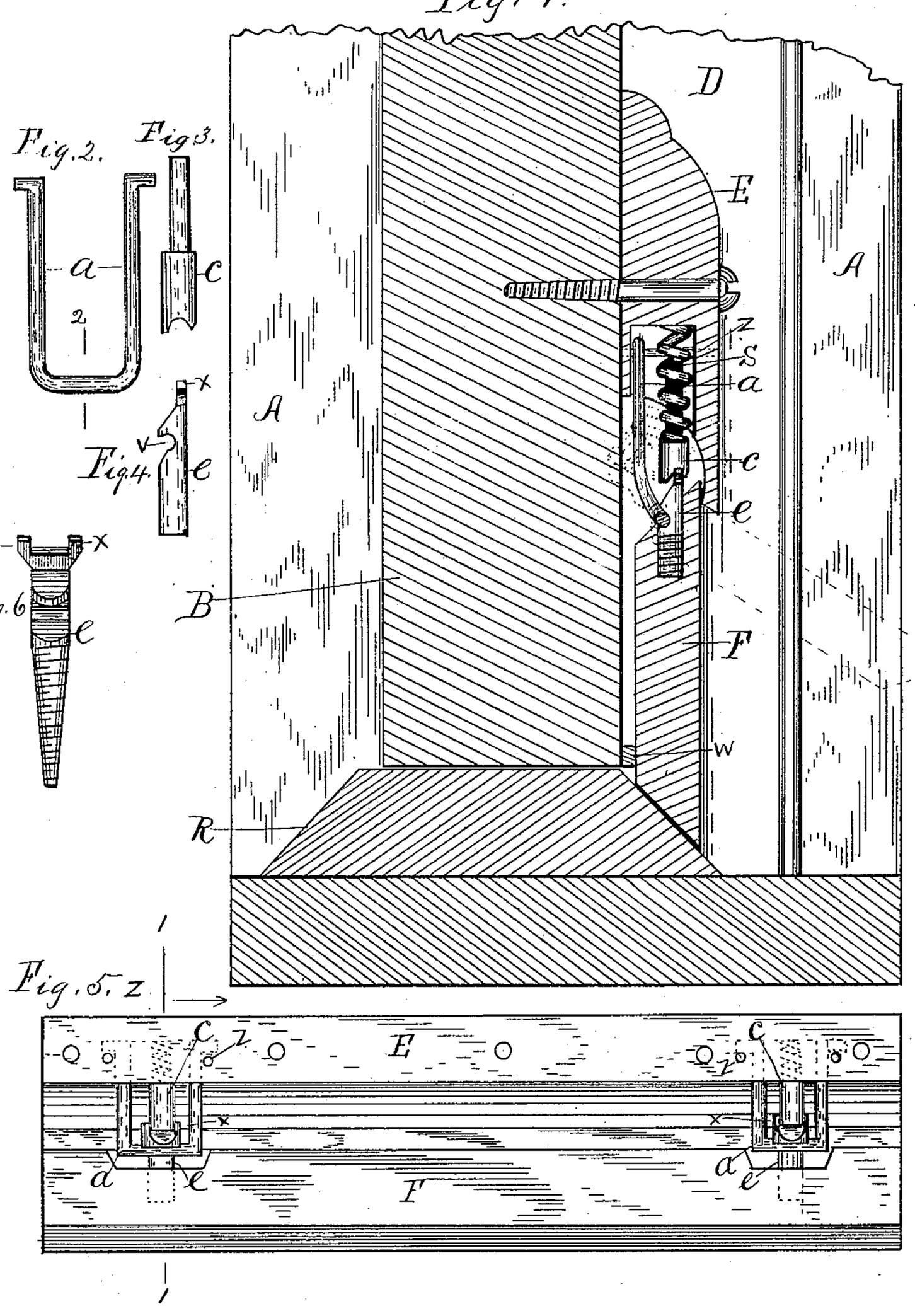
(No Model.)

R. C. MILLER.

WEATHER STRIP.

No. 407,443. Patented July 23. 1889.

Fig. 1.



Witnesses

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WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 407,443, dated July 23, 1889.

Application filed March 11, 1889. Serial No. 302,844. (No model.)

