

No. 675,005.

Patented May 28, 1901.

R. S. HIGGINS.  
WEATHER STRIP FOR DOORS.

(Application filed Feb. 23, 1901.)

(No Model.)

Fig. 1.

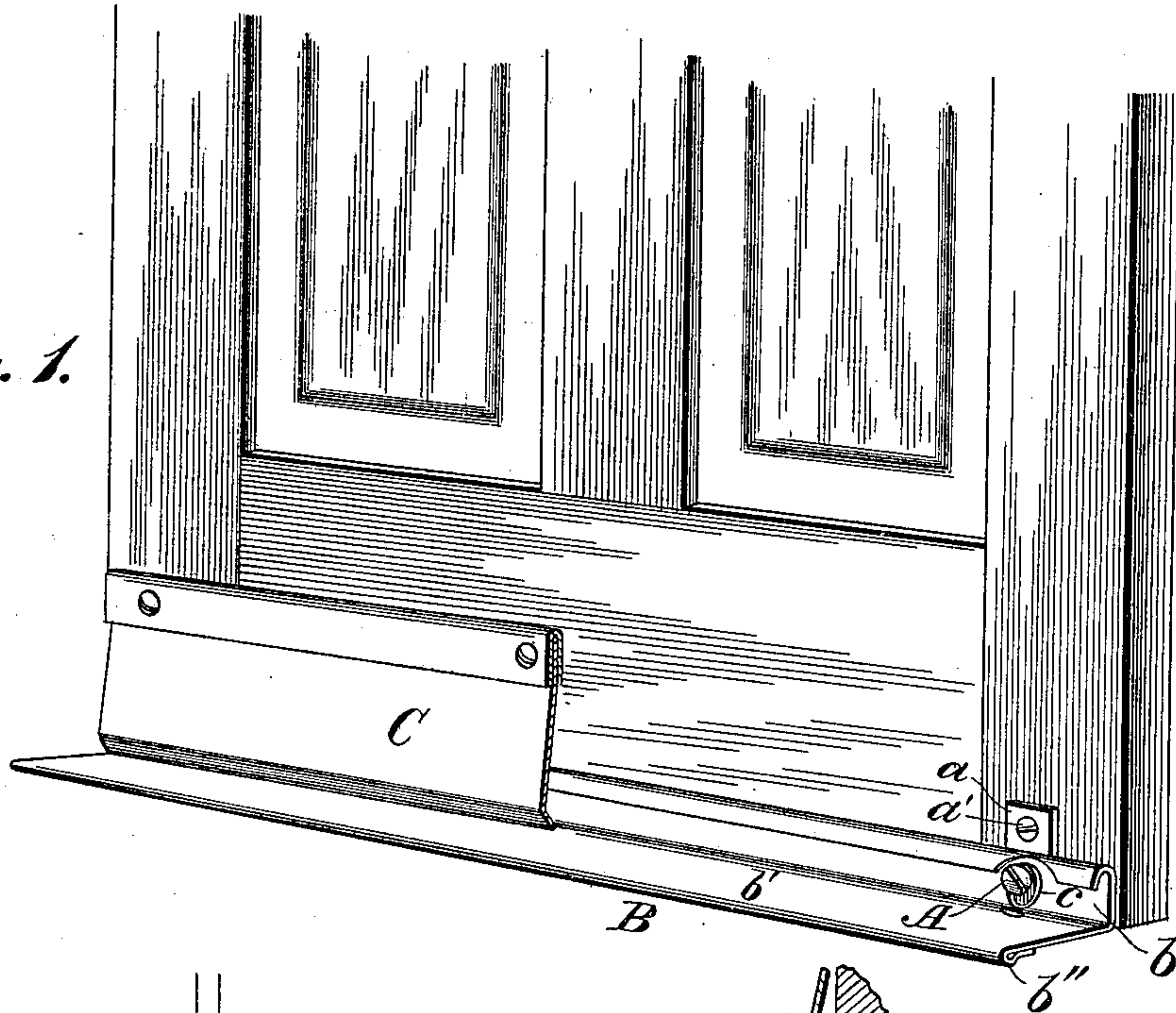


Fig. 2.

