

I. Gifford.

Weather Strip.

N^o 4,492.

Patented May 2, 1846.

Fig. 2.

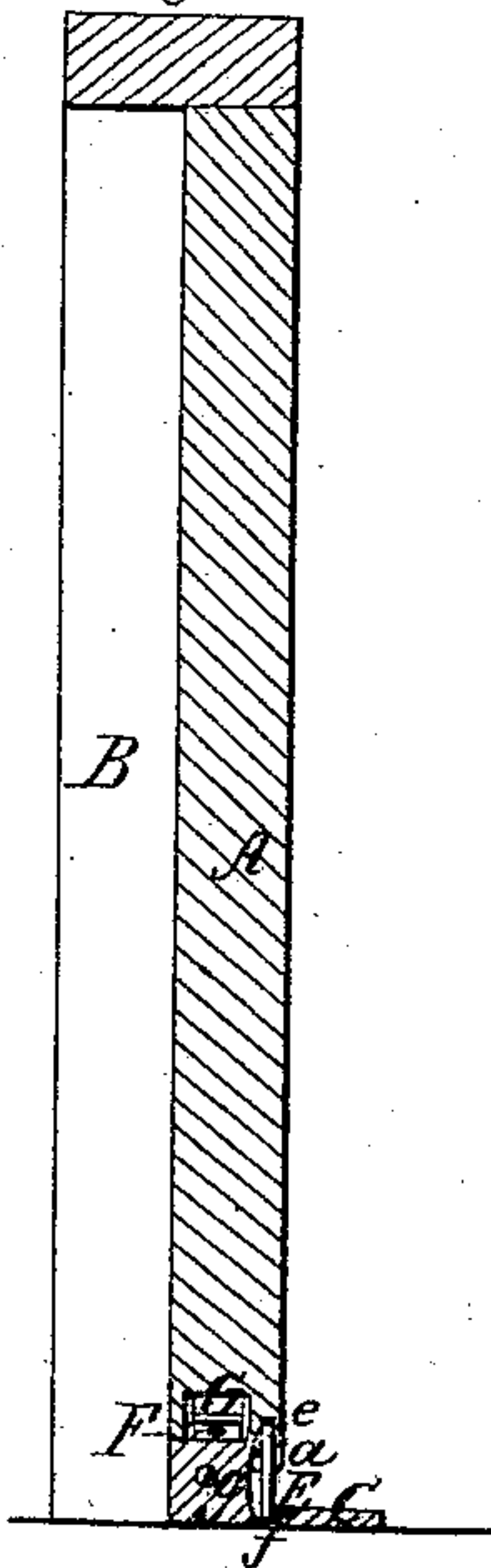


Fig. 3.

