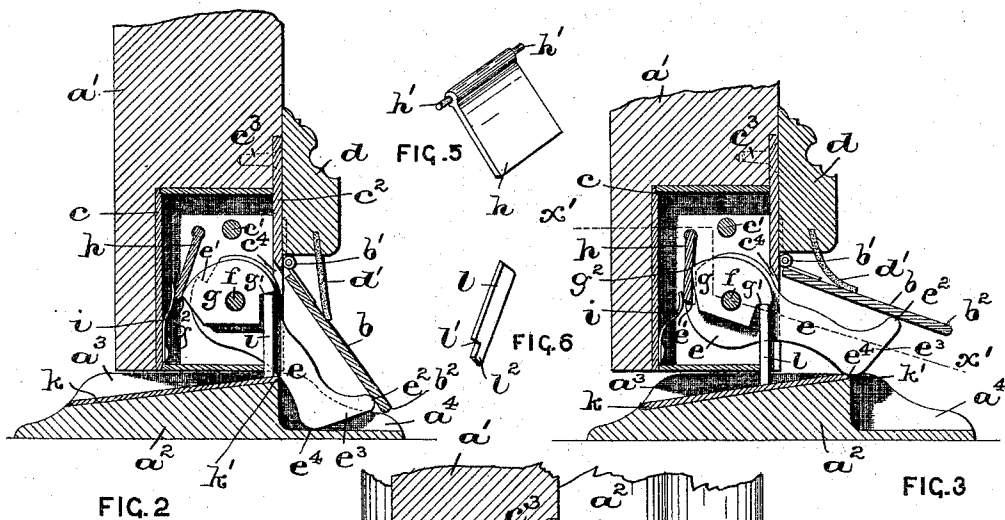
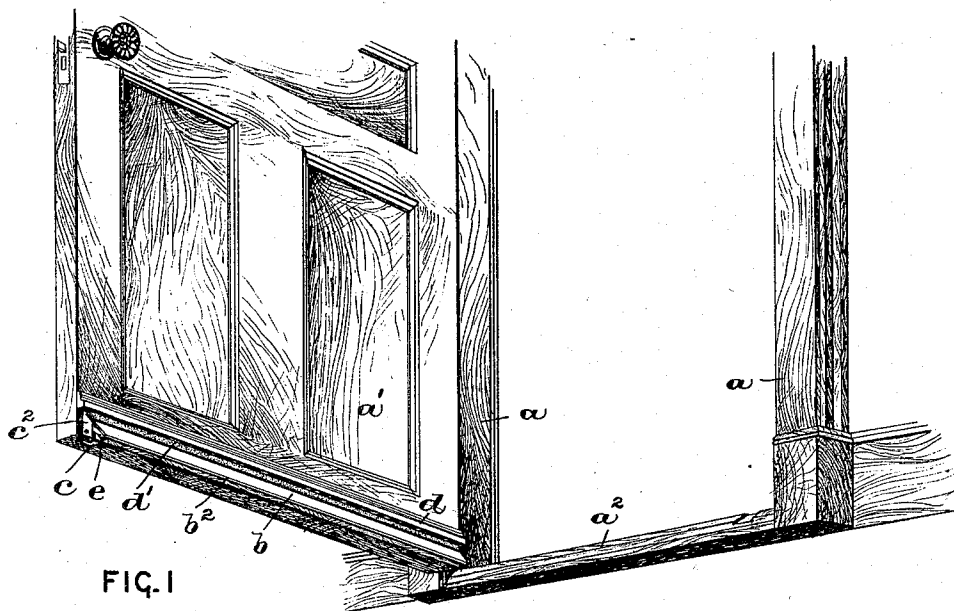


(No Model.)

H. RUDEBOCK.
WEATHER STRIP FOR DOORS.

No. 542,007.

Patented July 2, 1895.



WITNESSES:

Wm. H. Canfield, Jr.
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BY Fred C. Fraentzel, ATT'Y.

UNITED STATES PATENT OFFICE.

HOLCOMBE RUDEBOCK, OF NEWARK, NEW JERSEY.

WEATHER-STRIP FOR DOORS.

SPECIFICATION forming part of Letters Patent No. 542,007, dated July 2, 1895.

Application filed August 17, 1894. Serial No. 520,568. (No model.)

To all whom it may concern:

Be it known that I, HOLCOMBE RUDEBOCK, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Weather-Strips for Doors; 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention has reference to improvements in devices used to prevent the admission of cold air, wind, &c., through the crevice beneath the door and above the saddle for the door, and therefore relates to a novel arrangement of devices embodying a weather-strip for doors.