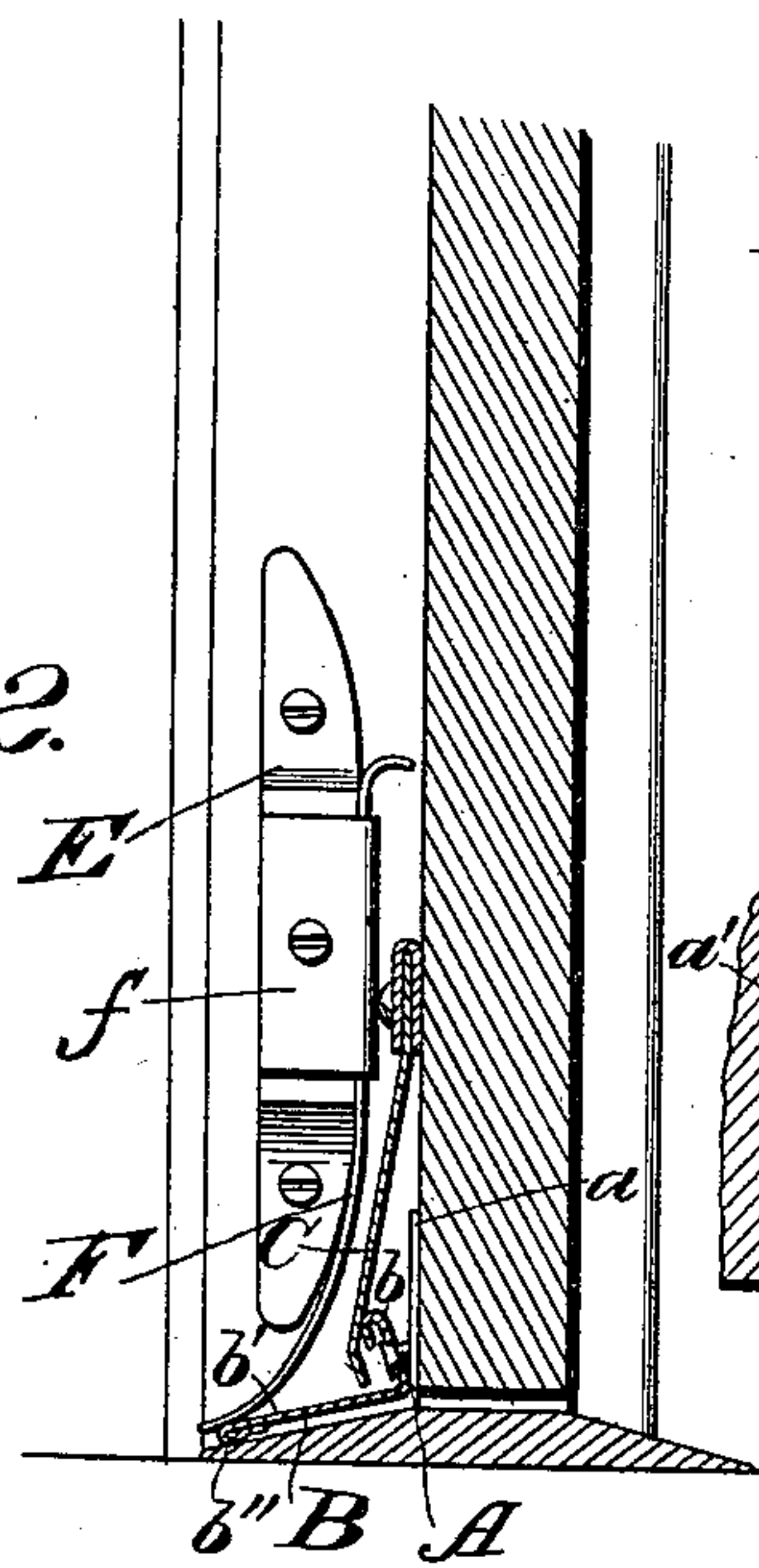


Fig. 3.

