

I. H. ATHEY.
 WEATHER STOP FOR DOORS AND THE LIKE.
 APPLICATION FILED AUG. 2, 1911.

1,063,635.

Patented June 3, 1913.
 2 SHEETS—SHEET 1.

Fig. 1

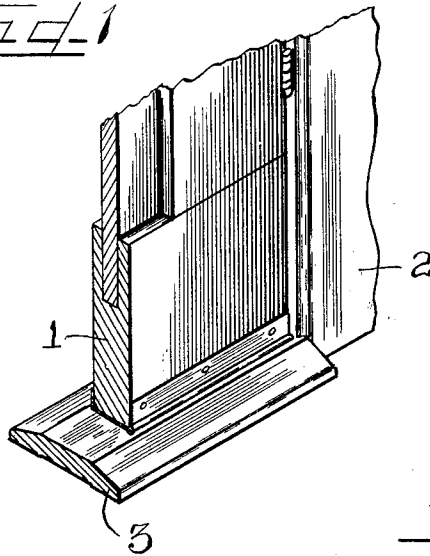


Fig. 2

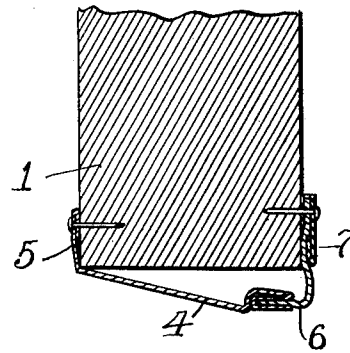


Fig. 5

Fig. 3

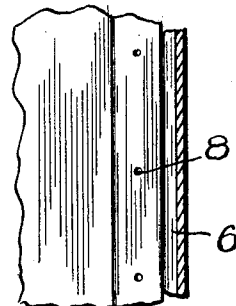
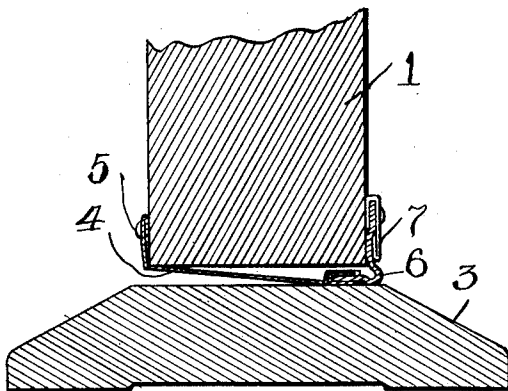
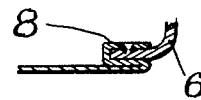


Fig. 4



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WITNESSES

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Fig. 6

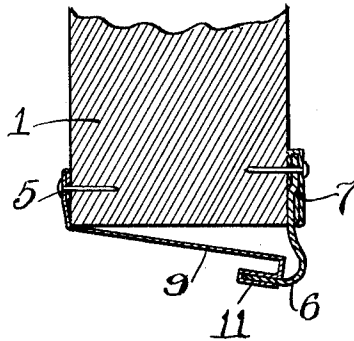


Fig. 9



Fig. 7

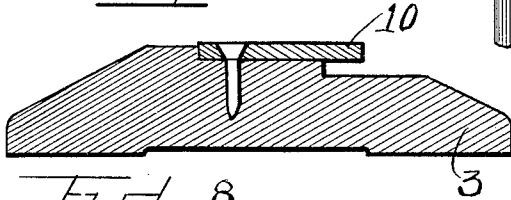


Fig. 8

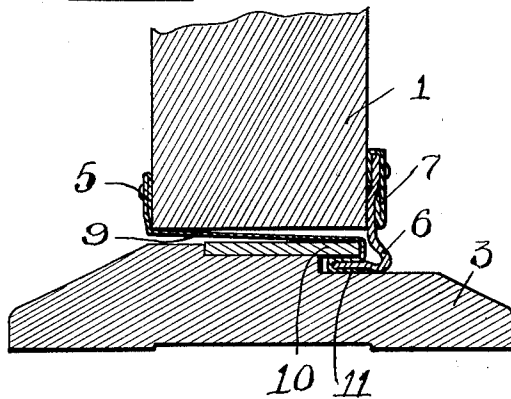
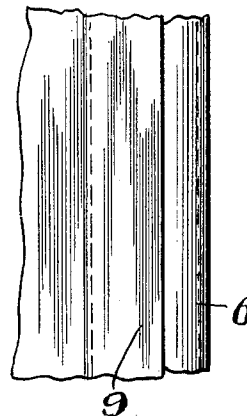


Fig. 10



WITNESSES

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UNITED STATES PATENT OFFICE.

