(No Model.) 2 Sheets—Sheet 1.

H. BALLHEIM.

WEATHER STRIP.

No. 551,250. Patented Dec. 10, 1895.

Fig. 1.

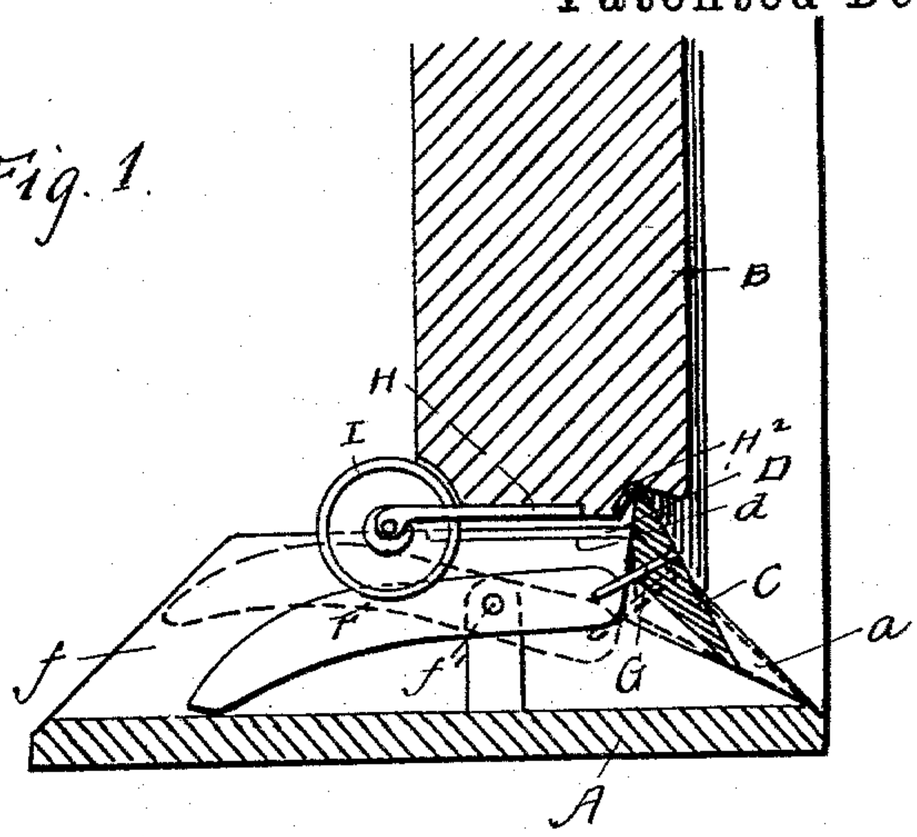
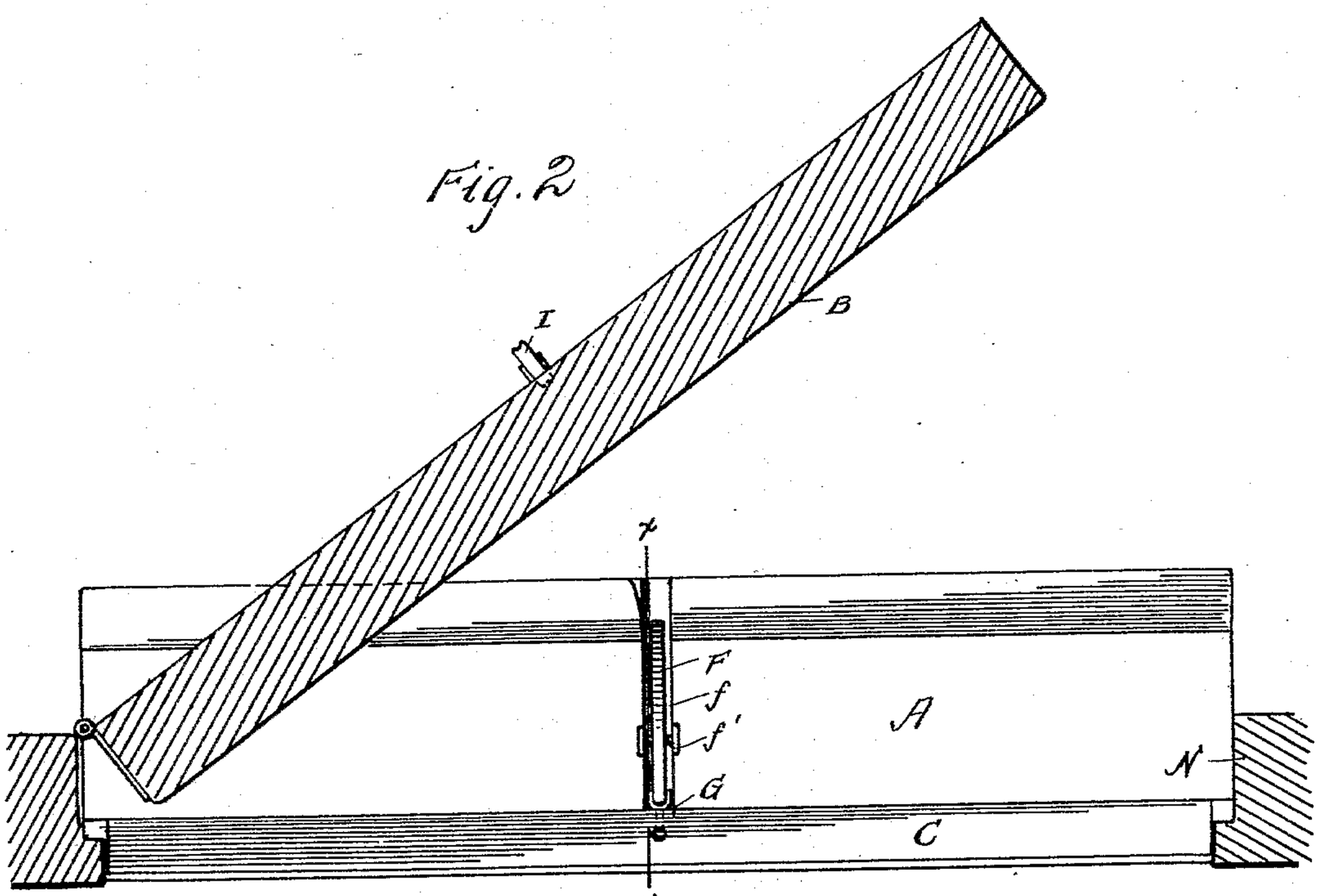


