(No Model.) 2 Sheets—Sheet 1.

W. H. BLAIR.

WEATHER STRIP.

No. 263,305. Patented Aug. 29, 1882.

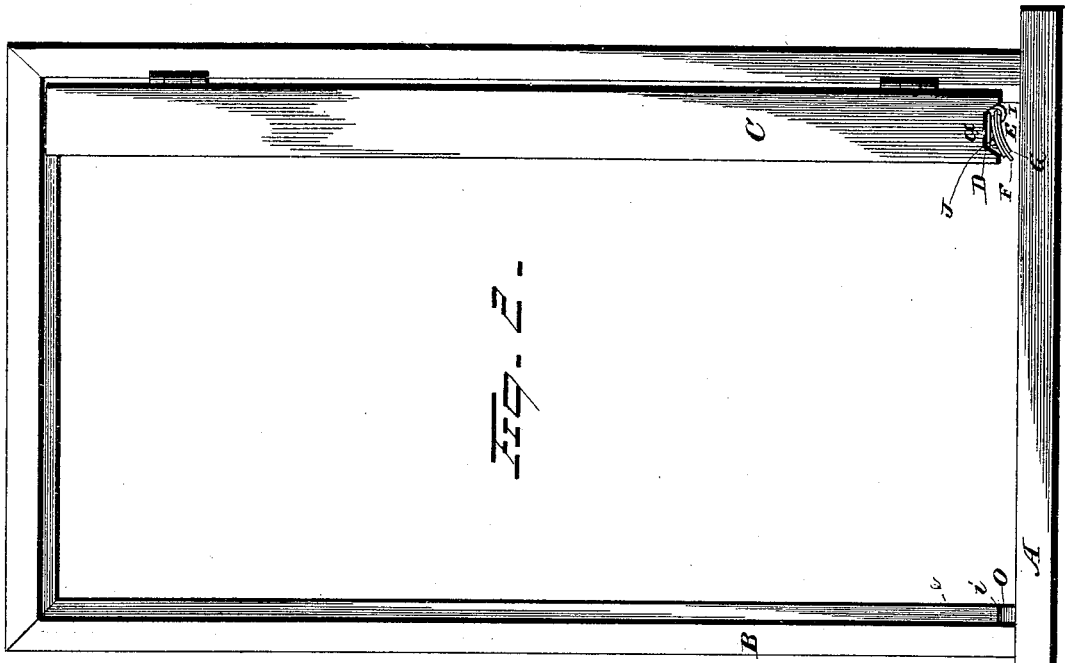

Fig. 2.

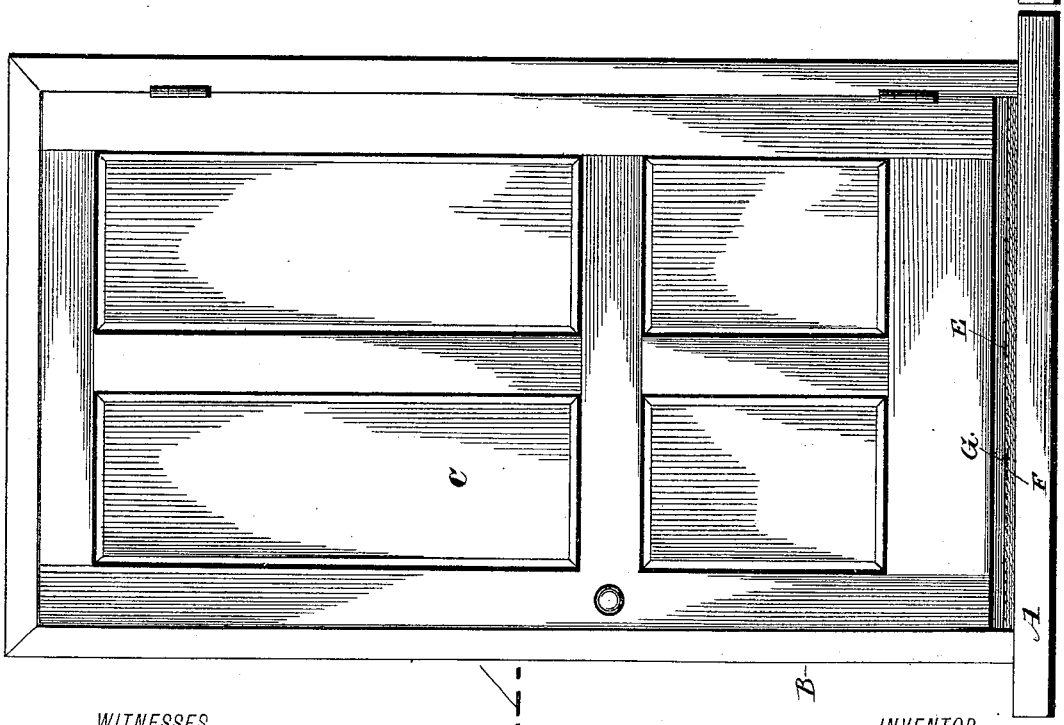

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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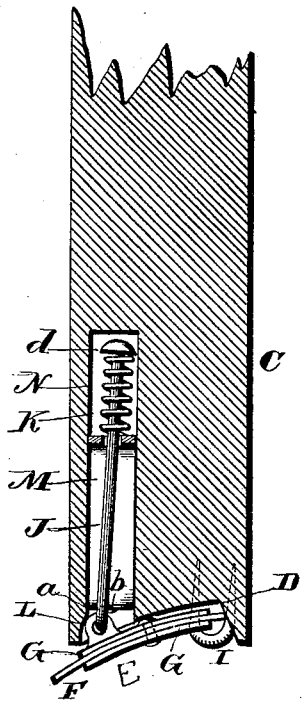
Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM H. BLAIR, OF JANESVILLE, WISCONSIN.

WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 263,305, dated August 29, 1882.

Application filed March 14, 1882. (No model.)

To all whom it may concern:

Be it known that I, WM. H. BLAIR, of Janesville, in the county of Rock and State of Wisconsin, have invented certain new and useful Improvements in Weather-Strips for Doors, &c.; and I do hereby 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 pertains to make and use the same.

My invention relates to an improvement in weather-strips for doors, the object of the same being to provide a cheap, durable, and simple device adapted to be secured to any door and effectually close the space between the sill and lower edge of the door when the door is in a closed position and to automatically rise up as the door is opened; and with these ends in view my invention consists in certain details of construction and combinations of parts, as will be more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a front view of the door with the lower edge thereof in section, to show the manner of securing the strip thereto. Fig. 2 is a view with the door open, showing the stop or lug for automatically lowering the strip as the door is closed; and Fig. 3 is a longitudinal transverse section, showing the spring for holding the strip up when the door is open.

A represents the sill, B the door-frame, and C the door, hinged thereto in any desired manner. This door C is provided at its lower end with the longitudinal groove or gutter D, extending throughout the entire width of the door for the reception of the strip E, which latter, when the door is in an open position, is caused, by means to be hereinafter described, to enter said groove, where it is held up out of the way and out of sight, thereby enabling the door to present a neat appearance. This weather-strip E is composed of a strip of rubber, F, or other suitable flexible material, strengthened and held in position throughout its entire length by the metallic strips G, placed on opposite sides of the rubber strip and secured thereto by rivets or otherwise. These metallic strips G are of less width than the rubber strip F, and are so secured thereto that when the weather-strip E is forced downward by the inclined stop O the lower edge of the rubber will bear on the sill B and the upper edge thereof against the lower edge of the door, and thereby effectually close the opening or space between the sill and door. Either before or after the metallic strips G are secured to the rubber strip F they are curved to conform to the shape of the gutter or groove D, so that when the door is open or partially open the strip E will snugly rest in said gutter up out of the way, with its inner edge slightly below the door, so as to enable the stop O to engage therewith as the door is being closed. The completed strip E is perforated at suitable distances apart near its upper edge for the passage of the staples I, which form the hinges for the strip E and pivotally secure it to the door. The weather-strip E is held in its closed position by a spring-actuated bolt, J, placed in a recess or cavity, K, formed near one or both sides of the door, or in the center of the lower edge thereof, and connected thereto by means of the eyes L, secured to the said strip in any suitable manner. The bolt J is supported within the recess by the bracket M, which latter is secured to the lower edge of the door by flanges *a*, the latter being perforated for the passage of screws *b*. That portion of the bolt J between the cap *d* and the upper face of the bracket M is encircled by the spiral spring N, the tendency of which is to constantly keep the weather-strip E, to which the hooked lower end of the bolt is secured, up to its highest elevation or closed position.

O is an inclined stop or lug secured to the frame B in front of the bead *e* in such a position that the projecting edge *i* thereof will rest in a position slightly below the lower edge of the door, so as to pass above the weather-strip E and force the inner or lower end thereof downward as the door is being closed. The outer face of this lug O is inclined backward from top to bottom, and as the projecting end *i* engages with the top of the strip E the inner edge of the said strip is caused to follow the inclination of the said lug O, which forces the inner edge of the strip downward until the rubber face thereof bears on the sill A and the opposite rubber facing or edge upward until it bears on the bottom of the door. The lug O is adapted to be adjusted vertically for the purpose of causing the inner edge thereof to ac-

curately register with the lower edge of the door under all conditions or changes to which the frame and door are liable.

The metallic portions of my improvement can be made of cast metal at a comparatively small cost, and the completed strip, with its attachment, is as well adapted for inside as outside doors.

To enable that portion of the strip against which the stop O bears to withstand greater wear I have increased its thickness at this point, which accomplishes the desired object.

This improved weather-strip is also well adapted for inside doors without any sill, and will close the space between the carpet and door, or between the floor and door, and effectually exclude a draft.

My device is simple in construction, of comparatively few parts, of small initial cost, and is adapted to be secured to doors of any construction and effectually perform its office automatically.

It is evident that slight changes in the construction and arrangement of the different parts might be resorted to without departing from the spirit of my invention, and hence I would have it understood that I do not limit myself to the exact construction of parts shown and described, but consider myself at liberty to make such changes as come within the spirit and scope of my invention.

I am aware that it is not broadly new to combine a rubber strip with overlapping or inclosing strips of hard material so as to leave a projecting flap or edge of rubber at front and rear of the strip. I am also aware that it is not new to combine with a door provided with a vertical recess a spring-pivoted strip and rod arranged within the recess and connected to the strip. Hence I do not broadly claim these features of construction; but,

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a door provided with a vertical recess and a horizontal groove in its lower edge, of a weather-strip consisting of a rubber strip and metallic strips partially inclosing the rubber strip and riveted together, staples for securing the strip to the door, and a spring-bolt arranged in the vertical recess of the door and connected to the strip, substantially as set forth.

2. The combination, with the sill and door, the latter being formed with a vertical recess and a horizontal groove in its lower edge, of a weather-strip secured to the door by staples, and having flexible edges adapted to bear respectively on the lower end of the door and upper face of the sill, and a rigid center extending throughout the length of the strip, a spring-bolt supported in a bracket within the vertical recess of the door and connected to the strip, and a lug or stop for automatically lowering the strip when the door is closed, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM H. BLAIR.

Witnesses:
J. W. SALE,
JAMES BLAIR.