

(No Model.)

W. H. ORTON, J. D. HANES & G. H. ORTON.
AUTOMATIC WEATHER STRIP.

No. 474,920.

Patented May 17, 1892.

Fig. 1.

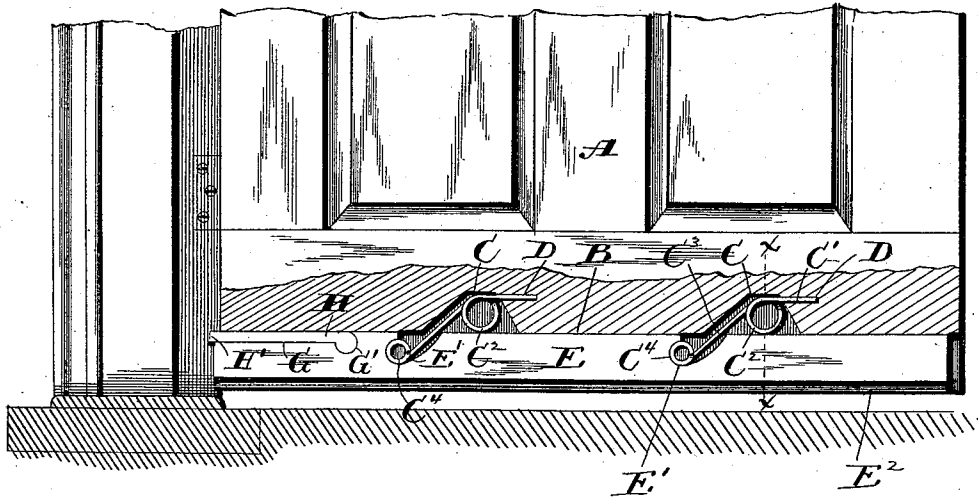


Fig. 2.

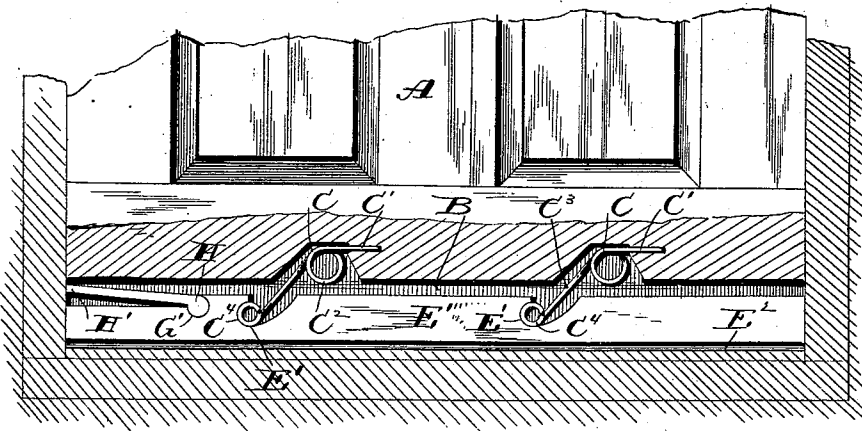
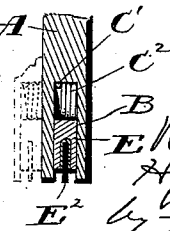


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

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AUTOMATIC WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 474,920, dated May 17, 1892.

Application filed October 21, 1891. Serial No. 409,378. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM H. ORTON, JAMES D. HANES, and GEORGE H. ORTON, citizens of the United States, residing at Glens Falls, in the county of Warren and State of New York, have invented certain new and useful Improvements in Automatic Weather-Strips; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in automatic stops or weather-strips for doors and swinging or hinged windows; and it has for its object to simplify and cheapen the construction and to render more serviceable and efficient in operation this class of appliances.

The invention has for a further object to provide a weather-strip which, when the door is open, will be automatically drawn into a recess in the edge of the door and which will only be projected from its seat when the door or window to which it is applied has been closed.

To the above ends and to such others as the invention may pertain the same consists in the peculiar construction and in the novel combination, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the accompanying drawings, and then specifically defined in the appended claims.