Fig. 2.



WITNESSES

Geo. M. Anderson

Philip Lemasi.

INVENTOR

Henry Ballheim

by E. W. Anderson

his Attorney

(No Model.) 2 Sheets—Sheet 2

H. BALLHEIM.

WEATHER STRIP.

No. 551,250. Patented Dec. 10, 1895.

Fig. 3.

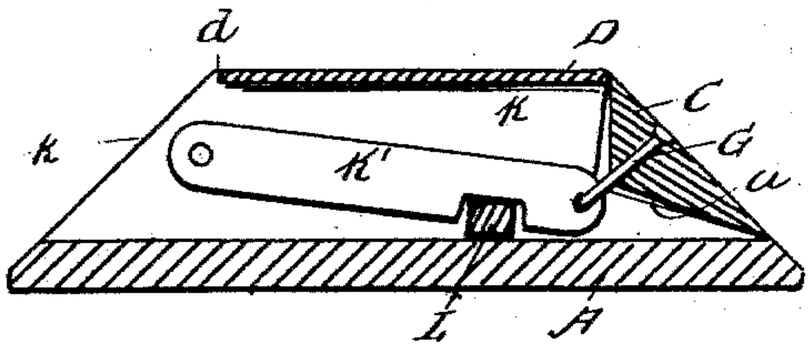


Fig. 4.