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WEATHER-STOP FOR DOORS AND THE LIKE.

1,063,635.

Specification of Letters Patent.

Patented June 3, 1913.

Application filed August 2, 1911. Serial No. 642,026.

To all whom it may concern:

Be it known that I, ISAAC H. ATHEY, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Weather-Stops for Doors and the Like; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the numbers of reference marked thereon, which form a part of this specification.

Difficulty has heretofore existed in applying a weather stop to a door bottom in such a manner as to prevent the wind and dust from blowing beneath the same.

Furthermore, during rainstorms, the rain beating against the outer face of the door, is drawn inwardly beneath the same by the inflowing current of air, frequently causing considerable damage.

The object of this invention is to afford a weather guard adapted for application to door bottoms, the bottoms of swinging windows or analogous structures, which prevents the inflow of air beneath the door, and, of course, thereby prevents the admission of dust or water.

It is also an object of the invention to afford a construction in which a resilient member is secured to the door to engage yieldingly against the threshold or floor and in which a flexible material acts in conjunction therewith to afford a yielding, soft packing, which fits snugly to the floor or threshold and prevents the admission of air between the same and the door.

It is also an object of the invention to afford a construction in which a yielding spring plate is engaged on one side the door and a resilient and flexible packing strip is secured on the other and connected with a spring plate to afford a double packing and closure for the space beneath the door.

The invention consists in the matters hereinafter described and more fully pointed out and defined in the appended claims.

In the drawings: Figure 1 is a fragmentary perspective view in section illustrating the application of a weather guard or stop embodying my invention, to a door. Fig. 2 is an enlarged, fragmentary, vertical section taken through the bottom rail of the door

and the weather guard and showing the same as when the door is open. Fig. 3 is a similar view showing the same with the door closed. Fig. 4 is a fragmentary, transverse section illustrating the connection between the resilient bottom plate and packing strip and showing the same inverted. Fig. 5 is a fragmentary top plan view thereof, with the packing strip in section. Fig. 6 is a view similar to Fig. 2, and illustrating an application of the embodiment of my invention in connection with a threshold plate. Fig. 7 is a transverse section of the threshold and plate. Fig. 8 is a sectional view of the construction illustrated in Figs. 6 and 7, and showing the door closed. Fig. 9 is a top plan view of the threshold and threshold plate. Fig. 10 is a fragmentary bottom plan view of the weather guard and strip shown in Figs. 6 and 8.

As shown in the drawings: 1, indicates the bottom rail of the door; 2, the hanging casing toward which the door swings; 3, indicates the threshold, which may be of any desired kind, and a resilient or spring bottom plate 4, is secured beneath the door for the entire width of the door, and as shown, is comprised of a thin plate of metal provided on the outer side the door with an upwardly directed flange 5, whereby the same may be rigidly secured to the outer side of the door. Said plate is of a width to extend from a point beneath the inner edge of the door, and along its edge is folded longitudinally upon itself twice to afford an inwardly directed recess between said two folds to receive therein the lower edge or margin of a strip 6, of buck-skin or any suitable packing material, the other margin of which is rolled or in any suitable manner secured to, or engaged by a metallic strip 7, and is secured therethrough to the bottom rail. The width of said flexible strip 6, is such as to cause the same to be flexed, as shown in Fig. 3, when the resilient plate 4, is sprung upwardly by engagement on the threshold, thereby affording a non-metallic packing strip which bears on the threshold or floor along the inner edge of the resilient plate 4.