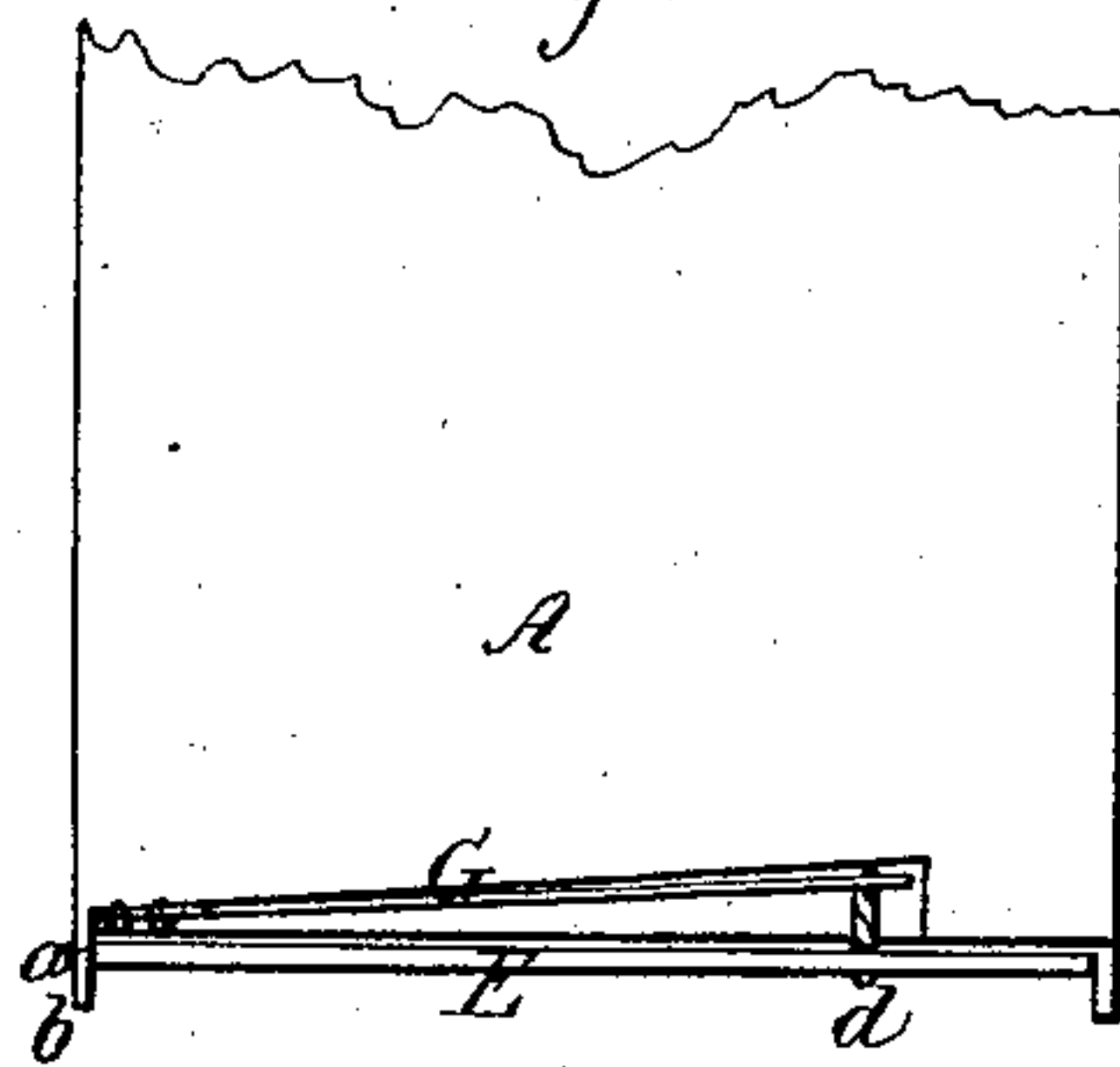


Fig. 1.

