(No Model.)

W. J. LEWIN.

WEATHER STRIP FOR DOORS OR WINDOWS.

No. 463,060. Patented Nov. 10, 1891.

Fig. 1.

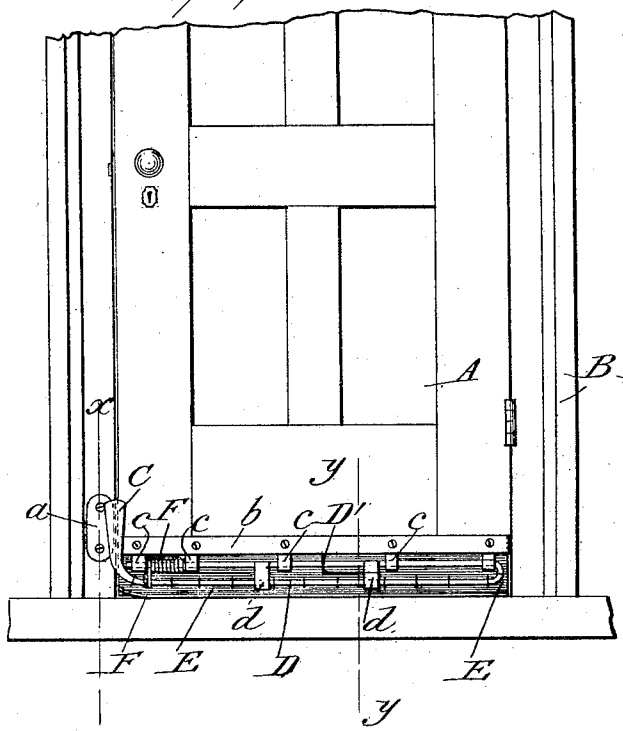


Fig. 2.

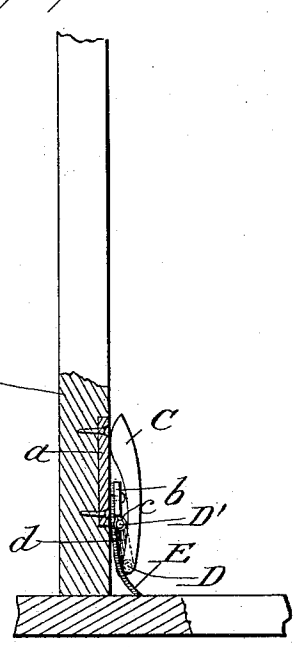


Fig. 3.

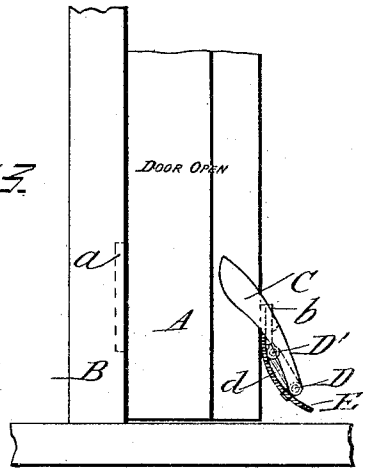
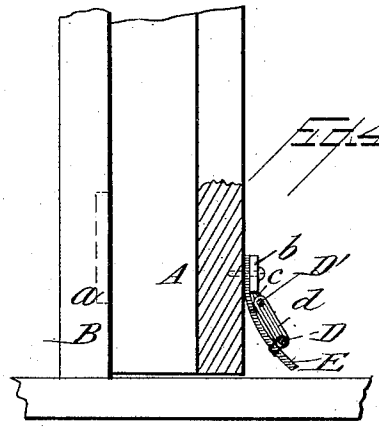


Fig. 4.



Attest:

F. H. Schott

Wm. L. Boyden.

Inventor

William J. Lewin

per John A. Fisher, Atty.

UNITED STATES PATENT OFFICE.

WILLIAM J. LEWIN, OF LOCKPORT, NEW YORK.

WEATHER-STRIP FOR DOORS AND WINDOWS.

SPECIFICATION forming part of Letters Patent No. 463,060, dated November 10, 1891.

Application filed February 25, 1891. Serial No. 382,837. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. LEWIN, a citizen of the United States, residing at Lockport, in the county of Niagara and State of New York, have invented certain new and useful Improvements in Weather-Strips for Doors and Windows; 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.

