

J. W. FLESHER & W. M. GILMAN.  
Weather-Strip.

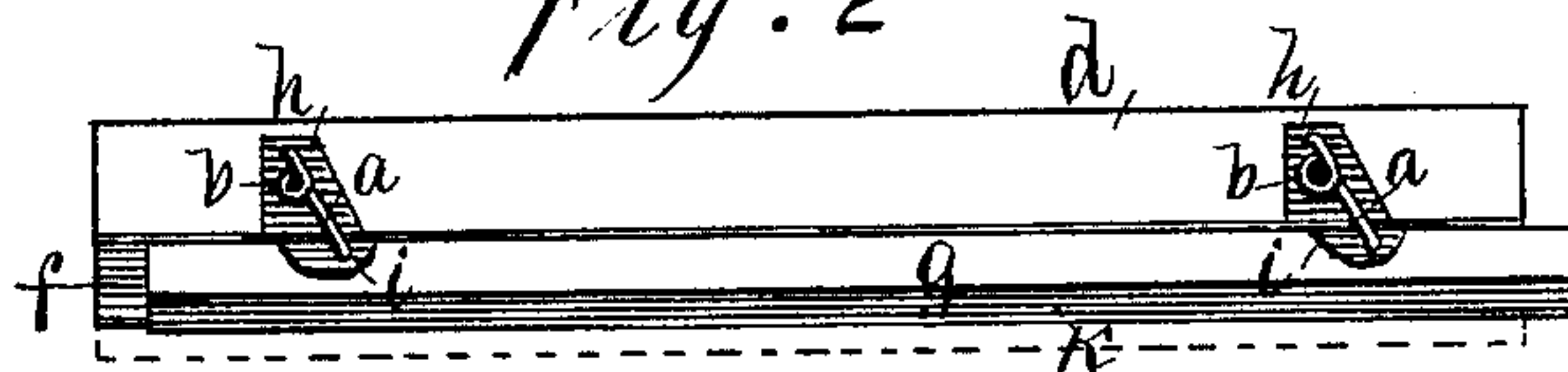
No. 220,228.

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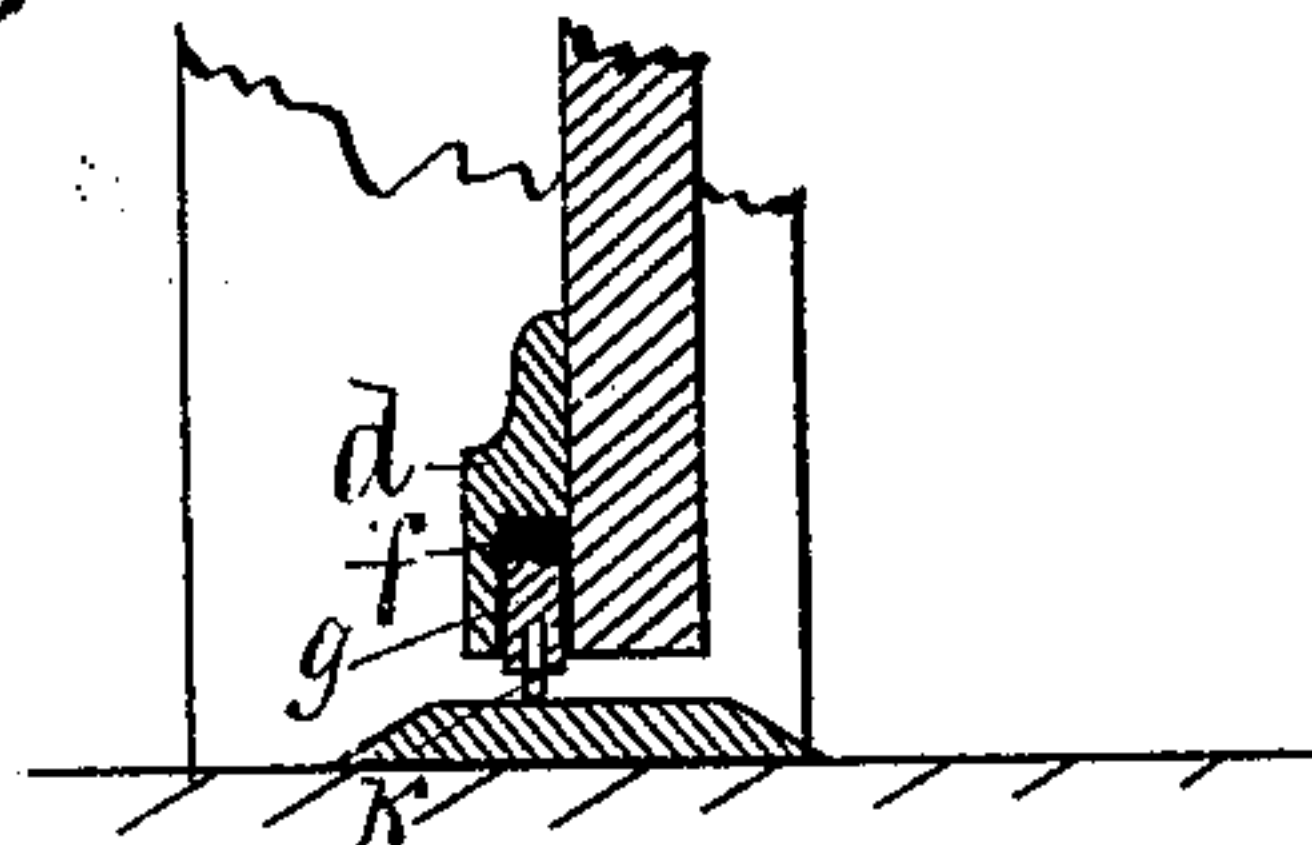
*Fig. 1*



