

(No Model.)

C. L. BELL.
Weather Strip.

No. 238,753.

Patented March 15, 1881.

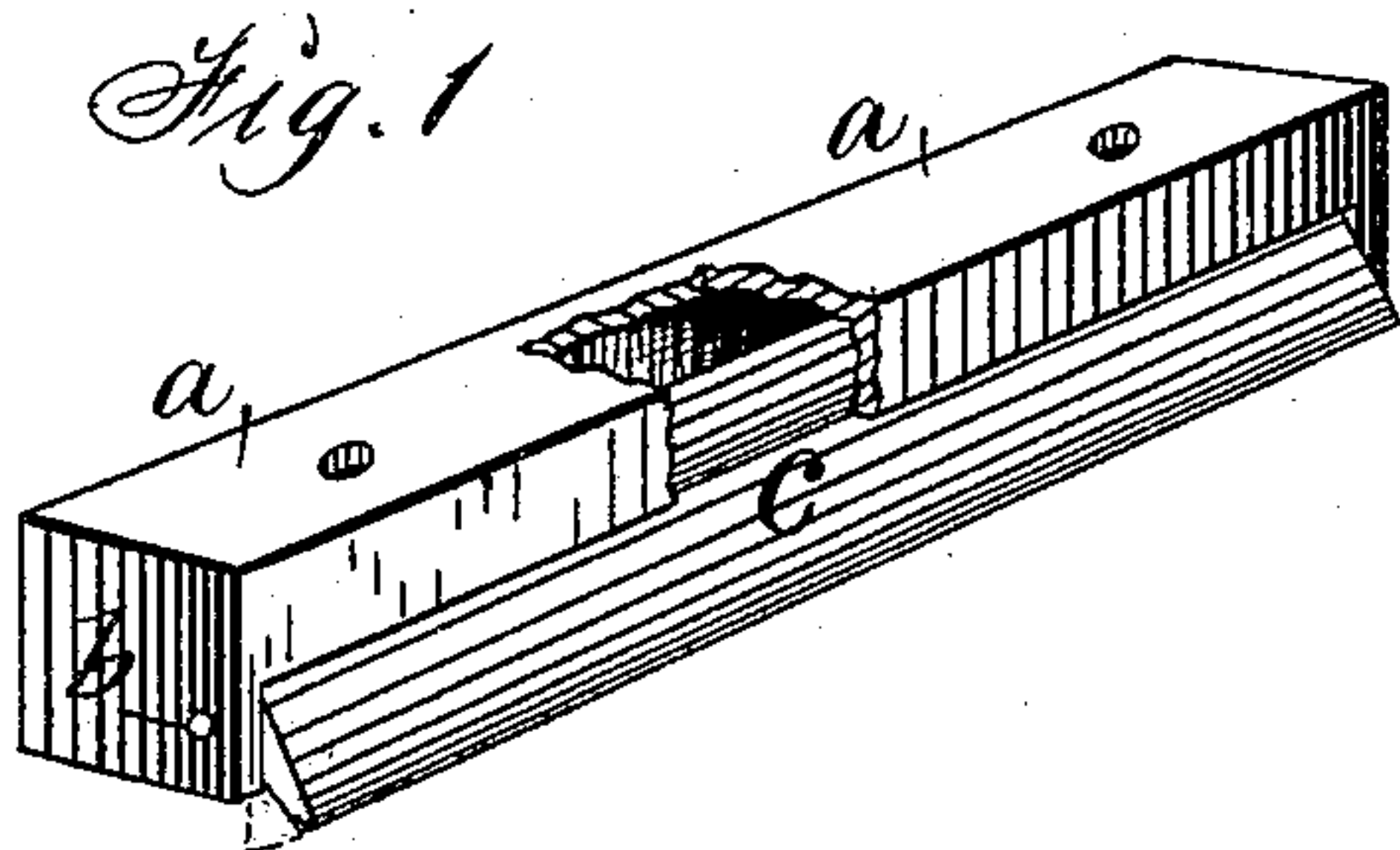


Fig. 2

