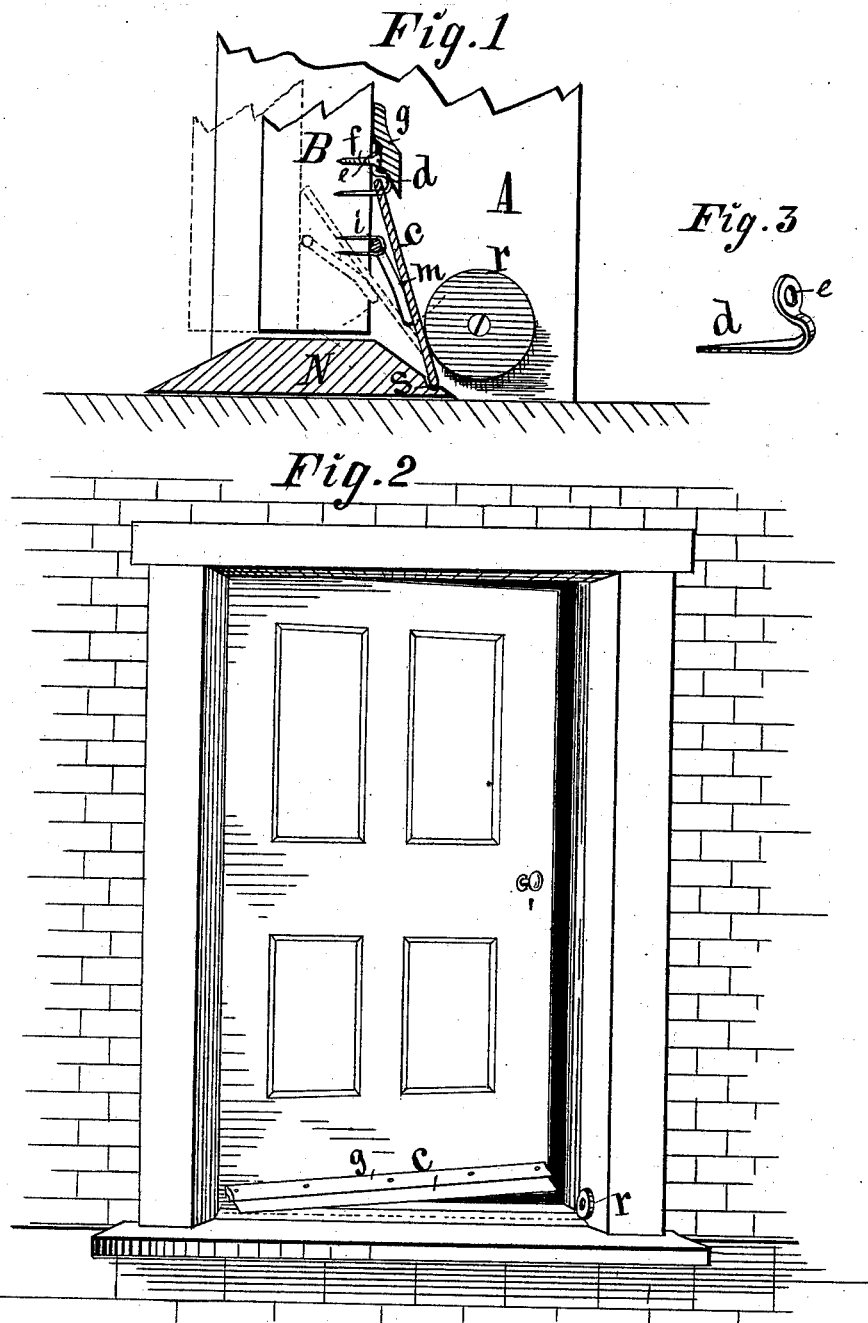


A. E. GILMAN.  
Weather-Strips for Doors.

No. 216,034.

Patented June 3, 1879.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

ANDREW E. GILMAN, OF DES MOINES, IOWA.