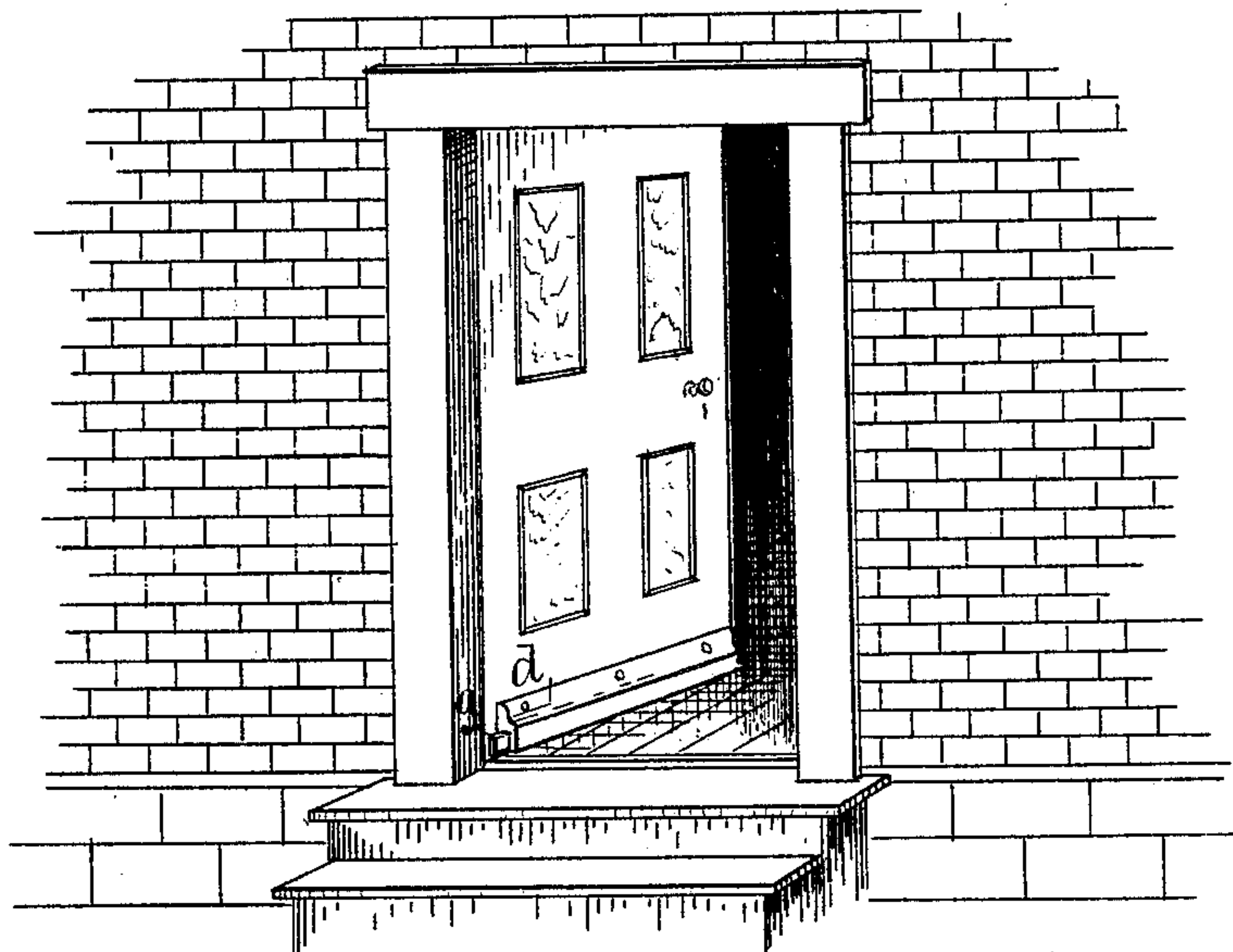
*Fig. 2*



*Fig. 3*



*Fig. 4*



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# UNITED STATES PATENT OFFICE.