This invention relates to an improvement in weather strips or protectors for doors and windows, the object of the invention being to provide a simple, cheap, efficient, and automatically-operating device adapted to be connected to the edge of a door, window, or other shutter and to operate to close tightly when the shutter is closed, so as to exclude all drafts of air and effects of storm and make a tight protection against the outside; and the invention therefore consists in the construction, arrangement, and combination of parts substantially as will be hereinafter described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a front elevation of a portion of a door provided on its lower edge with my improved weather-strip, the door being represented as closed. Fig. 2 is an enlarged cross-section on the line *x x* of Fig. 1. Fig. 3 is a detail edge view showing the door open and representing the position of the parts of the weather-strip at this time. Fig. 4 is an enlarged detail section on the line *y y* of Fig. 1.

Like letters of reference designate corresponding parts throughout all the different figures of the drawings.

A represents a door, and B the frame to which it is hinged. I have selected a door simply for illustration in order to show the practical application thereto of my improved weather-strip; but I desire to say that the invention is equally applicable to windows and shutting devices of all kinds, and the door is simply one of many devices to which the strip may be connected.

E represents a strip of rubber, felt, cloth, or any other suitable flexible substance or material adapted to cover the joint between the lower edge of a door and the contiguous face of the sill, said flexible strip being securely connected along its upper edge to the face of the door by any suitable means—such, for instance, as the longitudinal strip *b*, which is secured by screws to the face of the door in a horizontal position and at a short distance from the lower edge of the door. In this way the flexible weather-strip E is left free, so that it can be pushed down into the position shown in Fig. 2, or pulled out away from the door-sill into the position shown in Figs. 3 and 4. In Fig. 2 the strip E, being in contact with the door-sill, covers the space or slot usually found between the lower edge of the door and the sill, and thus excludes all drafts, rain, snow, and the effects of storm or wind, making therefore a secure and effectual guard against the entrance of any of these unpleasant things, and also in the position shown in Figs. 3 and 4 we see that the strip E is removed sufficiently far above the sill that it will not be in the way at all when the door is being opened. Thus the flexible strip is adapted to be manipulated back and forth from a position where it serves no purpose into a position where it serves its purpose effectually to prevent the admission of the effects of unpleasant weather.

C designates a latch or lever projecting upwardly near the vertical edge of the door and preferably formed integral with a horizontal rod D, which rod bends to provide the parallel portion D′, the two rods D and D′ being accordingly parallel to each other and located near the lower edge of the door, they being connected rigidly by the ties *d d*, and the rod D′ being held or supported within the bearings *c c c*, formed on the horizontal bar *b*. Furthermore, it will be perceived that the rod D′ near the other end is provided with an encircling coiled spring, which has an arm that engages rod D near the point where the latch or lever C projects upwardly at an angle to said arm. Thus it will be seen that the latch C is permitted to move back and forth in a position close to the edge of the door and to occupy either the position shown in Fig. 2 or that shown in Fig. 3. It occupies the position shown in Fig. 2 when the door is closed, and it bears then upon a plate *a* set into the door-frame. It occupies the position shown in Fig. 3 when the door is open. The spring F causes

the latch C to move from the position shown in Fig. 2 into the position shown in Fig. 3. It will furthermore be noted that the flexible weather-strip E is connected by stitching or other means to the rod D. (See Fig. 1.) Therefore when the latch C is in the position shown in Fig. 3, the rod D having been lifted in consequence of the depression of the latch-arm C, the flexible strip E will likewise have been lifted and caused to occupy a position where it is out of contact and slightly above the door-sill, as is clearly shown in both Figs. 3 and 4. This is the position that the parts occupy when the door is open and the weather-strip is useless, performing no function. When the door is closed, however, into the position shown in Figs. 1 and 2, the latch-arm C strikes against the door-frame or, rather, against the plate *a* set therein, and this causes the rod D to press down upon the flexible strip, pushing the latter down into the position shown in Fig. 2, where it effectually covers the lower edge of the door and forms a tight and efficient device for keeping out the ill and unpleasant effects of the weather. Thus we have an automatically-operating weather-strip. Its function and operation for the various purposes for which it may be adapted will be readily understood and perceived from the foregoing description of the construction and incidental operation without need of any further enlarged description of the operation of any of the parts. When the door opens, the flexible strip is automatically released from contact with the sill and therefore the the door swings freely without having its motion clogged or hindered by any obstruction at its base. When the door is closed, then the parts of the weather-strip come into play, operating automatically to close the space at the edge of the door, so that an effectual weather-guard is provided.

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

The combination, with a door A, of a flexible strip E, secured thereto near the lower edge, and a rod D, having a projecting latch-lever C, said rod D being formed integral with rod D′, held in the bearings *c c*, together with the spring F, coiled around one end of the rod D′ and connected to the rod D, said flexible strip E being connected by stitching or otherwise to the rod D, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM J. LEWIN.

Witnesses:

ARTHUR W. WHITTAKER,

WILLIAM W. BRIEN.