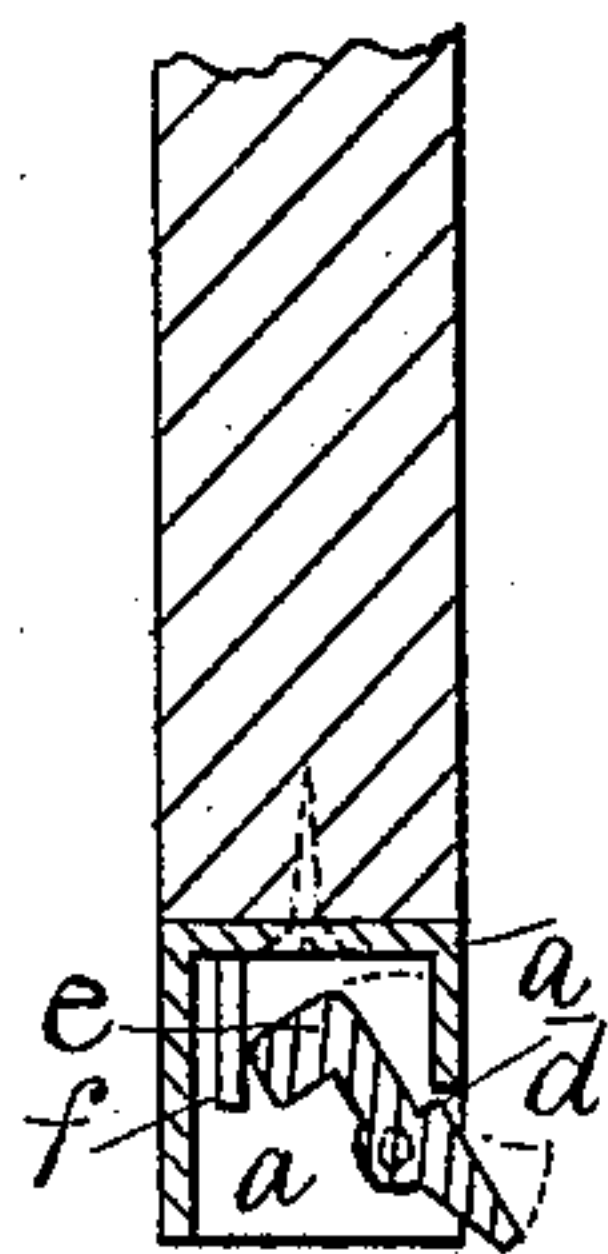


Fig. 3

