E. HANDLEY & T. G. ORWIG.
Door-Sill and Weather-Strip.

No. 204,434. Patented June 4, 1878.

Fig. 3

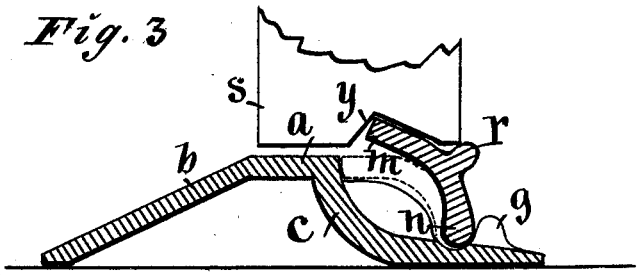


Fig. 1

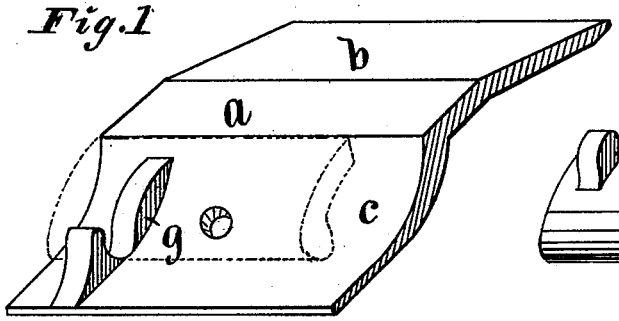


Fig. 2

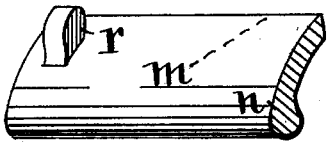
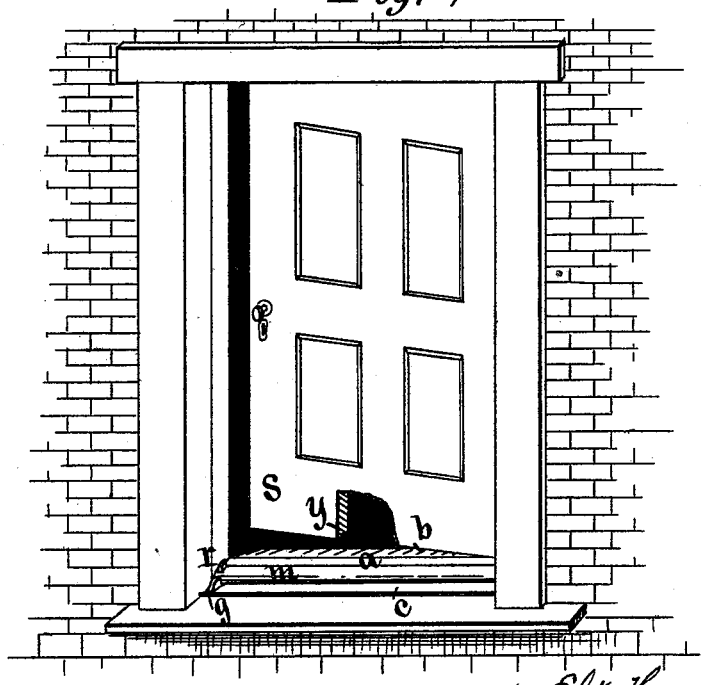


Fig. 4



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UNITED STATES PATENT OFFICE.

ELI HANDLEY, OF PERRY, AND THOMAS G. ORWIG, OF DES MOINES, IOWA.

IMPROVEMENT IN DOOR-SILL AND WEATHER-STRIP.

Specification forming part of Letters Patent No. **204,434**, dated June 4, 1878; application filed July 23, 1877.

To all whom it may concern:

Be it known that we, ELI HANDLEY, of Perry, Iowa, and THOMAS G. ORWIG, of Des Moines, Iowa, have invented an Improved Door-Sill and Weather-Strip, of which the following is a specification:

Our invention relates to that class of devices used to prevent wind, dust, rain, and snow from passing into a dwelling through a crevice under the door.

It consists in forming a metallic weather-strip in two parts and applying it in such a manner that one part will be rigidly fixed to the floor and the other part simply placed upon it, to be automatically operated by the movements of the swinging door, as hereinafter fully set forth.

Heretofore a metal weather-strip having a cam or projection has been hinged to a wooden threshold or sill by means of staples passed through slots formed in the edge of the strip, and a sill made of wood or metal has had a groove to receive the front edge of a metal cap, that is held from slipping off by means of lugs projecting over the groove in the sill when the cap is operated by a pivoted bent lever by the contact of the door.

Our object is to simplify the construction and operation of a combined sill and weather-strip; and to accomplish the results contemplated, we form our device complete in two pieces, and shape those pieces relative to each other, as hereinafter fully shown and described.

Figure 1 of our drawings is a perspective view of a section of the door-sill, designed to be fixed to the floor at the base of the door-frame. *a* is a central elevated and level surface. *b* is an inclined plane, representing the beveled portion that is to extend inward from the bottom of the door. *c* is a curved plane, extending outward from the central level plane *a*. *g* is a combined rest and hinge-socket, designed to form a bearing for a movable re-enforcing-piece. A corresponding bearing, *g*, is formed at the opposite end of the sill, and another in the center, when desired.

Fig. 2 is a perspective view of a section of our re-enforcing-piece, designed to rest and rock in the bearings *g* of the fixed portion of the sill *a b c*, to perform the function of a weather-strip. It is a strip or bar of metal corresponding in length with the sill, and bowed upward. *m* is the top edge, designed to rest against the top line of the curved plane *c* of the fixed sill. *n* is the lower rounded and eccentric edge, designed to rest and turn in the hollowed-out portion of the bearings *g*. *r* is a cam fixed on the top side and end of the movable strip. To strengthen the strip *m n* when made of cast metal, a heavy wire may be placed in the sand and mold and the metal cast around it. The two distinct parts of our complete weather-strip, *a b c g* and *m n r*, may each be cast complete, and their projecting parts *g* and *r* formed integral with their bodies; or the bodies may be swaged from plate metal by means of suitable dies, and the projecting parts attached by brazing, or in any suitable way.

Fig. 3 is a transverse central section, illustrating the application and operation of our complete sill and weather-strip. *s* represents a hinged and swinging door. *y* is a groove formed in the bottom edge of the door. When the door is open, the movable re-enforcing-strip *m n* rests upon the bearing *g*, and forms part of the complete sill. In closing the door, its corner comes into contact with the projecting cam *r* of the movable strip, and thereby rocks it in its bearings and raises its front edge *m* from its normal and level position to enter the groove *y* in the bottom of the door. (Indicated by broken lines, Fig. 4.) When the door is opened, it resumes its normal position on a level with the central plane *a* of the fixed portion of the sill.

Fig. 4 is a perspective view, showing the complete sill applied to a right-hand door, and the movable part *m n r* in its normal position, as required when the door is open. By simply changing the cam *r* from one end to the other, the complete sill will be adapted for a left-hand door.

We claim as our invention—

1. The door-sill *a b c*, having bearings *g*, the mating strip *m n r*, formed and combined substantially as shown and described, to operate in the manner and for the purposes specified.

2. As an improved article of manufacture, a combined door-sill and weather-strip, composed of the parts *a b c g* and *m n r*, substantially as and for the purposes set forth.

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