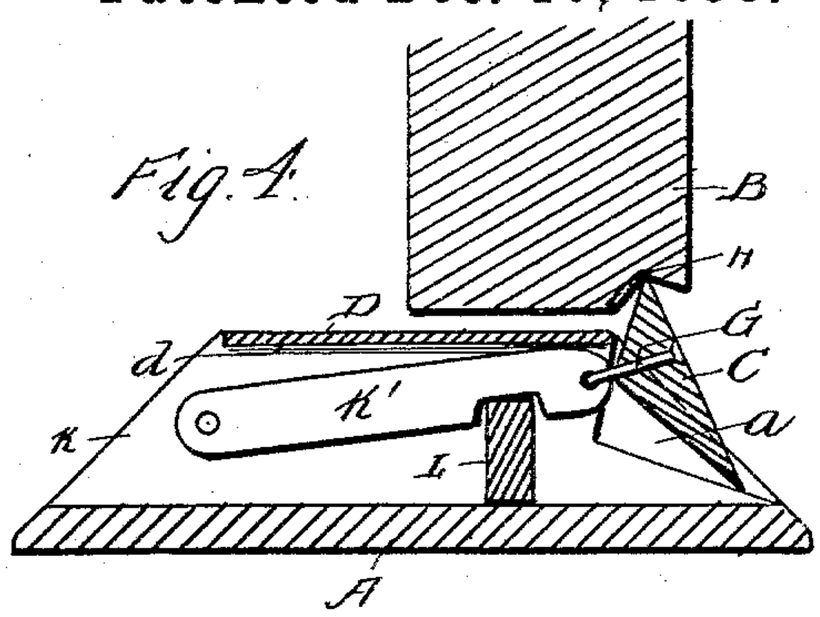


Fig. 5.

