

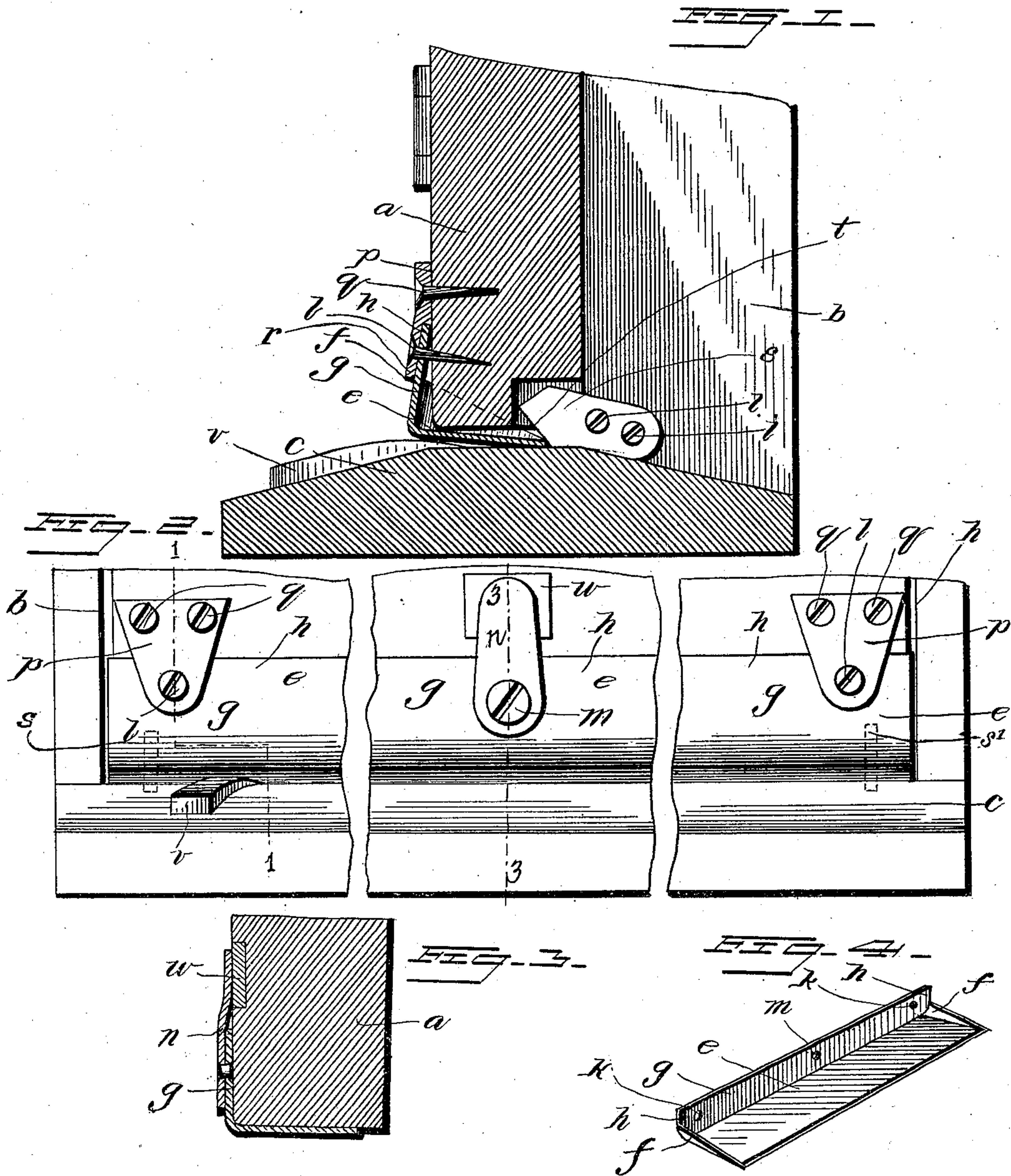
No. 711,491.

Patented Oct. 21, 1902.

B. F. GRANDSTAFF.  
WEATHER STRIP.

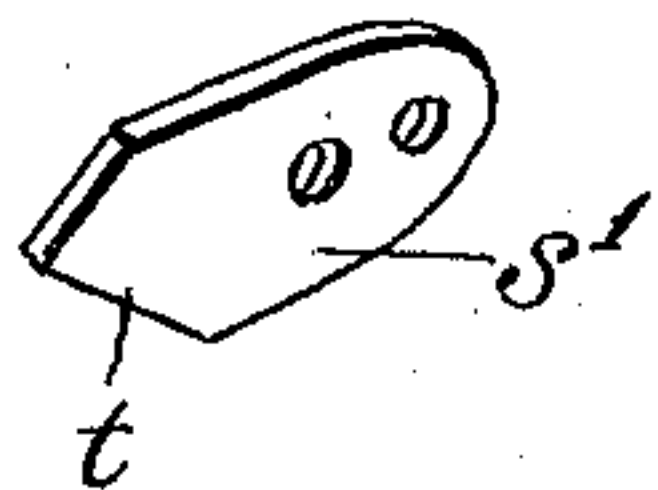
(Application filed Apr. 9, 1902.)