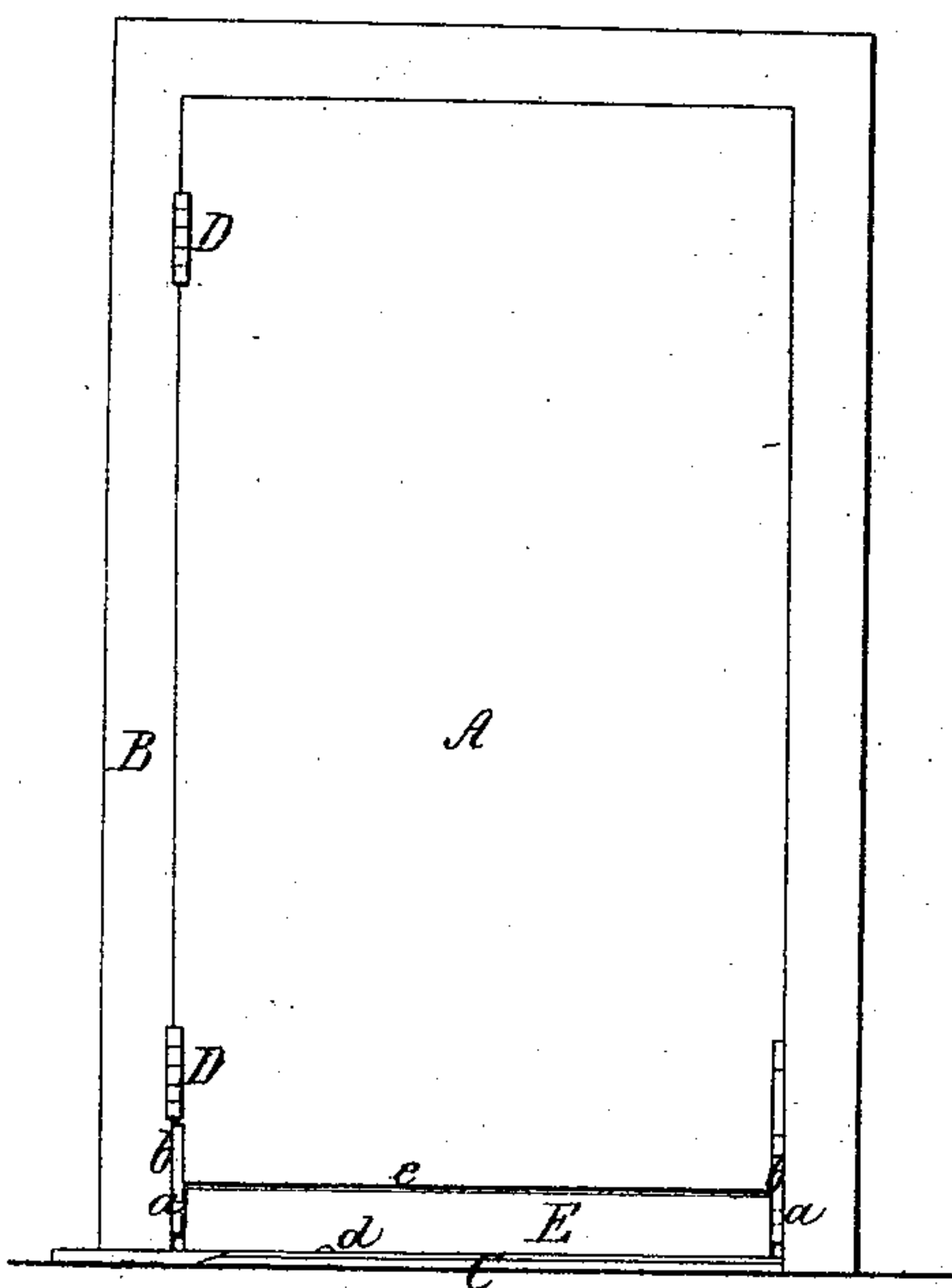
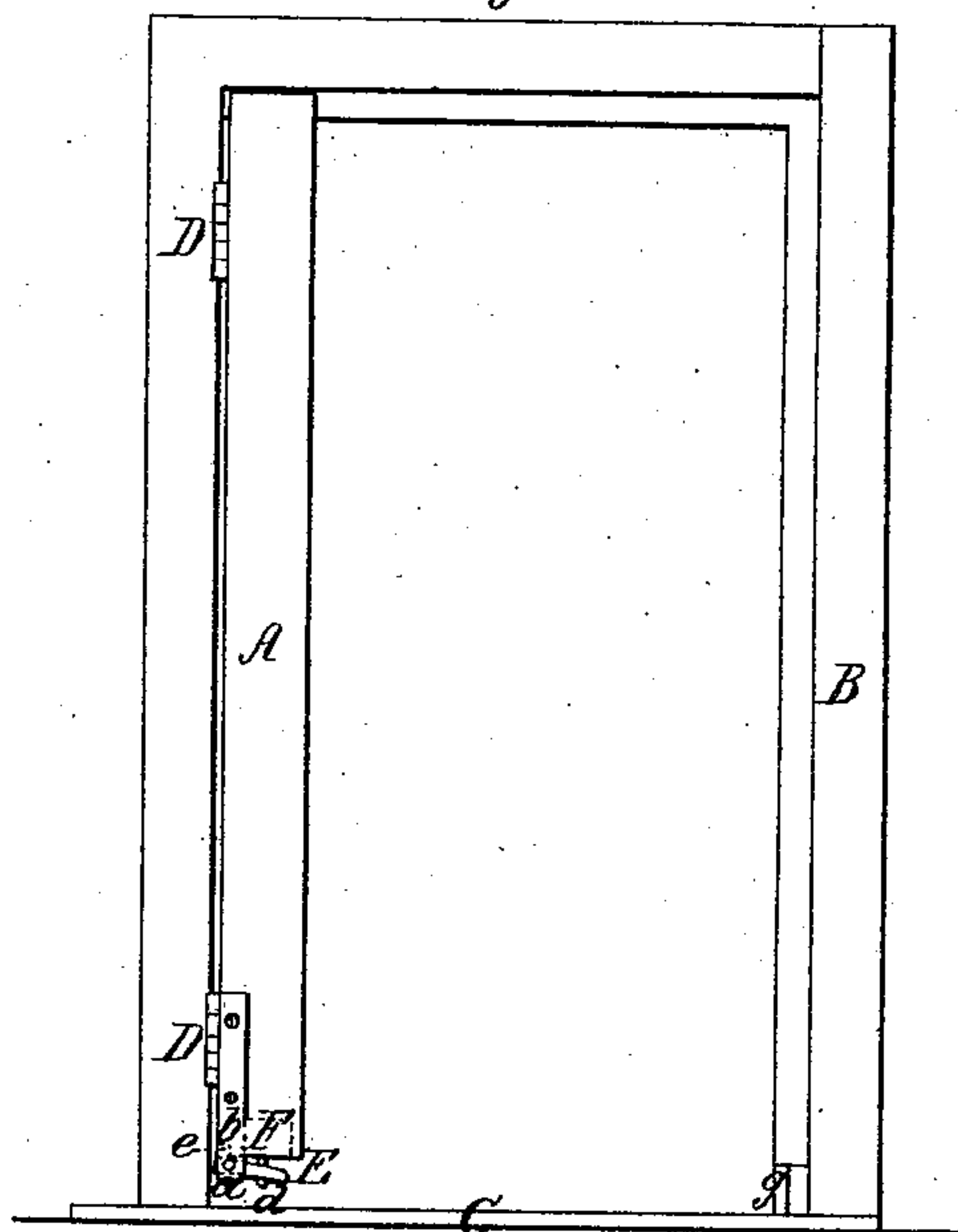


Fig. 4.



