(No Model.)

A. E. DUNCAN.

WEATHER STRIP.

No. 365,434. Patented June 28, 1887.

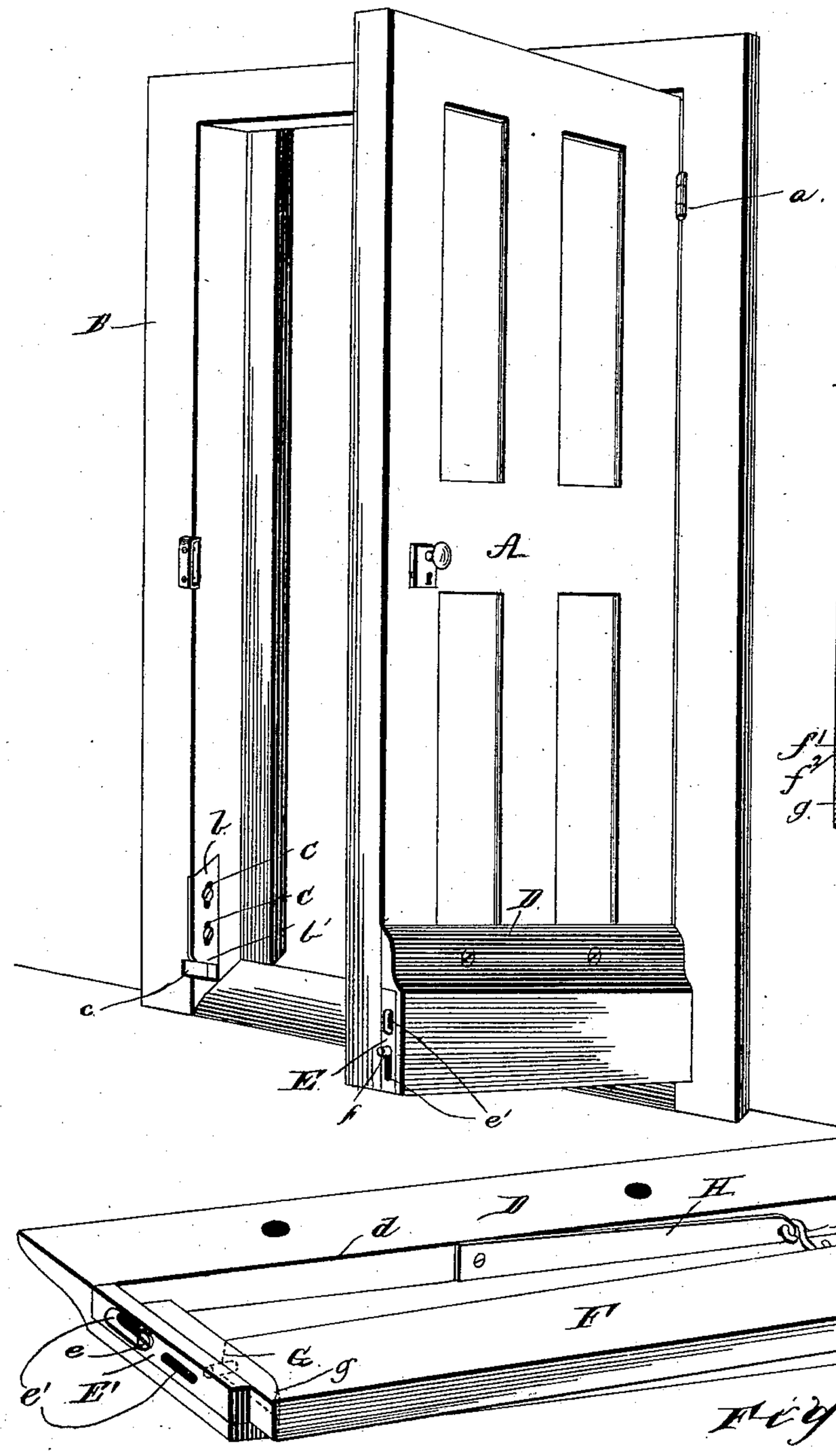

Fig. 1.

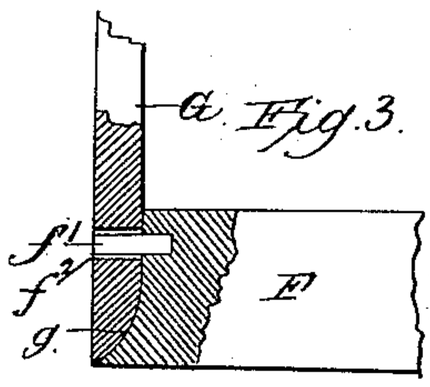

Fig. 3.