To all whom it may concern:

Be it known that I, ROBERT C. MILLER, a citizen of the United States of America, residing at Channahon, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Weather-Strips for Doors, of which the following is a specification, reference being had therein to the accompanying drawings, and the letters and figures of reference thereon, forming a part of this specification, in which—

Figure 1 is a vertical section of my weather-strip at the side of one of its hinges, taken on line 1 of Fig. 5, looking in the direction of the arrow, as it would appear applied to a door. Fig. 2 is a side view of the stirrup of the hinge. Fig. 3 is a side view of the plunger of the hinge. Fig. 4 is a side view of the stud of the hinge. Fig. 5 is a rear view of the weather-strip detached from the door; and Fig. 6 is another side view of a stud *e*, showing its lower end screw-threaded.

In the drawings similar letters of reference indicate corresponding parts, so that a description of parts forming one hinge will suffice for both.

The object of my invention is to furnish a simple, durable, cheap, and yet efficient device for preventing wind, rain, dust, snow, &c., from entering buildings through the aperture between the bottom of the door and the threshold, and also between the door and jamb.

Referring to the drawings, E represents a cleat secured to the door B a short distance above its lower end, and to its outer side by means of screws in the ordinary manner. Said cleat is cut away on its lower inner side, as shown in cross-section in Fig. 1, so as to overhang a leaf arranged between it and the threshold.

F is a leaf, having a stud *e* set in its upper side, one near each end, which stud may be screw-threaded to screw therein, or may be driven home in a recess formed a little smaller in diameter than said stud to cause it to be held secure therein. Said stud is formed on its side toward the door and out of line with the bearing on its upper end with a hooked notch V, and has its upper end terminating in a narrow bearing provided with an integral stud X at either end, as shown particularly in Figs. 5 and 6.

a is a stirrup, which is secured to cleat E in a recess formed in its under side by means of transverse pins Z, passing through said cleat and under the laterally-extending upper ends of said stirrup, as shown in Fig. 1, and also in broken lines in Fig. 5. The lower end of said stirrup curves toward leaf F and is inserted in the hooked notch V of stud *e*, forming by such connection a hinge upon which leaf F turns. The curve in said stirrup is such as to cause the inner face of the leaf to be in a perpendicular line falling from the upper end of the stirrup, as shown in Fig. 1.

C is a plunger, having its lower end concave in form to rest on the bearing on the upper end of stud *e* between the studs X X, to secure it in place. The upper end of said plunger terminates in a stem smaller in diameter than its other part, and is provided with a coil-spring S, sleeved on said stem and projecting above said stem and seated in the said recess in the lower part of the cleat E containing said stirrup. The resiliency of said spring is such as to cause the plunger C to bear with considerable force on stud *e* and leaf F for the purpose of holding said leaf turned down when the door is closed, or turned up when the door is open. The bearing of said plunger on the upper end of stud *e* is in a perpendicular line falling outside of the hinged connection of said stud and stirrup when the door is closed, as shown in Fig. 1, so that when in such position the spring S causes the lower beveled side of the leaf F to tightly engage the correspondingly-beveled outer side of the threshold R, and also causes the door to close tightly against the door-stop D, secured to the jamb A, which stop is cut away, so that when the door closes the leaf F will engage the stop to turn the leaf down, as shown.

When the door is opened, it will cause the leaf to drag on the threshold and be turned up sufficiently to cause the point of contact between said plunger and stud to be moved to a perpendicular line inside of the hinged connection of said stirrup and stud, when the resiliency of said spring will cause said leaf to be turned up to its fullest extent to the po-

sition shown in the broken lines in Fig. 1, the spring and plunger when in such position standing between the two members of said stirrup, and the overhanging part of cleat E preventing the leaf from turning too far up.

W is a bead secured to the bottom of the door on its outer side to prevent the leaf from turning under the door when the door is open, if said leaf should by accident be turned down. Such connection of the cleat and leaf dispenses with the use of any other hinge than said stud and stirrup, and any number of such hinges may be used, according to the length of the leaf, to support it properly.

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

The weather-strip shown and described, consisting of the combination of the cleat E, leaf F, stud *e*, secured in the upper side of said leaf and having the hooked notch V, and the bearing on its upper end provided with studs X, stirrup *a*, having its lower part curved outwardly from the door and its upper part secured to cleat E in the recess in its lower side, plunger C, having its lower end concaved to rest on the bearing on the upper end of stud *e* and having its upper end terminate in a stem, and coil-spring S, arranged on the stem of said plunger and seated in said recess, all arranged substantially as and for the purpose set forth.

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