UNITED STATES PATENT OFFICE.

LUTHER GIFFORD, OF SYRACUSE, NEW YORK.

WEATHER-STRIP FOR DOORS, &c.

Specification of Letters Patent No. 4,492, dated May 2, 1846.

To all whom it may concern:

Be it known that I, LUTHER GIFFORD, of Syracuse, in the county of Onondaga and State of New York, have invented a new and useful improvement to be applied to the lower parts of doors in order to prevent or hinder the passage of wind or water between them and their thresholds; and I do hereby declare that the nature of my improvement and the manner in which it operates are fully described and represented in the following specification, accompanying drawings, letters, figures, and references thereof.

Of the said drawings Figure 1 denotes an elevation of the inner side of a door and its frame as they appear when the door is closed and as having my improvement applied to them. Fig. 3 is a central, vertical and transverse section of the same taken as if the spectator was looking toward that upright post of the frame which is opposite to the one to which the door is hinged. Fig. 3 is a vertical and longitudinal section of the bottom part of the door taken so as to exhibit the spring which lifts the hinged flap to be hereinafter described, the said figure also representing the hinged flap in the position it assumes when the door is open. Fig. 4 is an elevation of the door and its frame, the former being supposed to be opened at an angle of ninety degrees with the plane of the front of its frame.

A, in the different figures represents the door, B the door frame and C the threshold of the same. The door is hinged to its frame by hinges D, D, in the usual manner. The lower edge of the bottom sill or part of the door is to be raised a short or proper distance above the top edge of the threshold, to have a turning flap E applied to it. The said flap is in its length equal to the width of the door, and it has small journals *a, a* fixed upon its ends, and bearing pieces *b, b* secured to the door for the reception of the journals; the same being as represented in the drawings. Each of the said journals is arranged upon its end of the flap in a position somewhat below the upper edge of the flap or between its upper and lower edges as seen in the drawings. A long cavity F is cut or made in the lower part of the door from its lower edge upward therein and for the purpose of receiving a long spring G arranged therein as denoted in Fig. 3. The said spring is connected to the turning flap

E by a cord or chain or other proper contrivance *d* and acts upon the flap so as to throw and hold it up into the inclined position in which it is represented in Fig. 4. The upper part of the flap when the door is closed is made to fit into a recess *c*, Fig. 2, made in the lower edge of the door. The lower part of the flap shuts or abuts, under similar circumstances, against a shoulder *f* made in the threshold. A small plate *g*, curved on its front edge, is secured to the door frame just above the threshold and in such position that when the door is in the act of entering its frame or of being shut therein, the flap E shall be brought into contact with it (the plate *g*) and be turned down by it into a vertical position.

From the above it will be seen, that, at the commencement of the operation of opening the door, the shoulder *f* will aid in throwing the flap upward, or into its inclined position, and, as soon as the door is opened a very little, or so far as to remove the flap from the influence of the plate *g*, the spring G or other mechanical equivalent will elevate the flap into the position denoted in Fig. 4, thereby enabling its lower edge to rise above the threshold, and be kept from contact with it during the completion of the operation of opening the door. When the door is closed, the shoulder *f* of the threshold and the recess *c* of the door, in connection with the flap E, will very effectually hinder the passage of wind or water between the threshold and door.

My improved air and water guard, as above described, operates in a very peculiar manner, to exclude rain or wind when the door is closed, for, as its lower part rests against a vertical shoulder, against which it is forced by the plate *g*, and as its upper part abuts into the vertical recess *c*, of the door, the wind or water must rise vertically, in the act of passing between the guard or flap E, and the door or threshold. Such an obstacle to the passage of the water or wind, will nearly, if not entirely, exclude it.

I do not claim a flap, hinged to the bottom part of a door, or operating in vertical directions in a groove or cavity made therein, as heretofore used and applied to doors, but,

That which I do claim as my improvement, is—

The combination of the turning flap E, (applied to the door) and the shoulder *f*

made upon the threshold thereof, the said turning flap having a spring or other equivalent, adapted to it and the door, for turning it and elevating or partially revolving its lower edge, above the threshold, while the operation of opening the door is being effected, and, also, a cam plate (g) or other mechanical equivalent, applied to the door frame, for the purpose of turning

it (the flap) into a vertical position, whenever the door is closed as described. 10

In testimony whereof, I have hereto set my signature, this fourth day of November, 1845.

LUTHER GIFFORD.

Witnesses:

ABNER FREEMAN,
ZENAS L. MARSTON.