My improvement is designed to secure an automatically-acting weather-strip arranged along the lower edge and on the outside face of a door and means operating to cause said strip to be automatically held in a raised position when the door is opened, and thereby enable the closing of the door, when desired, and said means, when the door is finally closed, causing the weather-strip to automatically drop against the saddle for the door, and, resting on the edge of the saddle, near the floor, to positively shut out the entrance of cold air, wind, rain, or snow beneath the lower edge of the door.

The invention therefore consists in the novel arrangements and combinations of parts hereinafter fully described, and finally embodied in the clauses of the claim.

The invention is illustrated in the accompanying sheet of drawings, in which—

Figure 1 is a perspective view of a door-frame and door in its open relation thereto provided with the weather-strip and operating devices embodying the principles of my present invention. Fig. 2 is a vertical section of the door and its saddle with a vertical section of a casing mortised in the lower part of the door and a certain mechanism for operating the weather-strip connected with the door, all of said parts being illustrated in their inoperative position when the door is closed

and the section being taken on line x in Fig. 4 of the drawings. Fig. 3 is a similar view of the parts illustrated in said Fig. 2, but showing them in their operated positions holding the weather-strip in its raised position as soon as the door is being opened. Fig. 4 is a horizontal section taken on line x' in Fig. 3. Fig. 5 is a perspective view of a certain pivoted stop-plate, and Fig. 6 is a similar view of a trip-post used in connection with the weather-strip-operating device.

Similar letters of reference are employed in each of the above-described views to indicate corresponding parts.

In said above-described views, a designates the door-frame, a' the door, and a^2 the saddle for the door. Pivotally arranged along the lower edge of the door a' , by means of suitable hinges b' or otherwise, is the weather-strip b , which is preferably made of heavy sheet metal, but may be made of any other suitable material. Said weather-strip, as will be seen from Fig. 1, extends entirely across the lower edge of the door, on the outside face thereof, and when the same is open is raised, and thus permits the passage of the weather-strip over the saddle for the door when the latter is being closed; but when the door is closed the lower edge b^2 of the strip b drops down upon the saddle along the edge of the same near the floor to exclude the entrance of cold air, wind, &c. Directly above said weather-strip b and secured to the door a' in any well-known manner I may arrange a molding d , provided with a piece of soft rubber d' or other flexible material, which comes in contact with the weather-strip b and is for the purpose of preventing cold air from getting into the room between the door and that part of the strip b where it is hinged to the door, as will be clearly evident from an inspection of Fig. 2. Of course it will be understood that said supplemental weather-strip above the strip b is not absolutely necessary to the successful working of my invention, and may therefore be dispensed with, if desired. The mechanism for operating said weather-strip b , causing it to be raised or lowered as the door is opened or closed, is clearly illustrated in Figs. 2, 3, and 4. The same consists essentially of a suitable casing c , made up of the separable sides, which are

secured together in the usual manner by a rivet c' . Said casing is provided with a face-plate c^2 , and by means of suitable screws c^3 the casing is firmly secured in a mortise in the lower edge of the door, near the corner farthest away from the door-frame when the door is open, as illustrated in Fig. 1.

On a suitable pin f , secured at its free ends in the opposite sides of the casing c , are loosely arranged an operating arm or lever e and a cam-shaped disk g . Said lever is provided with a stop e' , with which a pivoted stop-plate h , acted upon by a spring i , engages at a certain time to hold a finger e^2 on that portion of the arm e extending through an opening c^4 in the face-plate against the under side of the weather-strip b , and thereby retaining said strip b in its raised position.

In a slot a^3 in the saddle a^2 is an inclined plate k , and riding against said plate k while the door is being closed is a trip-post l . Said post, as will be seen from Fig. 6, is provided with an offset l' , and its lower and smaller portion l^2 fits in a correspondingly-shaped opening c^5 . (See Fig. 4.) This retains said post in a vertical position and the offset l' prevents its falling from the casing when the door has been opened. The upper end of the post l is adapted to engage with a suitable recess g' in the disk g as said lower end l^2 rides on the incline k , and thereby causes the frictional sliding contact of the sharp end g^2 of the disk g against the pivotally-hung stop-plate h and throws it out of its holding engagement with the stop e' of the arm e , which, owing to its own weight and that of the strip b against the supporting-finger e^2 , will drop and bring the end e^3 of said arm e down into a recess a^4 in the saddle a^2 and the lower edge of the weather-strip b down against the saddle, as illustrated in Fig. 2.