The margin of the packing strip 6, may be secured in the fold or bend of the plate 4, as shown in Fig. 4, that is to say, the metal on one or both sides the strip may be perfo-

rated and the cut edges driven inwardly as indicated at 8, thereby positively engaging the packing strip in place therein.

The construction illustrated in Figs. 6 to 10 inclusive is as before described, except that the resilient plate 9, which corresponds with the resilient plate 4, is bent or folded at its free edge to afford a recess to receive a sill or threshold plate 10, therein, as shown in Fig. 8. For this purpose, the resilient plate is folded as before described, except that the inner fold is spaced a sufficient distance from the body of the plate 9, to afford a sufficiently wide recess to receive the edge of the plate 10, while the outer folds of said plate having the margin of the flexible strip 6, engaged therein, affords a tongue 11, which fits into a recess in the threshold below said threshold plate, as shown in Fig. 8. The engagement of the flexible strip 6, therewith and with the bottom rail of the door is as before described.

The operation is as follows: As the door swings outwardly on its hinges, the resilient plate at its free edge, engages on and slides upwardly over the threshold into the position shown in Figs. 3 or 8, with the resilient packing strip 6, flexed thereby and bearing along the inner length of the threshold between the door jambs, and acting, together with the engagement of the metallic resilient strip on the threshold, to afford a tight packing which prevents wind blowing beneath the same, and, of course, excluding thereby rain and dust.

Usually the material employed for the resilient packing strip is buck-skin or chrome leather, but any suitable flexible material capable of withstanding the slight wear occasioned by the engagement with the threshold may be substituted therefor.

Of course, I am aware that details of the construction may be varied, and I therefore do not purpose limiting myself in the patent to be granted on this application, otherwise than necessitated by the prior art.

I claim as my invention:

1. A weather guard for swinging doors embracing a resilient plate or strip adapted to be engaged near the outer side of the bottom rail of the door and extending beneath the door, and a flexible strip secured on the bottom rail near the inner side of the door and permanently secured to the inner edge of said resilient plate, and of a width to afford a packing strip between the inner side of the door and the threshold when the door is closed.

2. A weather guard for swinging doors embracing a resilient plate or strip adapted to be engaged on the bottom rail of the door near the stop side thereof and extending be-

neath the door, and a flexible strip such as leather secured on the bottom rail at the opposite side of the door and permanently secured on the inner edge of said plate, and of a width to fold as a packing strip between the inner side of the door and the threshold.

3. A weather guard for swinging doors embracing a resilient plate or strip adapted to be engaged on the stop side of the bottom rail of the door and extending beneath the door, and obliquely downwardly to engage on the threshold, and a flexible non-metallic strip secured on the bottom rail at the inner side of the door and folded into the inner edge of said resilient plate, and of a width to afford a packing strip between the inner side of the door and the floor.

4. A weather guard for swinging doors embracing a resilient strip of sheet metal engaged near the outer side of the bottom rail of the door, and extending beneath the door inwardly and downwardly to engage the threshold, a strip of leather secured on the bottom rail at the inner side of the door and permanently secured and folded into the inner edge of said resilient strip and of a width to afford a packing strip between the inner side of the door and the threshold, and a metal binding strip folded onto the upper edge of said strip and affording a finish.

5. A weather guard for doors embracing a resilient plate engaged near one side of the bottom rail of the door and extending obliquely inwardly to engage the threshold when the door is closed and a flexible strip having one edge secured on the other side of the bottom rail of the door and the other edge secured to the inner edge of the resilient plate to afford a packing.

6. A weather guard for doors embracing a resilient plate provided with an upwardly directed flange adapted to be engaged on the outer side of the bottom rail of the door, a flexible strip having one of its edges secured to said resilient plate, and the other edge secured to the inner side of the bottom rail of the door, and a binding strip secured to the free edge of said strip to afford a finish.

7. In a weather guard for doors, a resilient plate engaged near one side of the bottom rail of the door and extending obliquely inwardly to engage the threshold when the door is closed, and a flexible member secured to the plate and door to support said plate when not in operation.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

ISAAC H. ATHEY.

Witnesses:

CHARLES W. HILLS, Jr.,
GEORGE R. MOORE.