## IMPROVEMENT IN WEATHER-STRIPS FOR DOORS.

Specification forming part of Letters Patent No. **216,034**, dated June 3, 1879; application filed September 9, 1878.

### *To all whom it may concern:*

Be it known that I, ANDREW E. GILMAN, of Des Moines, in the county of Polk and State of Iowa, have invented an Improved Weather-Strip for Doors, of which the following is a specification.

My invention relates to that class of devices that are applied to operate a hinged weather-strip at the outside and bottom of a door to prevent wind, dust, rain, snow, and frost from passing through underneath the door.

Heretofore weather-strips of different kinds have been hinged to doors in various ways, and automatically operated by means of cams, latches, and springs fixed to the threshold or door-frame facing.

Staples have been used as a means for hinging rigid strips to a door, and moldings have been fixed over the top edges of hinged strips.

Elastic apron-strips have been fastened direct to a door, and made partly rigid by attaching parallel bars on opposite sides of the apron to engage a roller-formed cam fixed to the door-jamb.

My improvement consists in hinging a rigid strip direct to the outside of the door by means of staples having eyes that can be covered by a molding that extends over the top edge of the hinged strip, and in arranging and combining with the rigid hinged strip an actuating-spring, a roller-formed cam, and a threshold having a groove, in such a manner that the cam and spring will co-operate in directing the lower edge of the hinged strip into the groove of the threshold when the door is closed, all as hereinafter fully set forth.

Figure 1 of my drawings is a sectional elevation of a door-frame, threshold, and door having my invention applied. Fig. 2 is a perspective view, showing a door partly open and the relative positions of the hinged strip and the revolving cam. Fig. 3 is a perspective view of my improved staple.

Jointly considered, these figures illustrate the construction, application, and operation of the complete device.

A represents a door-frame; B, a swinging door. *c* is a flat metal plate and weather-strip, hinged to the lower portion of the door by means of staples passed through perforations in its top edge and into the door.

*d* represents my improved staple, having an eye, *e*, and thereby adapted to be fastened securely to the door by means of a screw.

One fork of the staple is passed through the strip *c* and into the door, and the other is bent upward at right angles and flattened and perforated to rest against the surface of the door, so that a screw, *f*, can be readily passed through the eye *e*, to clamp the staple fast to the door, as illustrated in Fig. 1.

*g* represents a molding, fixed to the door by means of nails or screws, to cover the staples *d*, screws *f*, and the top edge of the hinged strip, and to prevent rain from getting between the strip and the door.

*i m* is a spring-rod, fastened to the door by means of staples, or in any suitable way, in such a manner that a projecting end will press against the rear or under side of the hinged strip *c*, to hold it up and away from the threshold N whenever the door is open.

*r* is a revolving disk in the form of an anti-friction roller, pivoted to the door-facing in such a position relative to the hinged strip *c* and the fixed threshold N that when the door is closed the cover of the strip will come into contact with the roller and cause it to revolve, and at the same time perform the function of a cam in pressing down the hinged strip and its elevating-spring *i m* in such a manner that the lower edge of the strip will engage the outside inclined surface of the threshold, or enter a groove, *f*, formed in the beveled edge of the same.

Dotted lines in Fig. 1 indicate the positions of the spring *i m* and the hinged strip *c* when the door is opened and the spring allowed to assume its normal position, and to lift the hinged strip upward and away from the door, as required, to pass over the threshold and carpet when the door is swung to and fro by persons passing in and out.

I claim—

1. In a weather-strip for doors, the staple *d*, having an eye, *e*, in combination with a swinging strip, *c*, substantially as and for the purposes set forth.

2. The rigid hinged weather-strip *c*, staples *d* *e*, molding *g*, spring *i* *m*, and revolving cam *r*, arranged and combined on a door and frame relative to a threshold, *N*, having a

groove, *s*, substantially as shown and described, to operate in the manner set forth, for the purposes specified.

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