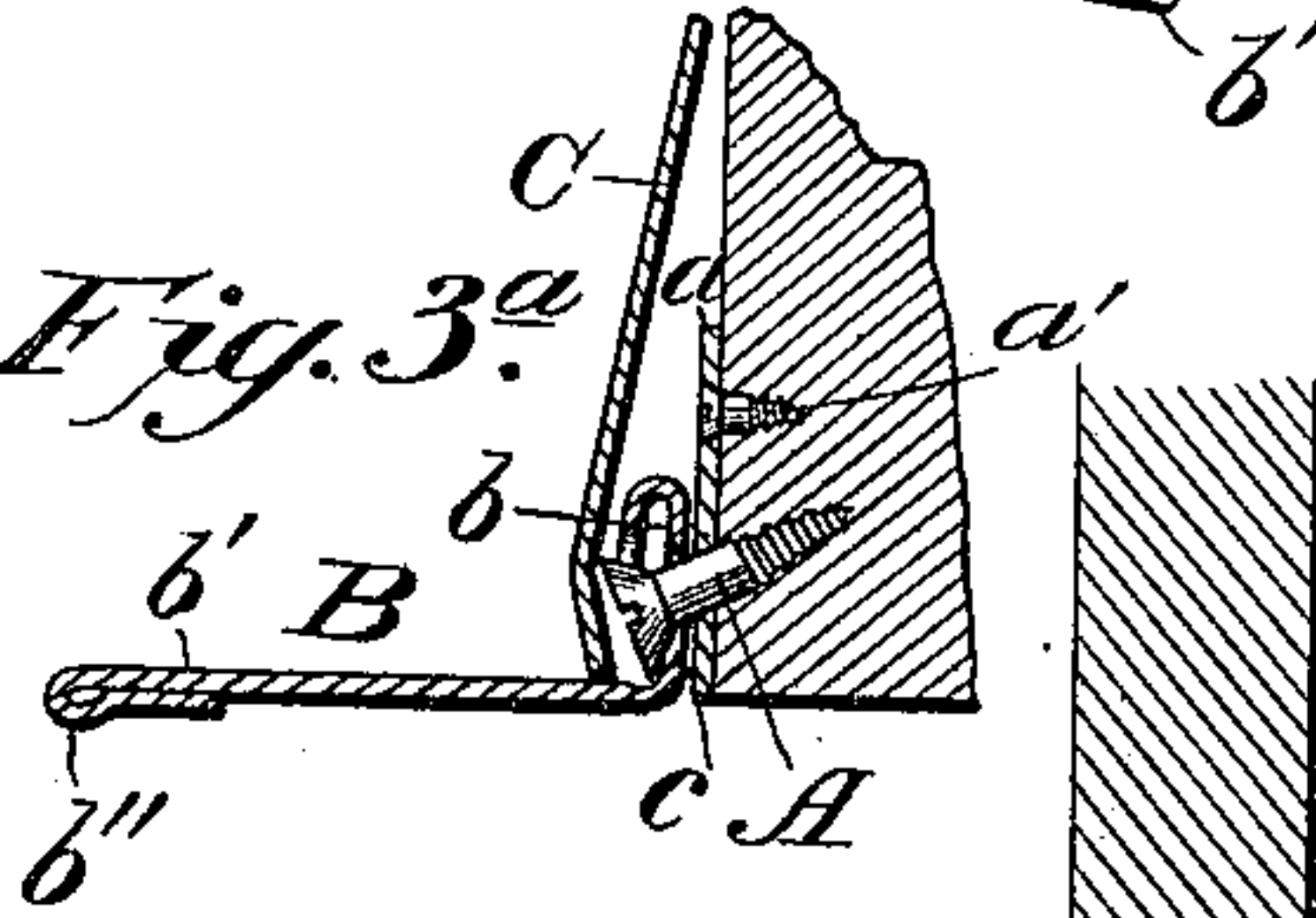


Fig. 3.