(No Model.)



Witnesses:

R. A. Boswell.  
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Inventor.

B. F. Grandstaff,

By

E. M. Anderson  
his Attorney.



# UNITED STATES PATENT OFFICE.

BENJAMIN FRANKLIN GRANDSTAFF, OF PERU, INDIANA.

## WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 711,491, dated October 21, 1902.

Application filed April 9, 1902. Serial No. 102,113. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN FRANKLIN GRANDSTAFF, a citizen of the United States, and a resident of Peru, in the county of Miami and State of Indiana, have made a certain new and useful Invention in Weather-Strips; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, 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 the line 1 1, Fig. 2, showing the invention as applied with the weather-strip in lowered position. Fig. 2 is a front elevation of the invention as applied, parts being broken away. Fig. 3 is a section on the line 3 3, Fig. 2, with the weather-strip in raised position. Fig. 4 is a detail perspective view of the strip proper. Fig. 5 is a detail view of the guide-block *s'*.

The invention has relation to weather-strips for the bottoms of doors; and it consists in the novel construction and combinations of parts, as hereinafter set forth.

In the accompanying drawings the letter *a* designates a door, *b b* the door-jamb at the sides, and *c* the sill or carpet-strip at the bottom of the doorway.

*e* is the weather-strip, which is designed to extend under the bottom of the door. It is made of metal and is formed with upturned end flanges *f*, connected at their inner ends with an upturned back flange *g*, which extends farther upward than the tops of the end flanges, this extension *h* being perforated at *k k* for the passage of the hinge-pins *l l* and at *m* for the attachment of the plate-spring *n* to the door.

*p p* indicate plates or castings, each of which is perforated through its upper and vertical portions for the reception of screws *q*, whereby it is secured to the inside face of the door at or near its bottom. Below this vertical portion each plate has an inclined lug or flange *r*, which is perforated for the passage of the hinge pin or screw *l*. Between the lug or flange *r* and the face of the door is an angular interval, which allows play to the back flange of the weather-strip.

The lifting-spring *n* is normally bent at its middle portion and is riveted to the middle of the weather-strip flange in such wise that its upper portion or tongue projects upward above the flange and engages a wear-plate *w*, which is let into the bottom of the face of the door. This spring *n* serves normally to hold the weather-strip up, so that it will clear the carpet in passing over the same when the door is opened.

Near the inner end or hinge side of the sill-strip *c* is provided a beveled wear-plate *v*, which serves to raise the weather-strip in a positive manner when the door is being opened or closed to the proper height to pass over the sill-strip without striking the same.

At the bottom of the inner or hinge jamb of the doorway is secured a guide-block *s*, the inner end of which is formed with an oblique downward bevel on its under side, as indicated at *t*, the beveled end serving to engage the free edge of the weather-strip at its inner end portion and force such edge down into close engagement with the sill.

At the bottom of the outer jamb of the doorway is secured a bevel-end guide-block *s'*, which when the door is closed engages the edge of the weather-strip at its outer end portion and serves also to force its free edge down to close engagement with the sill.

In this wise it is designed to provide a closely-engaging weather-strip which when the door is closed will not only be securely pressed against the sill, but also will be tightly pressed by its back flange against the bottom of the inner door-face, and its ends being flanged will cover in the ends of the bottom of the door, thus preventing entrance of water at the ends of the strip and serving as stiffening-ribs.

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

1. The combination with a door and the sill of the doorway, of a hinged weather-strip having the upturned back flange provided with perforations for the hinge-pins, the wear-plate upon the door and the plate-spring secured to the back flange and bearing at its upper end upon said wear-plate, substantially as specified.

2. The combination with a door, of the

weather-strip having end flanges and an extended back flange, the door-plates having inclined flanges or lugs forming angular intervals between themselves and the face of the door, the hinge-pins passing through said lugs and weather-strip, the wear-plate in the door, and the plate-spring connected to the middle of the weather-strip and engaging said wear-plate, substantially as specified.

3. A weather-strip of metal, having the upturned end flanges, and the upturned back

flange connected to said end flanges, the upward extension of said back flange perforated for the hinge-pins, and the bent spring secured to the middle of said back flange, substantially as specified.

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

BENJAMIN FRANKLIN GRANDSTAFF.

Witnesses:

C. E. GRANDSTAFF,  
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