

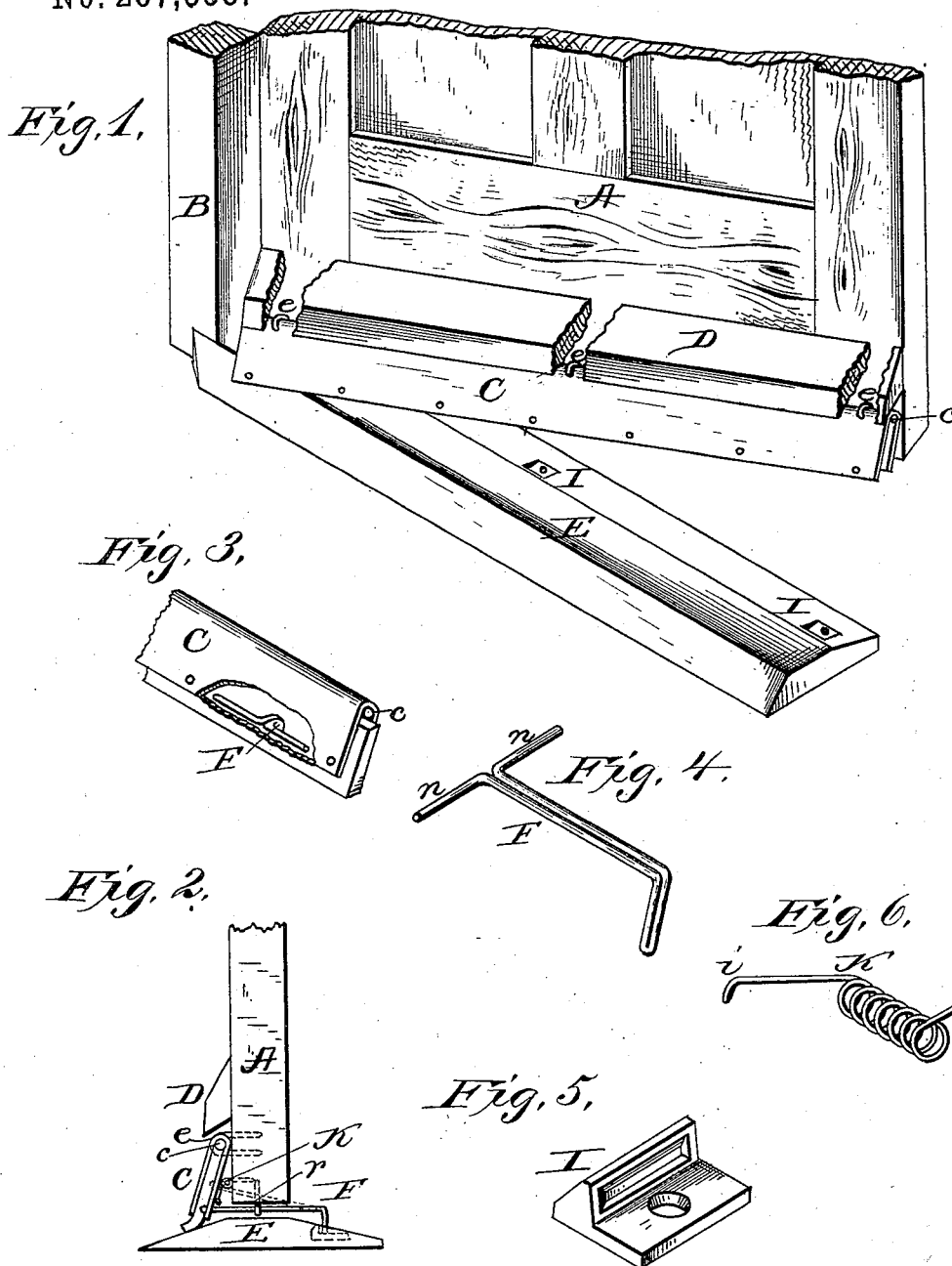
(No Model.)

W. H. LYNCHARD & G. S. SAUNDERS.

WEATHER STRIP.

No. 267,355.

Patented Nov. 14, 1882.



Witnesses:
Frank L. Ouraud,
Will. G. Garman.

Inventors:
William H. Lynchard,
George S. Saunders,
By James T. Drummond,
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM H. LYNCHARD AND GEORGE S. SAUNDERS, OF MOUNT PLEASANT,
IOWA.

WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 267,355, dated November 14, 1882.

Application filed February 10, 1882. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM H. LYNCHARD and GEORGE S. SAUNDERS, citizens of the United States, residing at Mount Pleasant, in the county of Henry and State of Iowa, have invented a new and useful Improvement in Weather-Strips, of which the following is a specification.