The operation of the device is as follows: Suppose the door has been closed and the several parts are in their inoperative positions, (illustrated in Fig. 2.) As soon as the door is being opened the projection e^4 on the end e^3 of the arm e will be caused to ride against the edge k' of the incline k , as clearly shown in Fig. 4. At the same time the spring-actuated stop-plate h , bearing against the sharp edge g^2 of the disk g , loosely arranged on the pin f , forces the trip-post l down in sliding contact with the incline k and permits the spring to force the holding end of the plate h over the stop e' , which has been brought directly below the end of said plate h by the action of the projection e^4 of the arm e against the edge k' , whereby the said weather-strip b is held in its raised position against the finger e^2 on said arm e . These positions of the parts are thus retained while the door is open, and while being closed the weather-strip b is permitted to pass over the saddle of the door. In closing the door, when the latter has reached the position illustrated in Fig. 3, then the trip-post l begins to ride up on the incline k , thereby causing the partial rotation of the

disk g on its pin f , forcing the holding-plate h from its engagement with the stop e' on the arm e , the end e^3 of the arm falling into the recess a^4 in the saddle and the weather-strip b assuming its position against the saddle, as has been described in the above. The said disk g is held in its operative position on the pin f in any well-known manner, preferably by collars f' , while the slotted opening c^4 in the face-plate c^3 of the casing c will retain the arm e in its proper position on the pin f . The plate h is preferably made as illustrated in Fig. 5, having pins h' , by means of which the plate can be pivotally hung in perforations in the opposite sides of the casing c , as will be clearly evident.

The features of the above-described invention are of considerable importance, as the device is simple in construction and operative under all conditions.

Of course it will be evident that certain changes may be made in the details of construction and the arrangements of parts. Hence I do not wish to be understood as limiting myself to the exact arrangement and combinations of parts herein shown and described, as I am well aware that they may be departed from without departing from the general scope of my invention.

Having thus described my invention, what I claim is—

1. In a weather strip for doors, the combination, of a strip, as b , adapted to be arranged along the lower edge and outside face of the door, a casing, as c , connected with the door, an arm or lever pivotally arranged in said casing, having a stop thereon, a spring-actuated holding plate adapted to engage with said stop, to bring the free end of said arm in lifting contact with said strip and to hold the same in its raised position when the door is opened, and mechanism connected with said pivoted arm for causing its disengagement from said spring-actuated holding plate and hence from its lifting contact with said strip, consisting essentially of a cam-shaped disk g , a trip post in said casing adapted to engage with said disk, and an incline on the saddle for the door, on which said post rides, while the door is being closed, substantially as and for the purposes set forth.

2. In a weather strip for doors, in combination, a casing, arranged in the lower portion and outside face of the door, a pin f in said casing, an arm e on said pin, provided with a stop e' and a lifting portion e^3 , a pivotally arranged strip b on the bottom of the door with which said portion e^3 is adapted to engage to lift said strip, a spring-actuated stop-plate h adapted to engage with said stop e' on the arm e to hold it in its raised position, and mechanism connected with said arm e for causing its disengagement from said spring-actuated holding plate and hence from its lifting contact with said strip b , substantially as and for the purposes set forth.

3. In a weather strip for doors, in combina-

tion, a casing, arranged in the lower part and
outside face of the door, a pin *f* in said casing,
an arm *e* on said pin, provided with a stop *e'*
and a lifting portion *e³*, a pivotally arranged
5 strip *b* on the bottom of the door with which
said portion *e³* is adapted to be engaged to
lift said strip, a spring-actuated stop-plate *h*
adapted to engage with said stop *e'* on the
arm *e* to hold it in its raised position, and
10 mechanism connected with said arm *e* for
causing its disengagement from said spring-
actuated holding plate and hence from its
lifting contact with said strip *b*, consisting

essentially of a cam-shaped disk *g*, a trip post
in said casing adapted to engage with said 15
disk, and an incline on the saddle for the
door, on which said trip post rides while the
door is being closed, substantially as and for
the purposes set forth.

In testimony that I claim the invention set 20
forth above I have hereunto set my hand this
15th day of August, 1894.

HOLCOMBE RUDEBOCK.

Witnesses:

FREDK. C. FRAENTZEL,
WM. H. CAMFIELD, Jr.