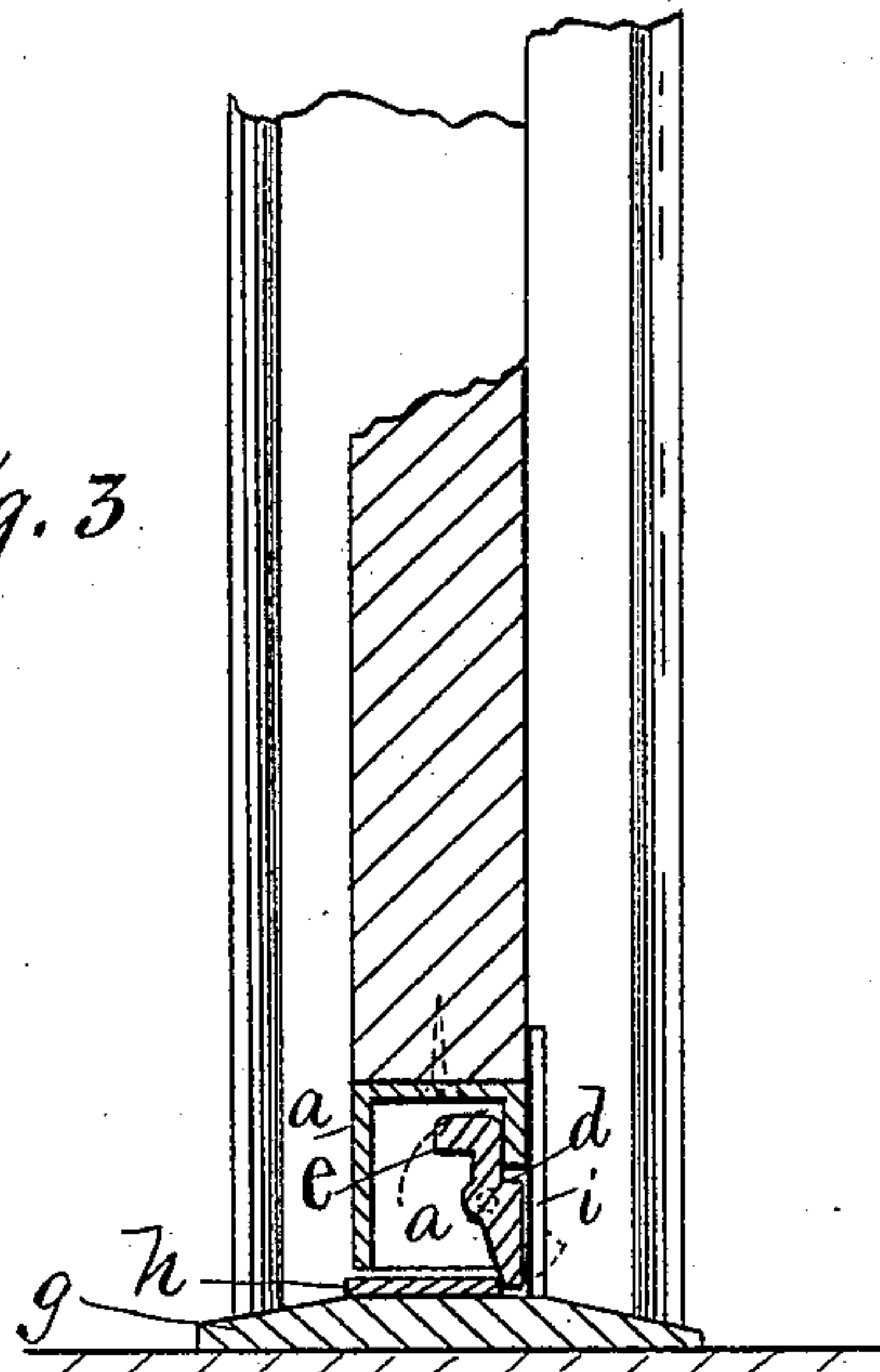
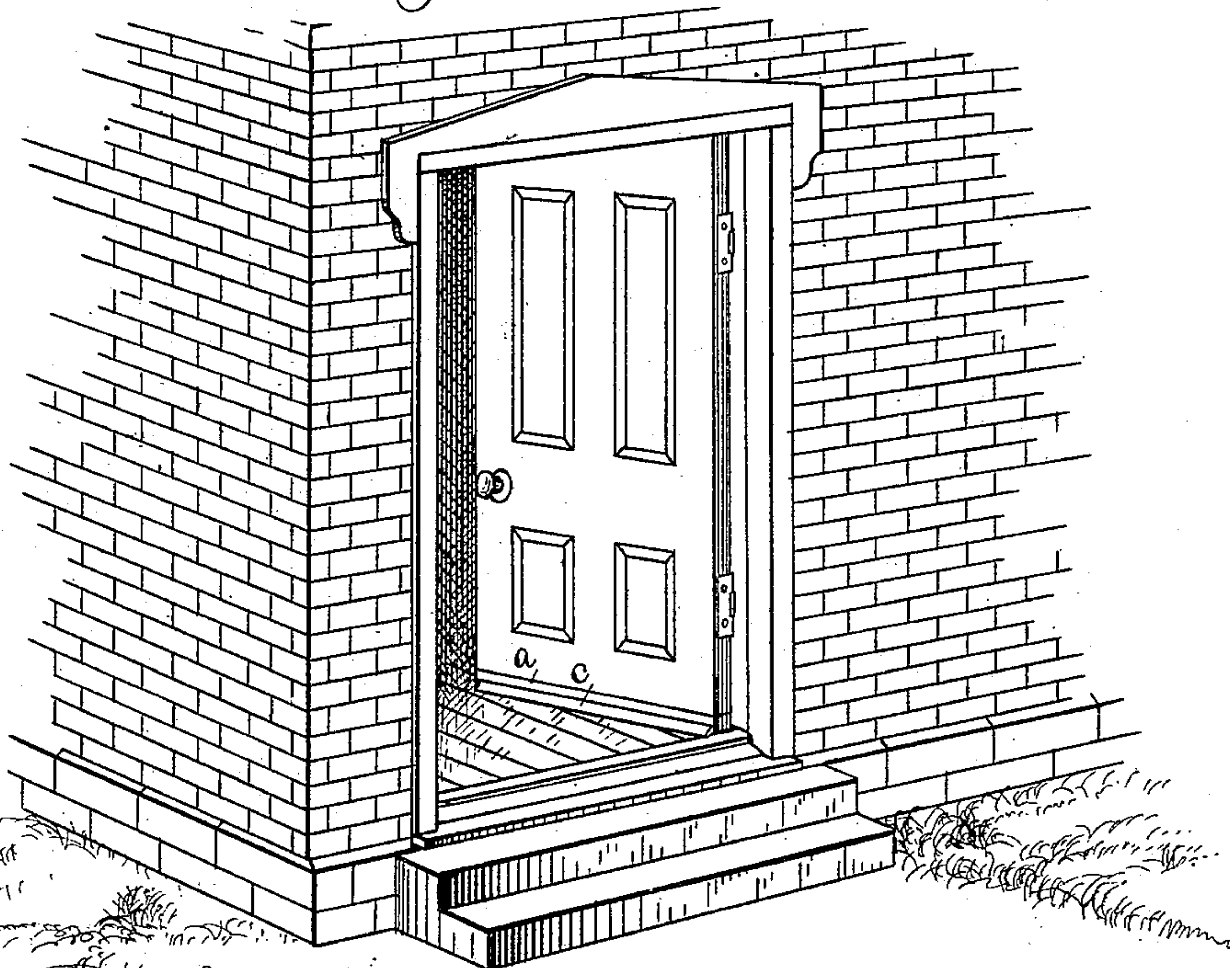