Our invention relates to improvements in weather-strips designed for excluding rain and wind from entering under doors, and has for its object an improvement in mechanism for automatically operating weather-strips, causing them to stand out from the door in a raised position when the door is ajar, or to close down tightly on the carpet-sill as the door is closed. We are aware that weather-strips have been made to thus operate by means of various devices attached to one or both door-jamb, working in harmony with the weather-strip, and that hooks or projections at the end of weather-strips have been used to close them to the door-sill as the door is closed, by their hooking or taking over projecting lugs fastened on either the door-sill or one of the jamb-casings of the door, said arrangement being objectionable in placing the closing tension of the strip at its end, thereby failing to entirely close the opening at the opposite end and at the center of the sill, especially in sills made irregular by use or otherwise. Said closing mechanism is also further objectionable in having both the lug (serving as a catch for the hook) and the hook projecting so as to cause damage by catching and rending clothing and other objects in passing. We will proceed to specifically point out by the use of illustrative drawings and otherwise the constituents of our invention.

Our invention consists of the mechanism herein shown for automatically operating a weather-strip, it being constructed and attached to a door as herein described.

In the accompanying drawings, constituting part of this specification, similar letters of reference indicate like parts in the different figures, and dotted lines parts hidden from view, of which—

Figure 1 is a perspective of part of a door ajar, with parts of a weather-strip attached thereto embodying our invention. It also

shows part of one jamb of the door-frame and a carpet-sill. Fig. 2 is a cross-sectional view of an elevation of part of a door in a closed position, showing also a weather-strip attached thereto, in combination with a carpet-sill. Fig. 3 is a perspective of a section of part of a weather-strip detached, having part of its upper plate removed, to show the manner of attaching the closing-hooks to the said strip. Fig. 4 is a perspective of one of the closing-hooks detached. Fig. 5 is a perspective of one of the catches with which the hooks engage in closing the strip to the carpet-sill, and Fig. 6 is a spiral spring for raising the strip while the door is open.

In referring to the different parts by letters, A indicates the door; B, the jamb of the door; C, the weather-strip; E, a carpet-sill; F, a closing-hook; I, a catch for engaging the hook F in closing the door, and K a spiral spring for raising and holding the strip C in an elevated position when the door is open.

The further construction and operation of the several parts we will describe as follows, viz:

The strip C is composed of a metal plate folded, having the upper fold slightly the wider of the two folds, and has transversely-cut notches or slots made at its bend, in which staples *e* work. The said folded plate C also has a rod, *c*, extending the full length of the said strip, which is laid closely in its bend, serving as a stiffener, and also, in combination with the staples *e*, as the hinge or pivot in connecting it with the door. The staples *e* (forming part of the said hinge-connection) are placed astride of the rod *c* in the notches or slots in the bend of the metal plate of the strip C, and are driven into the door as a means of fastening. The strip C is also provided with a strip of rubber placed between its folds, which strip extends beyond the edges of the metal strip at both ends and at its forward edge, and is fastened by riveting through it and both folds of the metal plate. The object of the projecting edge of the said rubber strip is to more thoroughly close the opening under a door than otherwise, and also to serve as a guard or protection against damage by the corners of the metal strip catching and tearing clothing, or to prevent like injury in

any way liable to be produced thereby. The said strip C has one or more hooks, F, attached to it, which attachment is made by inserting the hook's point forward through apertures made in the under fold of the metal strip C, so that the diverging ends *n* will fit snugly against the said metal plate in a lengthwise position, and having the peak of the said hooks pointing downward. The said hooks are supported under the door by means of staples *r*, which staples are driven astride of them into the bottom of the door, (so as to prevent them from catching the carpet or otherwise engaging with fixtures on the floor.) In the event of a door swinging very low, so as to endanger the said hooks engaging with carpets when arranged as above described, the difficulty may be obviated by making transverse recesses ranging upward from the inner lower corner in its bottom, in which recesses the said hooks are made to work by driving the staples *r* so as to hold them up in the said position, and by attaching the said hooks to the strips at a higher point, as shown by the dotted lines in Fig. 2, by which arrangement the said hooks will be drawn at an angle upward into the said recesses by the action of the strip C in rising as the door is opened, thereby carrying the said hooks in an elevated position, and partly incased in the said recesses, while the door is swinging.

Catches I, formed as herein shown on an enlarged scale at Fig. 5, and also shown in Fig. 1, are embedded in and fastened to the carpet-sill E in numbers equal to and at points cor-

responding with the hooks K on the door. As the door is closed the peaks of the said hooks engage with the catches I and draw the strip C tightly down on the carpet-sill E, thereby causing the edges of the rubber packing of the said strip to completely fill the opening. As the door is opened so as to slack the tension of the said hooks, the strip C is raised so as to clear the floor and other objects by means of the spiral spring K, which spring has an arm, *i*, pressing against the under side of the said strip. The said springs are fastened to the door by means of partly embedding them and driving their tines *h* into the door. As a means of protecting the hinged edge of the said strip, and for preventing water from entering back of the strip by running down the door, a cap, D, is provided, which cap is fastened to the door over the said strip.

Having thus fully described our invention, so as to enable others skilled in the art to which it appertains to understand the same, what we claim as new, and desire to secure by Letters Patent, is—

In combination with a door, A, and a carpet-sill, E, the weather-strip C, having for its operating mechanism the closing hook or hooks F, catch or catches I, and the spring K, all arranged substantially as herein shown, and for the purposes specified.

WILLIAM H. LYNCHARD.

GEORGE S. SAUNDERS.

Witnesses:

JAMES A. THROOP,

H. D. WALKER.