The invention is fully illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, like letters of reference indicating the same parts throughout the several views, and in which drawings—

Figure 1 is a vertical longitudinal section of the lower edge of a door provided with our automatic stop or weather-strip, the weather-strip being shown as in the position that it will occupy when the door is open. Fig. 2 is a like view showing the strip in the position it assumes when the door is closed. Fig. 3 is a vertical section on the line $x x$ of Fig. 1.

Reference now being had to the details of the drawings by letter, A designates the door, the lower edge of which is provided with a longitudinal vertical recess B, within the upper portion of which recess are placed at intervals springs C, said springs being constructed of wire and of substantially the form shown—viz., consisting of the horizontal portion C', loop C², which may consist of either one or more coils of wire, and the portion C³, which extends downward at substantially an angle of forty-five degrees from the loop and is provided at its extreme lower end with a loop C⁴. These springs, which are adapted to actuate the weather-strip when the door is opened, as will be presently explained, are placed at suitable intervals within the slot B. Ordinarily two or three of the springs will be found to be sufficient. The horizontal portion C' of the spring is secured within a horizontal slot D, and the looped lower end C⁴ of the spring is loosely seated within a cam-shaped recess E' in the upper edge of the weather-strip E, the lower edge of which strip is provided with a strip E² of felt, rubber, or other substance adapted to the purpose of effectually closing down against the floor or door-sill, and preventing the ingress of rain or wind.

The strip E at its end adjacent to the hinged edge of the door is provided with a recess G, the inner end of which is provided with an enlargement G', and within this recess is seated a dog H, having a portion fitting in said enlargement, the end H' of which lever extends when the door is open a short distance beyond the hinged edge of the door.

The operation of the device will be readily understood. When the door is opened, the tension of the springs C will serve to raise the strip E to a sufficient height to withdraw its lower edge entirely into the slot in the lower edge of the door. When the door is closed, the end H' of the dog H will contact with the door-jamb and will be forced inward, thus forcing the strip E downward, as shown in Fig. 2 of the drawings, and throwing the lower edge of the strip into close contact with either the floor or the door-sill and effectually closing the space beneath the door against rain, wind, or snow.

It will be observed that the enlargement G'

at the inner end of the recess G, which receives the correspondingly-shaped inner end of the dog H, is formed on an arc of a circle, thus insuring the perfect working of the parts, and it will be further noted that the dog H fits snugly within the recess G, and is not pivoted, as is common in this class of dogs.

It is at once evident that the construction above described is capable of modifications within certain limits without departing from our invention. For instance, instead of providing the slot B in the lower edge of the door the weather-strip and its accompanying springs and lever H may be seated within a recess formed in the side of a strip, which could be secured to the face of the door adjacent to its lower edge. It is also evident that the device is equally well adapted for use at the top or bottom of either a door or a swinging or hinged window and that the parts may be so arranged as to cause the same to be actuated from either the right or left side, as desired.

Having thus described our invention, what we claim to be new, and desire to secure by Letters Patent, is—

1. The combination, with a hinged window or door A, having a groove formed in its lower edge, of the vertically and endwise movable strip E, seated within said groove, springs C, having their upper ends secured within the

slot, as described, formed between their ends with coils C², located in recesses in the lower edge of the door and their opposite ends inclined and provided with loops C⁴, adapted to engage substantially circular recesses in the upper edge of the strip E, and the dog H, seated within a recess in one end of the strip with its outer end adapted to normally extend beyond the side edge of the door, substantially as and for the purpose described.

2. The combination, with a hinged door having a groove at its lower edge, of a vertically and endwise movable spring-actuated weather-strip having near one end a horizontal recess, having at its inner end a substantially circular enlargement, and a dog H fitted in said recess with its outer end extended beyond the end of the strip and its inner end formed with a circular enlargement, which, in conjunction with the enlargement of the recess, provides for pivotal movement of the dog, substantially as shown and described.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM H. ORTON.
JAMES D. HANES.
GEORGE H. ORTON.

Witnesses:

AUSTIN E. HASELTON,
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