Fig. 4



Witnesses:

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UNITED STATES PATENT OFFICE.

CHESTER L. BELL, OF MAPLE RIVER JUNCTION, IOWA.

WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 238,753, dated March 15, 1881.

Application filed January 6, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHESTER L. BELL, of Maple River Junction, in the county of Carroll and State of Iowa, have invented an Improved Automatic Weather-Strip for Doors, of which the following is a specification.

My invention relates to that class of devices that are designed to prevent wind, dust, rain, and frost from passing into a house through a crevice under an outside door.

Heretofore hinged strips have been applied direct to the bottoms of doors, to be operated in numerous ways by means of cams, levers, and springs. Strips have also been combined with the thresholds of doors to be automatically turned up against the doors when closed, by means of cams and catches fixed to the doors. A weighted strip has also been hinged to a strip of corresponding length fixed to the outside of the door in such a manner that the weighted strip would be depressed by its lower edge coming into contact with a projection on the door-frame.

Hinged strips on doors that require extraneous devices for pressing them down on the threshold, or holding them up as the door swings, to prevent them from scraping on the carpet or floor, are liable to cause the door to warp, and to seriously interfere with the opening and closing, and latching and locking of a door.

My improvement consists in pivoting a weighted metal strip in a metal boxing that can be readily and rigidly fixed against the bottom of the door to stiffen the door and prevent it from warping, and in such a manner that the pivoted strip will be elevated when the door swings, by force of gravity, and depressed upon the threshold when the door is closed, by simply coming in contact with the door-jamb, or a plain metal plate fixed to the door-jamb, all as hereinafter fully set forth.

Figure 1 of my accompanying drawings is a perspective view of my improved device. Parts of the box are broken away to show the position of the weighted and pivoted strip relative to the inside of the boxing. Fig. 2 is a transverse sectional view, showing the device applied to a door and the strip elevated. Fig. 3 is a transverse sectional view, showing the device applied to a closed door, and the hinged

strip depressed upon the threshold by means of a plate on the door-jamb. Fig. 4 is a perspective view of a door having the complete device attached. Jointly considered, these figures clearly illustrate the construction, application, and operation of my complete invention.

a represent a case or box, preferably made of malleable iron, and cast complete in one piece. It may, however, be formed of metal plates that can be joined together by means of lap-joints and rivets. Its bottom is open, and its front side extends only about half-way down. Its closed top is perforated to allow screws to be passed through upward and into the bottom edge of the door, for the purpose of securing the complete device to the door. It also has perforations *b* in its closed ends, through which screw-bolts are passed inward, and into the ends of the weighted strip *c*, to pivot the strip within the box. In place of using screw-bolts to pivot the strip, journals may be formed on or attached to the ends of the strips to enter corresponding bearings formed in or attached to the ends of the box. The lower edge of the strip *c* is thin and tapering.

d is a shoulder in the front face of the strip. It extends from one end to the other, and is designed to engage the lower edge of the front part of the box *a*.

e is a flange or swell extending inward from the top edge of the strip to add weight to the strip and to place such added weight in an eccentric position relative to the axial center of the strip when pivoted in the box.

f represents a stop fixed in the box in such a position relative to the strip that it will engage its weighted top edge and restrict the downward vibratory motions of the weighted edge, and thereby prevent the lower edge from rising too high.

g represents a common wooden threshold or carpet-strip.

h is a flat metal plate fixed on top of the flat center and level surface of the wooden strip *g*.

i is a flat metal plate fitted into the inside edge of the door-jamb.

To apply my invention to a door I simply cut off the lower end squarely and sufficiently

to allow the box to be fitted and fastened to the end in such a manner that when the door is hinged and closed the lower edge of the box will come within about one-sixteenth part of an inch of the top surface of the threshold or a metal strip fixed on top of it.

In the practical operation of my invention, constructed and applied as set forth, the inclosed weighted top edge of the pivoted strip will balance the lower and exposed edge whenever the door is open, as required, to prevent the lower edge from scraping the floor or carpet when the door is swung to and fro; and when the door is closed the projecting and elevated edge is depressed to assume a vertical position and to fill the space between the lower edge of the front side of the boxing and the threshold, and to abut against the front or outer edge of the metal strip fixed upon the top and level surface of the threshold, as required, to prevent wind, dust, rain, and snow from penetrating under the door.

I claim as my invention—

1. As an improved article of manufacture, a weather-strip for doors composed of a metal case or boxing having an open bottom and a partially open front, and a weighted strip pivoted to and within said boxing, substantially as shown and described, to be applied and operated in the manner set forth.

2. The combination of the box or case *a a*, the pivoted strip *c d e*, and the stop *f*, substantially as shown and described, for the purposes specified.

3. The case or boxing *a a*, fixed to a door and carrying the oscillating strip *c d e*, a metal plate, *h*, on the threshold *g*, and the metal plate *i*, fixed to the door-jamb, arranged and combined to operate in the manner set forth, for the purposes specified.

CHESTER L. BELL.

Witnesses:

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