper edge or flange of the hinged strip 1 to throw the free edge of the latter with a yielding pressure against the door-sill, thus establishing close contact with the sill and preventing the ingress of moisture, cold air, &c.

The improved weather-strip may be applied to any door, and by adjusting the angle of the plate or bracket 7 it will be seen that the height to which the free edge of the hinged strip may be elevated can be regulated to suit the particular threshold-strip over which the strip has to pass. It will also be understood that the device is susceptible of changes in the form, proportion, and minor details of construction, which may accordingly be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

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

1. The combination with a door, of a weather-strip hinged at its upper edge to the same, a lever located above the weather-strip and hinged at its inner end to the door, a rod extending from the outer end of the lever to the door-frame and hinged to both of said parts to form a permanent connection between the lever and the door-frame, and a link depending from the lever at a point between the ends thereof and connected with and suspending the weather-strip from the lever, substantially as described.

2. The combination with a door, of a weather-strip hinged thereto, a lever fulcrumed on the door and moving about an oblique axis, a link interposed between the hinged strip and said lever and having a sliding connection with one of the said parts, and a rod interposed between said lever and the door-frame, substantially as described.

3. The combination with a door, and a weather-strip hinged thereto, of a lever fulcrumed on the door and moving about an oblique axis, a link interposed between and connecting said hinged strip and lever, and a rod interposed between said lever and the door-frame, substantially as and for the purpose described.

4. The combination with a door, of a weather-strip hinged at its upper edge to the same and provided with a forwardly-extending flange located below and being entirely independent of the hinge-joint, a stationary outwardly-extending spring-strip secured to the door and located above the weather-strip, said spring-strip being provided at its lower edge with an inwardly-extending flange arranged to engage and interlock with the flange of the weather-strip when the door is closed, and located beneath the flange of the weather-strip, whereby it is adapted to release the same as the door opens, substantially as described.

5. The combination with a door, of an inclined bearing-bracket secured to the door and provided with ears, a substantially U-shaped lever fulcrumed on said ears, extending outward from the door and moving about an oblique axis, said lever being provided at its lower side with an eye, a weather-strip hinged to the door, a rod connected to the weather-strip and extending through the lever and provided with a head, and a rod extending from the lever to the door-frame, substantially as described.

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

CHRISTOPHER S. ADAM.

Witnesses:
O. H. HUBBARD,
GRACE WARREN.