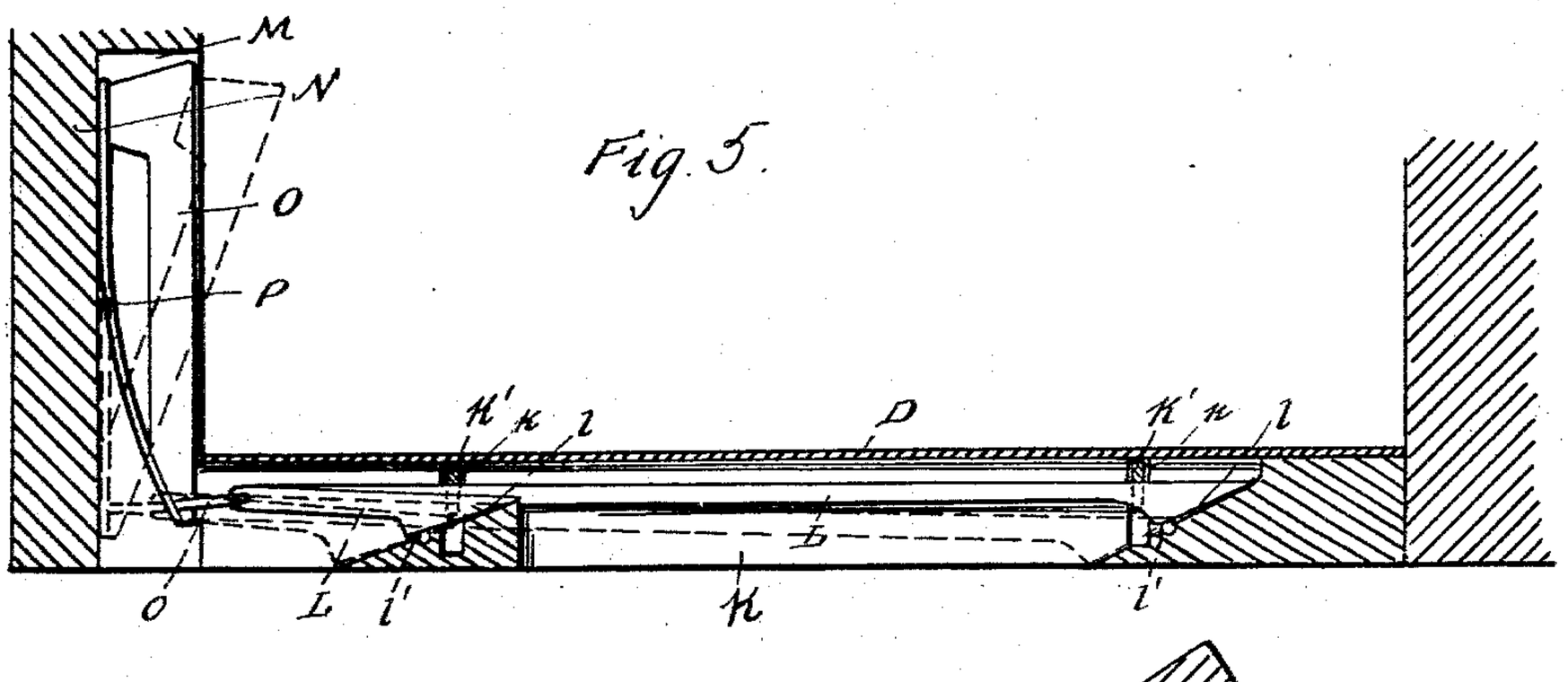
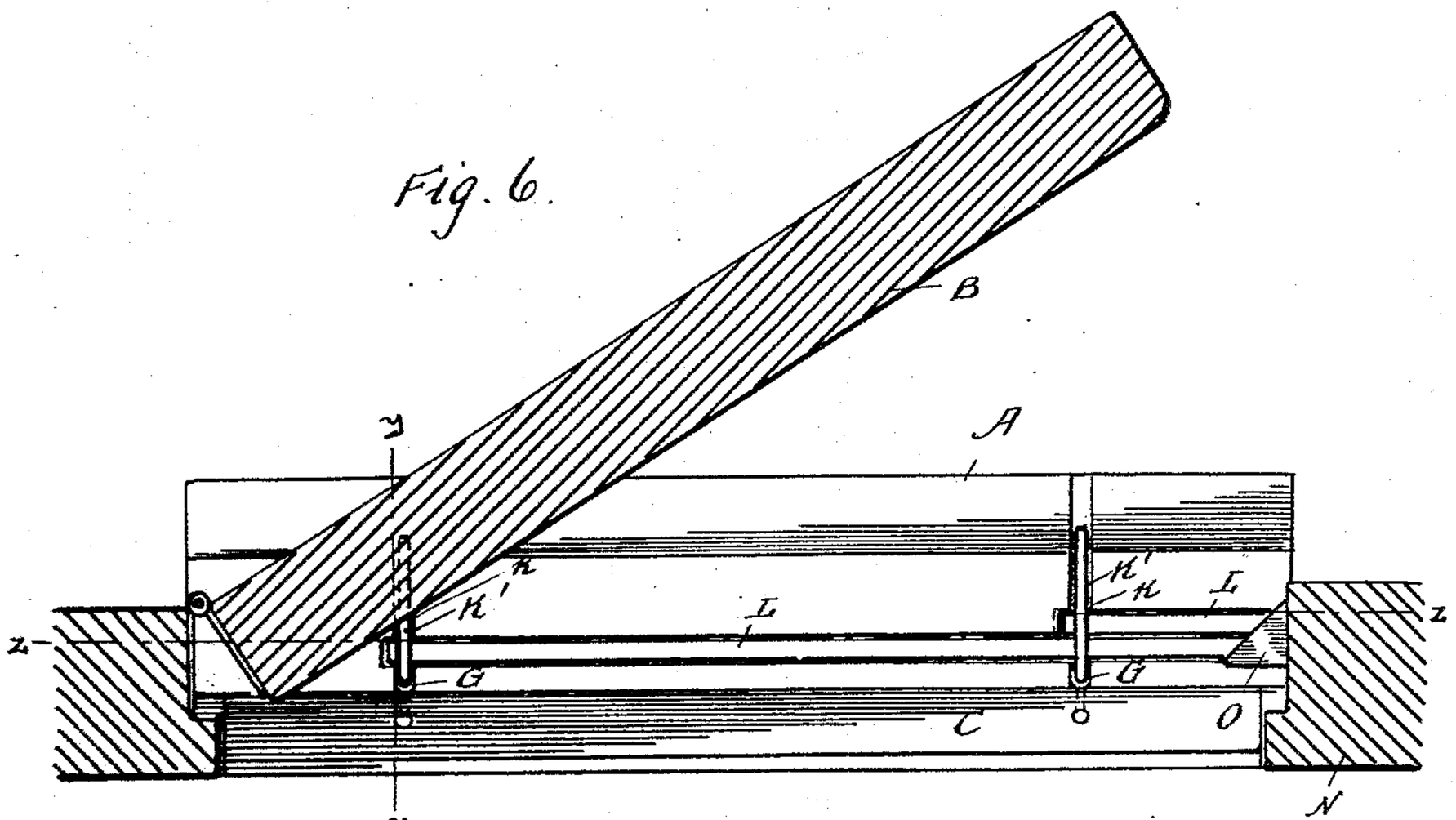