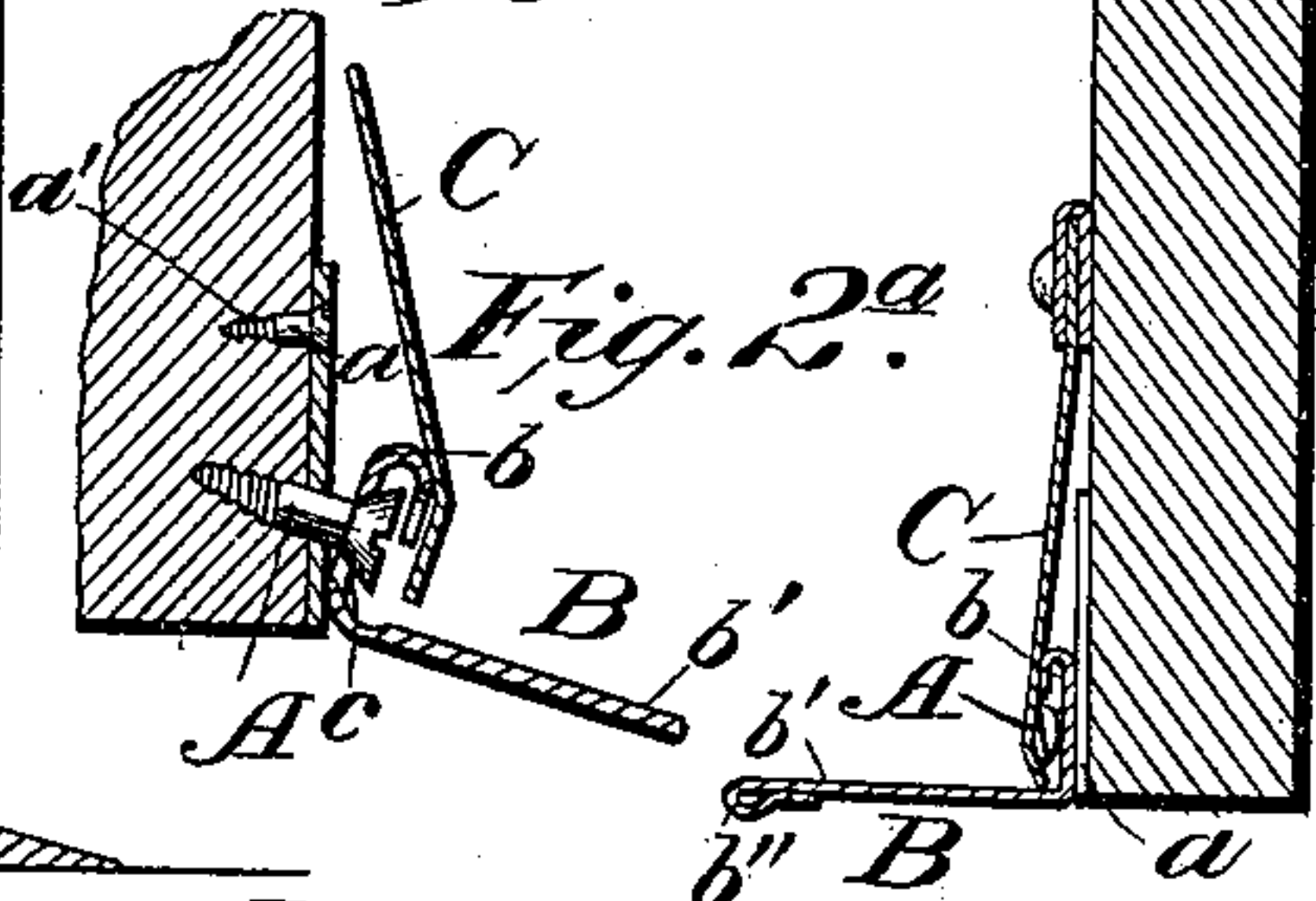


Fig. 2.

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Witnesses

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# UNITED STATES PATENT OFFICE.

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## WEATHER-STRIP FOR DOORS.

SPECIFICATION forming part of Letters Patent No. 675,005, dated May 28, 1901.

Application filed February 23, 1901. Serial No. 48,437. (No model.)

*To all whom it may concern:*

Be it known that I, ROZANDER S. HIGGINS, a citizen of the United States, residing at Neoga, in the county of Cumberland and State of Illinois, have invented new and useful Improvements in Weather-Strips for Doors, of which the following is a specification.

This invention relates to certain new and useful improvements in weather-strips for doors; and it consists more especially in the construction of the parts and means employed for attaching an angular weather-strip to the door so that it may have a rocking motion on the attaching means, as well as a limited vertical movement, the longer member of the angular weather-strip being maintained when the door is open in a horizontal position by having its longer member engaged by a resilient plate attached to the door, said longer member being held in contact with the sill or threshold by a spring attached to the door-frame, as will be hereinafter set forth.

In the accompanying drawings, Figure 1 is a perspective view of a weather-strip made in accord with my invention, the plate which is attached to the door for engagement with the weather-strip being shown partly in section. Figs. 2 and 2<sup>a</sup> are vertical sections, the weather-strip in each instance being shown lowered. Figs. 3 and 3<sup>a</sup> are vertical sections showing the weather-strip maintained in a horizontal position.

The door-frame, sill or threshold, and the door are each of the ordinary type, and in applying my improvements to a door I first secure to its outer face metal plates *a a*, the lower edges of which are placed so as to be flush with the lower edge of the door, said plates being held in place by screws *a'*. The plates have therethrough perforations for the reception of screws *A A*, which provide means for attaching an angular weather-strip *B* to the door.

