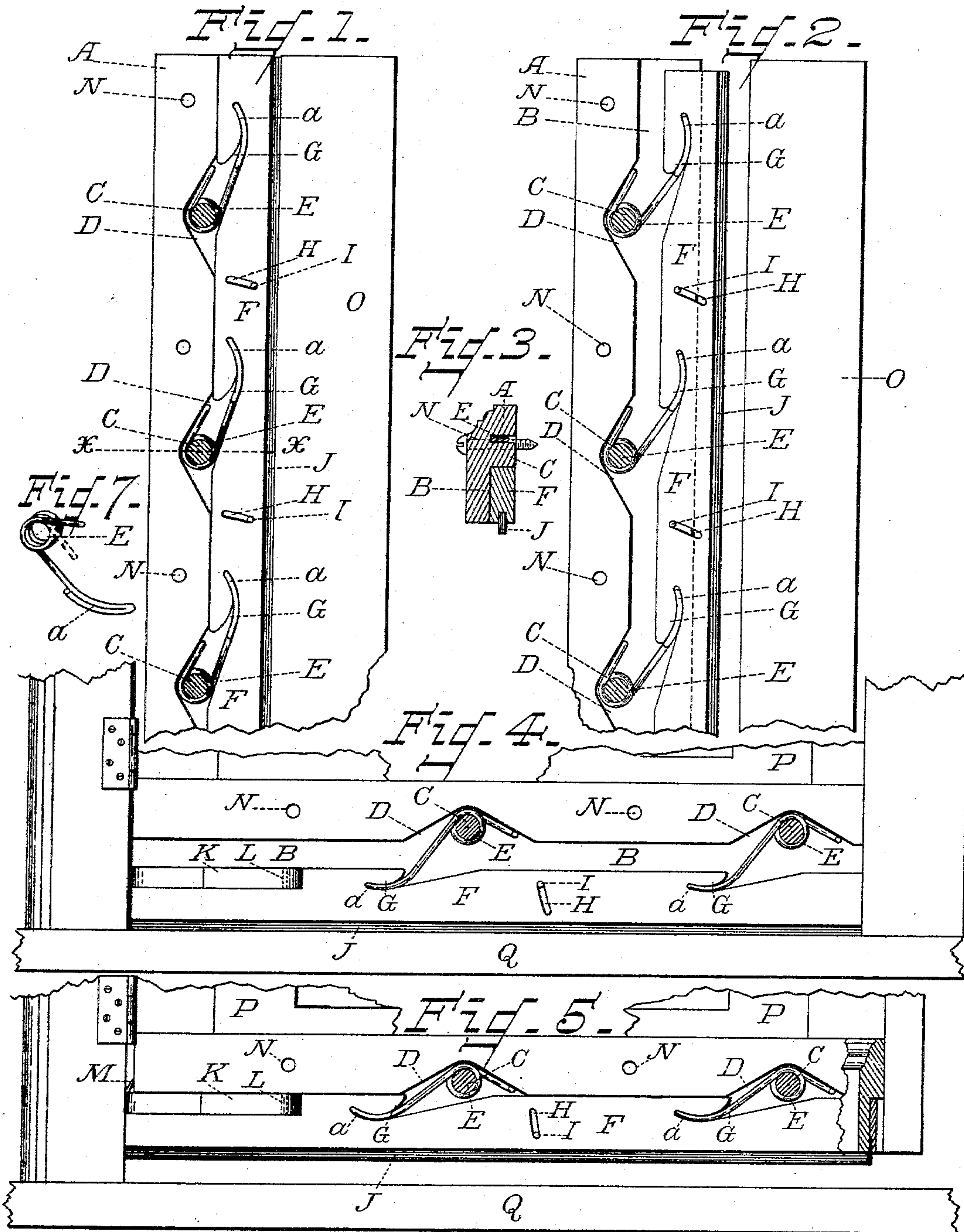


(No Model.)