Fig. 6.



WITNESSES

Geo. H. Anderson

Phillemasi.

INVENTOR

Henry Ballheim

by E. W. Anderson

his Attorney

UNITED STATES PATENT OFFICE.

HENRY BALLHEIM, OF LA PORTE, IOWA.

WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 551,250, dated December 10, 1895.

Application filed June 11, 1895. Serial No. 552,459. (No model.)

To all whom it may concern:

Be it known that I, HENRY BALLHEIM, a citizen of the United States, and a resident of La Porte, in the county of Black Hawk and State of Iowa, have invented certain new and useful Improvements in Weather-Strips; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a section on line *x x*, Fig. 2, the door being closed and the released position of lever shown in dotted lines. Fig. 2 is a plan view of threshold with invention applied thereto, plate D being removed and door and casing in section. Fig. 3 is a section on line *y y*, Fig. 6, door being open. Fig. 4 is a similar view with door closed. Fig. 5 is a section on line *z z*, Fig. 6, with parts in positions they would assume were door closed, released position shown in dotted lines. Fig. 6 is a plan view of threshold with invention applied thereto, plate D being removed and door and casing in section.

The object of this invention is to provide a weather-strip for doors, which is an effectual protection against the entrance of wind, rain, snow and dust, and which is simple in its construction and unobjectionable in appearance when the door is opened.

With this object in view the invention consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims.

Referring to the accompanying drawings, the letter A designates the threshold of a door and B the door. In the outer portion of the threshold is cut a rabbeted seat *a*, which extends the full width of the door. The bottom wall or face of this seat is downwardly and outwardly inclined and the vertical wall is undercut as indicated, being perpendicular, or substantially so, to the bottom wall. C is a transverse bar, preferably of iron, having inclined faces. This bar, when the door is closed, fits neatly in this seat *a*, its upper inner corner extending slightly above the upper edge of the vertical wall thereof, but seating evenly with the forward edge of a transverse flat surface-plate D, which is secured to the threshold in a rabbeted seat *d*. This plate D, together with a threshold, is cut or slotted at the center, as at *f*, and within the slot of the threshold is a lever F, which is fulcrumed at *f'* in a lug or bracket *c*. The forward and short arm of the lever is connected to the central portion of a bar C, as indicated at G. This connection G is rigid with the bar C, but is loosely engaged by the said lever.

H is a bracket or plate which is rigidly secured to the lower edge of the door at the central portion thereof, and to the rear portion of this plate, which projects slightly beyond the inner edge of the door, is journaled a roller I, which, as the door closes, travels in contact with the long arm of the lever F and depresses the same.

The outer bottom portion of the door has cut therein a transverse recess or rabbet, whose upper wall is inclined outward and downward and whose back wall is inclined upward and forward. H^2 is a strip or flap usually of leather, which is attached to the door within this recess.

As the door closes, the contact of the roller I with the arm of the lever F raises the short arm of said lever and thereby the bar C, and the latter is projected into the recess or rabbet I of the door against the flap H^2, making a neat and close joint therewith and effectually excluding the entrance of dust or of the elements. When the door is opened, the bar C drops back into its seat in the threshold by its own gravity.

In Figs. 3, 4, 5, and 6 I have shown other means by which the bar C may be raised into operation by the closing of the door, dispensing with the roller I. In this form of the invention, I form in the threshold a longitudinal slot K, which extends from the hinge side of the door to the center of the threshold and communicates with the slots *k* in which are fulcrumed levers K', one near each end of said slot K. In the slot K are placed two endwise-slidable bars L, whose forward ends are beveled on the under side, as indicated at *l*, and are provided with bearings *l'* in the said slot. These bars extend underneath the levers K', as shown in the drawings.

Seated in a vertical slot or recess M in the

jamb N at the hinged side of the door is a lever O, which has a connection at *o* with the bars L. A spring P holds the upper arm of the lever O projected beyond the face of the jamb N, when the door is open. When the door is closed this lever is pushed back into the slot M, and the bars L are moved toward the center of the door, thereby raising the levers K′ and the bar C. As soon ar the door is opened the spring P returns the parts to their first position.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a weather strip, the combination with a threshold having the surface plate D, and the rabbeted seat *a*, of the solid, triangular gravity-seating bar C, which is arranged to fit the said seat neatly when the door is open, and which makes an even joint when seated with the forward edge of the said plate D, a lever fulcrumed within a slot of said threshold transversely of its length, and a connection between one arm of the said lever and said bar, said connection being rigid with the said bar, but loosely attached to said lever, together with means on the door capable of engaging and operating the said lever, substantially as specified.

2. The combination with the threshold having the surface plate D, and the rabbeted seat *a* which extends the full width thereof and has its vertical wall undercut and its bottom wall inclined outward and downward, of the solid bar C of triangular cross section and adapted to fit neatly the said rabbet the upper surface of said bar being arranged to seat flush with the said surface plate when the door is open, a lever pivoted in said threshold and extending at right angles thereto, a connection between the said lever and the said bar said connection being rigid with the said bar but loosely engaged by the said lever, and means operated by the closing of the door whereby the said lever is actuated to raise the said strip, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY BALLHEIM.

Witnesses:

VALENTINE BALLHEIM,

JACOB ANTON.