JAMES W. FLESHER AND WILLIAM M. GILMAN, OF DES MOINES, IOWA.

## IMPROVEMENT IN WEATHER-STRIPS.

Specification forming part of Letters Patent No. **220,228**, dated October 7, 1879; application filed May 1, 1879.

*To all whom it may concern:*

Be it known that we, JAMES W. FLESHER and WILLIAM M. GILMAN, of Des Moines, in the county of Polk and State of Iowa, have invented an Improved Weather-Strip for Doors, of which the following is a specification.

Our invention relates to that class of weather-strips that are constructed and fastened to the bottom of a door in such a manner that a suspended portion will, in its normal position, when the door is open, project toward the door-jamb, to come in contact with the jamb when the door is closed, and to be thereby moved longitudinally and downward to press upon the threshold to close the crevice under the door, as required, to prevent wind, dust, rain, snow, and frost from passing inward under the door.

Heretofore movable strips have been combined with a fixed molding by means of plain links and operated by means of a spring.

Our improvement consists in forming and applying spring-links to suspend and operate a movable strip in the manner hereinafter fully set forth.

Figure 1 of our drawings is a perspective view of our spring-link. Fig. 2 is an inside or under-side view of our complete weather-strip ready to be applied. Fig. 3 shows a cross-section of the strip and its position when on a closed door. Fig. 4 is a perspective view, showing the strip on an open door. Together they clearly illustrate the construction, application, and operation of our complete invention.

*a* is our spring-link, formed from a short piece of spring-wire by bending its central portion into a coil to produce an eye, *b*, and its ends at right angles to produce pins *c c*. *d* represents a piece of molding made of wood or other suitable material. It may be plain or ornamental in form and vary in size as desired. It has a rectangular recess, *f*, formed in its lower and inside edge by means of a rabbet-plane, when made of wood, or by means of a suitable die, when swaged from sheet metal.

*g* is a movable weather-strip fitted into the

recess *f* of the molding *d*, and suspended therein by means of our spring-links. *h h* are cavities or depressions formed in the face of the molding *d*, near its ends, for the purpose of countersinking the spring-links. They intersect the recess *f* and meet corresponding cavities *i* formed in the face of the movable strip *g*.

The pins *c* of the short arms of the spring-links are driven into the molding at the top corners of the cavities *h*, and the pins *c* of the long arms of the same links are driven into the strip *g* at the lower corners of the cavities *i*, and the pieces *d* and *g* are thus connected.

Screws are passed through the eyes *b* of the spring-links, to fix the links more securely in place and to cause their long arms to actuate the strip *g*.

The same screws that are passed through the eyes of the links may be introduced from the outside of the molding and passed inward to extend into the door and to fasten the complete device in its place on the bottom of the swinging door. The spring-links *a b c c* thus fixed in the mating cavities *h* and *i* of the molding *d*, and movable strip *g*, to connect them and to suspend the movable strip, will, in their normal condition, hold up the movable strip, by pressing it laterally to extend beyond the end of the molding, and when the door is closed and the projecting end of the movable strip comes in contact with the door-jamb, a reverse movement occurs, as required to close the door and the crevice under the door.

The movable strip *g* is preferably made of wood, and an elastic rubber, *k*, fixed in its bottom, as shown in Fig. 3, but may be made of metal or other suitable material.

A complete automatic weather-strip is thus produced by means of two of our spring-links, *a*, piece of molding, *d*, and a movable strip, *g*, that can be readily applied to a door, by means of two screws, in such a manner that no spring, cam, catch, or latching device need be fixed outside of the weather-strip, and consequently without obstructing the passage-way by anything that can be struck by the feet of the passers or come into contact with their garments.



We claim—

1. In a weather-strip for doors, the spring-link *a*, having an eye, *b*, and pins *c c*, projecting at right angles from its ends, as a means of suspending and actuating the movable strip in the molding, substantially as shown and described, for the purposes specified.

2. As an improved article of manufacture, the automatic weather-strip for doors, com-

posed of the spring-links *a*, the molding *d f*, and the movable strip *g*, substantially as shown and described, to be applied and operated in the manner set forth.

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