The weather-strip *B* is preferably made of sheet metal, as galvanized iron, which is bent at right angles to provide on each side of the bend members *b b'*, one being longer than the other. The upper or shorter member *b* of the weather-strip is bent over toward the longer member *b'*, and the depending portion is offset from that part from which it springs and provides a point of contact with which en-

gages a resilient or spring plate *C*, which is secured to the door at a slight distance above the weather-strip. The longer member *b'* of the weather-strip has its outer end bent over the bend, being so shaped as to provide a rounded part *b''*, which bears upon the sill. The several bends in the strips *B* impart the requisite rigidity thereto, and the shorter or upwardly-projecting member has therethrough elliptical openings *c c*, which are countersunk, and above the openings the bent-over portion of the upper member is cut away or recessed, as shown in Fig. 1, to provide clearance for the attaching means.

Screws *A* of the ordinary type are used to attach the weather-strip to the door, the screws being passed through the plates *a* at an angle, so as to have an upward inclination, as shown in Figs. 2<sup>a</sup> and 3<sup>a</sup>, which will position the uppermost side of the beveled head of the screw at an upward inclination. The screw *A* and the opening *c* through the weather-strip are so positioned one relative to the other that the strip may have a rocking movement on the screw, which admits of a change in its inclination without permitting it to fall or hang below the lower edge of the door, though the fastening means permits a slight upward movement of the weather-strip at the point of connection should pressure be applied to the same from beneath.

To the door, slightly above the weather-strip, is secured a resilient plate *C*, the width being such that its lower edge will bear upon the longer member *b'* of the weather-strip near the angular bend, serving, with the connecting means, to hold said member *b'* in a horizontal position, the downward and inward pressure of the spring-plate causing the upper edge of the opening *c* to ride upon the upwardly-inclined shank of the screw, so that the rear face of the shorter member *b* will bear against the plates *a a*. This movement is effected by the construction of the parts when they are out of engagement with any means which would arrest or effect the lowering of the longer member of the strip, and it will be noted that the pressure of the spring on the longer member *b'* is downward and toward the door. In order that the connecting means may be cleared by the spring-plate *C*, it is bent inwardly near its lower edge,



which bend brings the point of contact of the spring-plate near the angular bend and below the point of suspension.

When the outer end of the long member *b'* of the weather-strip is depressed, the upper walls of the openings *c* ride over the shank of the screws and bear on the upwardly-inclined surfaces of the heads, and when so inclined the bent portion of the spring-plate contacts with the outwardly-bent portion of the member *b*. The outer end of the weather-strip may be depressed to contact with the sill when the door is closed by a spring *F*, which is embraced by a plate *f*, carried by a block *E*, attached to the door-frame, and it will be noted that both the upper and lower ends of this block are of similar construction, so that by reversing the spring it may be used on either the right or left hand side of the door-frame. When the spring *F* is forced downward, the door-sill by engagement therewith will be pressed upon the sill or threshold.

Prior to this application weather-strips having an angular bar or strip have been attached to a door by hinges, the weather-strip being moved in one direction by a resilient plate and downward toward the door-sill by a spring attached to the door-frame; but such construction is objectionable, as the door has usually to be removed in order to attach the hinges and the recesses for the leaves of the hinges mar the door, whereas with the present device the only marks which will show when the attachments are removed are the screw-holes, for in use the weather-strip is kept out of direct contact with the door by the plates

*a a*. The weather-strip and resilient plate are furnished of the maximum length and may be cut to fit doors of a minimum width, and the parts shown are readily applicable to either right or left hand doors.

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

In combination with a door and door-sill of ordinary construction an angular weather-strip having therethrough openings, screws for movably attaching the weather-strip to the door the screws being passed through the openings and into the door at an upward inclination whereby the rocking movement of the weather-strip is limited, the upper member of the weather-strip having an outwardly-bent portion, of a resilient plate attached to the door so that its lower edge will contact with the weather-strip below the means for attaching the same to the door and with the bent-over portion of the strip above the connecting means when the strip is depressed below the lower edge of the door, and means attached to the door-frame for effecting a depression of the outwardly-projecting portion of the weather-strip, substantially as shown and for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROZANDER S. HIGGINS.

Witnesses:

J. L. STEGER,  
J. S. SWINEHART.