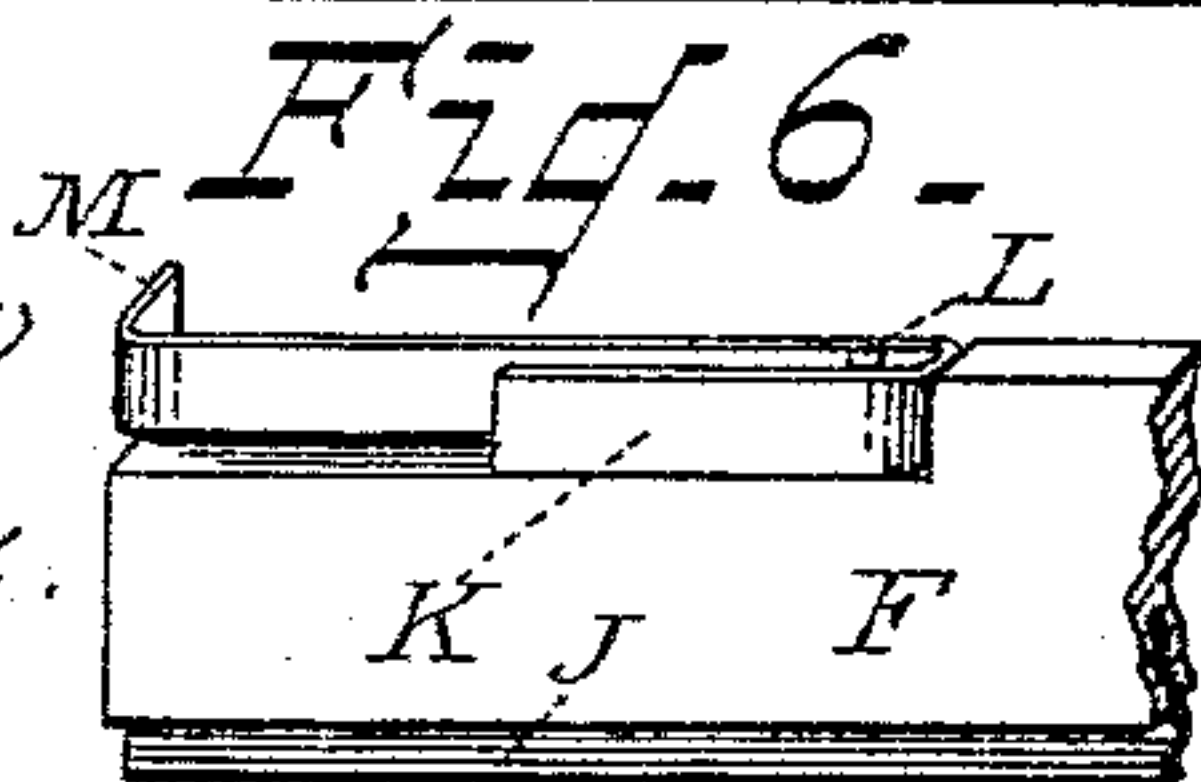
E. A. PARTELOW.
AUTOMATIC WEATHER STRIP.

No. 583,930.

Patented June 8, 1897.



Witnesses:
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UNITED STATES PATENT OFFICE.

EUGENE A. PARTELOW, OF AUBURN, NEW YORK.

AUTOMATIC WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 583,930, dated June 8, 1897.

Application filed November 24, 1896. Serial No. 613,353. (No model.)

To all whom it may concern:

Be it known that I, EUGENE A. PARTELOW, a citizen of the United States, residing at the city of Auburn, county of Cayuga, State of New York, have invented a new and useful Improvement in Automatic Weather-Strips, of which the following is a specification, reference being had to the accompanying drawings, on one sheet, making part of this specification.

My invention relates to improvements in automatic weather-strips whereby the same can be applied to the top or bottom, on the inside or outside, as well as to the frames or casings of hinged doors and windows, the said weather-strips being actuated automatically by the opening and shutting of said hinged doors and windows; and the objects of my improvement are to render unnecessary any extra attachments upon the door or window casings for actuating the said weather-strips, and to provide means for retaining the actuating mechanism in working place and also to assure the proper working relation between the actuating mechanism and the mobile weather-strip itself, whereby the latter may be caused to accommodate itself to uneven and irregular planes or surfaces under varying conditions of weather, and, further, to afford means of ready attachment and removal and fitting to place of said weather-strips wherever they may be required. I attain these several objects by the mechanism illustrated in the sheet of drawings hereto annexed, in which—

Figure 1 is a view of a portion of my improved automatic weather-strip applied to a like portion of door-casing and as the former appears in working position when the door is closed. Fig. 2 is a view similar to Fig. 1 as my improved automatic weather-strip appears when the door is swung open. Fig. 3 is a cross-section of my automatic weather-strip, taken on the line $x x$ of Fig. 1. Fig. 4 is a view of the automatic weather-strip applied to the inner side and bottom of the door, in the position it assumes when the door is shut. Fig. 5 is a view similar to Fig. 4 and showing the position the weather-strip assumes when the door is open. Fig. 6 is a portion of one end of the weather-strip with its

actuating-lever in position thereon. Fig. 7 is a perspective view of one of the wire springs.

Similar letters of reference refer to similar parts throughout the several views.

In Fig. 1, A is a hood or strip of molding having a rabbet B formed throughout its length and on its inner side, as seen in Fig. 3.

C C C are posts, and D D D are angular recesses formed about the same at the upper line of the rabbet B, said posts and angular recesses having their bottom planes on the same line with that of the said rabbet B of the hood or strip of molding A.

The springs E E E are formed of spring-wire practically in the manner shown in Fig. 7 and are provided at the curved ends thereof with a foot a , which is made by bending the wire in a loop upon itself in order to afford a greater friction-surface, the object of which will be presently explained.