Fig. 2.

Witnesses
Geo. Hopper.
R. H. Bishop.

Inventor
Albert E. Duncan

By his Attorneys,
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

ALBERT E. DUNCAN, OF LYONS, IOWA, ASSIGNOR OF ONE-HALF TO JOHN J. REED, OF SAME PLACE.

WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 365,434, dated June 28, 1887.

Application filed March 5, 1887. Serial No. 229,833. (No model.)

To all whom it may concern:

Be it known that I, ALBERT E. DUNCAN, a citizen of the United States, residing at Lyons, in the county of Clinton and State of Iowa, have invented a new and useful Improvement in Weather-Strips, of which the following is a specification.

My invention is an improved weather-strip for doors; and its object is to provide a device which will be simple in construction and efficient in operation; and the novelty consists in certain features of the construction, shown in the accompanying drawings, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a door provided with my improvements, the door being opened so as to show the guide-plate or trip on the door-frame; and Fig. 2 is a perspective of the weather-strip and its casing detached from the door. Fig. 3 is a detail view.

Referring to the drawings by letter, A designates the door, and B the door-frame. The door is hung upon the door-frame by means of hinges *a*, in the usual manner, and to the opposite side of the door-frame, upon its inner face, I secure the guide-plate or trip *b*. This trip *b* is set in a recess in the side of the frame, and consists of a metal plate having its lower edge, *b'*, inclined downwardly from front to rear, and it is secured in place by screws passed through slots C. An inclined groove, *c*, is formed in the face of the door-frame just below the trip, the upper edge of the groove coinciding with the lower edge of the trip.

D is an inclosing-case secured to the side of the door near its lower edge, as shown. The rear side of this inclosing-case is hollowed out or cut away, so as to form the shoulder *d*, extending entirely across the same and at the end edges of the case. Extending from this shoulder *d* to the bottom of the case I secure the slotted plates E E'. The weather-strip F is held between these slotted plates E E', and its outer end, or end nearest the swinging edge of the door, is provided with a pin, *f*, which projects through the slotted plate E and engages the lower inclined edge of the trip *b* in the operation of the device. The opposite end of the weather-strip is pivotally secured to a plate, G, which is adjustably secured to the plate E' by means of a screw, *e*, passed through the slots in said plate into the plate G. The weather-strip is pivoted by means of a pin, *f'*, secured in the end thereof and inserted in an enlarged socket, f^2, in the plate G, as clearly shown in Fig. 3. The lower end or edge, *g*, of this plate is rounded, as shown, and the inner end of the weather-strip is also rounded, so as to turn easily thereon.

It will be observed that I have shown the plate E' as provided with two slots, *e'*, through one of which the screw *e* is passed to secure the block G. In practice, a single screw will be generally found sufficient to secure this block G; but it may sometimes be found desirable to employ two screws, one passed through each slot.

In order to facilitate and cheapen the manufacture of my device, I form the plates E with two slots, *e'*, also, although only one is necessary.

H is a leaf-spring having one end permanently or rigidly secured to the under side of the shoulder *d*, its free end extending toward the swinging edge of the door, and I is a link connecting the free end of the spring with the upper side of the weather-strip.

In operation the block or plate G is adjusted to such a position that the inner end of the weather-strip will always rest against the floor or door-sill. The spring H will hold the outer end of the weather-strip off the floor when the door is opened, and when the door is closed the spring will hold the pin *f* against the inclined lower edge of the trip *b*, so that the weather-strip will be forced positively downward and caused to bear against the floor or door-sill with certainty when the door is closed.

The arrangement of devices just described, operating as set forth, prevents the weather-strip being broken when the door is opened, and as the parts are all adjustable, they can be readily shifted so as to compensate for wear.

The weather-strip can be secured in the lower edge of the door by forming a recess therein and securing the plates E E' to the side edges of the door; but I prefer the arrangement shown and hereinbefore described.

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

1. The combination of the casing, the plates E E′ at the ends thereof, the adjustable block G, secured to the inner face of the plate E′, the weather-strip supported by and between the block G and the plate E, and a spring holding the weather-strip normally off the floor, substantially as set forth.

2. The combination of the casing having the shoulder *d* on its inner side extending entirely across the same, the plates E E′ at the ends thereof, the adjustable block G, secured to the inner face of the plate E′, the weather-strip supported by and between the block G and the plate E, and a spring having one end secured to the under side of the shoulder *d* and its other end connected with the weather-strip, substantially as specified.

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

ALBERT E. DUNCAN.

Witnesses:
ABBOTT A. ROOT,
SAMUEL C. SCOTT.