The mobile weather-strip F, which is movable in the rabbet B of the hood or strip of molding A, is provided with curved slots or seats G G G, in which operate the feet $a a a$ of the springs E E E. The mobile weather-strip F is also provided with slots H H, which engage on guide-pins I I, which are made fast in the rabbet B of the hood or strip of molding A. The mobile weather-strip F is also provided at its bottom edge with a strip J, inserted longitudinally therein, and which is of an elastic or flexible character, such as rubber, felt, or like material. By referring to Fig. 6 it will be seen that a portion of the mobile weather-strip F is cut away at one end and the same replaced by the plug-lever K. The said plug-lever K is formed with a loop at one end corresponding exactly to the thickness of the mobile weather-strip F and which passes loosely over a pin L, fastened in proper position on the cut-away edge of the said mobile weather-strip F, as shown. The opposite outer end of the plug-lever K is bent at right angles, thus forming a lug M, which is caused to engage in the crack between the hinged edge of the door and the door-frame, the purpose of which arrangement of parts will be presently seen.

Screw-holes N N are provided in the hood or strip of molding A, by means of which the several parts already mentioned, when as-

sembled and arranged in working position, are held in place and protected from disarrangement upon the hinged door or window or upon the frames thereof.

5 O is the vertical swinging edge of the door, P is the inside bottom portion of the same, and Q is the threshold thereof.

Having thus described in detail the several parts constituting my improvements in automatic weather-strips, I will now set forth the operation of the same.

When it is desired to use the automatic weather-strip on the frame of the door in its vertical plane, the springs E E E are placed with their coils around the posts C C C and their short ends bearing against one side of the angular recesses D D D of the hood or strip of molding A, in the position shown. The feet *a a a* of the longer ends of the springs E E E are engaged in the curved slots or seats G G G of the mobile weather-strip F, which latter has been fitted and placed in the rabbet B of the hood or strip of molding A, the slots H H being at the same time engaged with the guide-pins I. The whole is now fastened on the vertical plane of the door-frame by means of screws passing through the screw-holes N N, the mobile weather-strip F through the action of the springs E E E being thrown outward when the door O is opened, as seen in Fig. 2, and pressed inward upon the edge of the rabbet B when the door O is shut, as shown in Fig. 1, thus assuring a close contact between the door O and the flexible strip J of the mobile weather-strip F and excluding the entrance of wind or wet effectually.

When it is desired to render the bottom of the door impervious to wind and wet between the bottom edge thereof and the surface of the threshold, the several parts already named are assembled as above and the plug-lever K passed in the space provided on the end of the mobile weather-strip F and its looped end around the pin L and the lug M at its opposite end entered into the crack between the hinged side of the door and the door-frame. This arrangement of parts may apply to either the inside or outside of the door, the plug-lever K only being reversed for action. It will thus be readily seen that when the door is swung open the crack at the hinged side thereof is widened, and through the retraction of the springs E E E, supporting the mobile weather-strip F, the latter is caused to rise free of the threshold, said rising being controlled by the impingement of the lug M of the plug-lever K against the door-frame until it reaches the limit of its action in the upper edge of the rabbet B of the hood or strip of molding A, as shown in Fig. 5.

When the door is closed or in the act of closing, a reverse action of the parts described ensues and the mobile weather-strip F is thrown downward by the action of the lug M of the plug-lever K against the door-frame,

as the crack between it and the door is contracted by the closing of the latter, thus bringing the flexible strip J of the mobile weather-strip F into close contact with the threshold Q, whatever its irregularities may be, as seen in Fig. 4.

It will thus be seen that my appliances admit of use on either the inside or outside of the bottom of the door, their action being similar and the results the same, thus affording a great advantage, so far as is known to myself, over other automatic weather-strips.

It will be seen, too, that when the weather-strip is applied to the bottom of the door I spread the ends of the springs E E E farther apart than the same are when the weather-strip is used in the vertical position already shown and described, and that the coil of the same is reversed to correspond with the action required of the mobile weather-strip F in its two differing positions.

It will finally be observed that when the weather-strip is desired for use in the vertical position referred to the plug-lever K is not a necessary element in the action thereof, the same being replaced by the impingement of the door itself against the mobile weather-strip F and its flexible strip J.

Having thus described my invention in its detail and the operation of the same, what I claim, and desire to secure by Letters Patent of the United States, is—

In an automatic weather-strip the combination of the hood A, having posts C, C, C, and angular recesses D, D, D, formed thereon at regular intervals, and having the rabbet B, formed throughout its length, in which the mobile weather-strip F, moves, and also having the screw-holes N, N, N, and the guide-pins I, I; the springs E, E, E, carried on said posts in said angular recesses, having feet *a, a, a*; the mobile weather-strip F, having curved slots or seats G, G, G, which engage with the said feet *a, a, a*, of the said springs E, E, E, for its support in the said rabbet B, of said hood A, and also having slots H, H, which engage with the guide-pins I, I, to regulate its movement, and further having a portion of one end thereof cutaway and provided with the pin L; with the plug-lever K, for actuating the mobile weather-strip F, and filling the cut-away portion referred to, and looped about the said pin L, at one end, and having the other end bent at right angles into the lug M, substantially constructed and arranged in the manner and for the purpose herein specified and described.

In testimony whereof I have hereunto set my hand, at Auburn, Cayuga county, New York, this 23d day of November, A. D. 1896.

EUGENE A. PARTELOW.

Witnesses:

FRANK R. RATHBUN,
ANNE L. R. HALLADAY.