

No. 847,873.

PATENTED MAR. 19, 1907.

E. N. ANDERSON.
WEATHER STRIP.

APPLICATION FILED APR. 2, 1906.

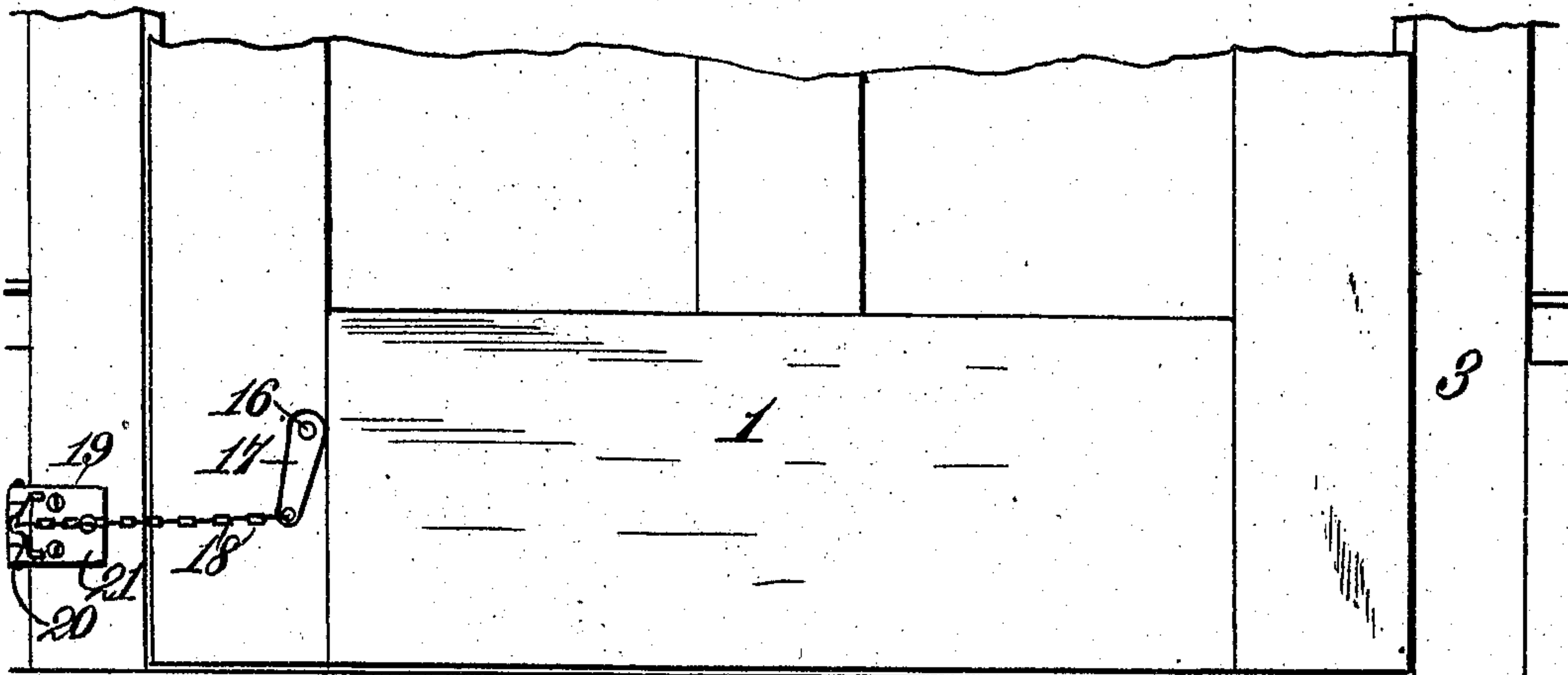


Fig. 1.

Fig. 2.

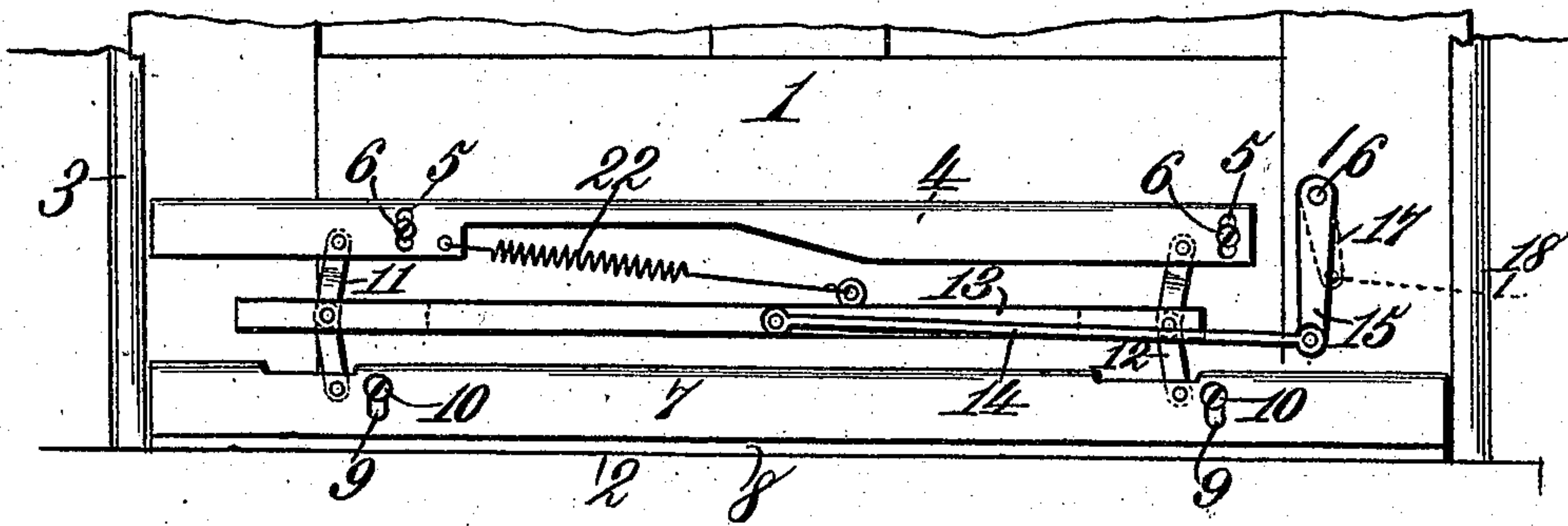


Fig. 3.

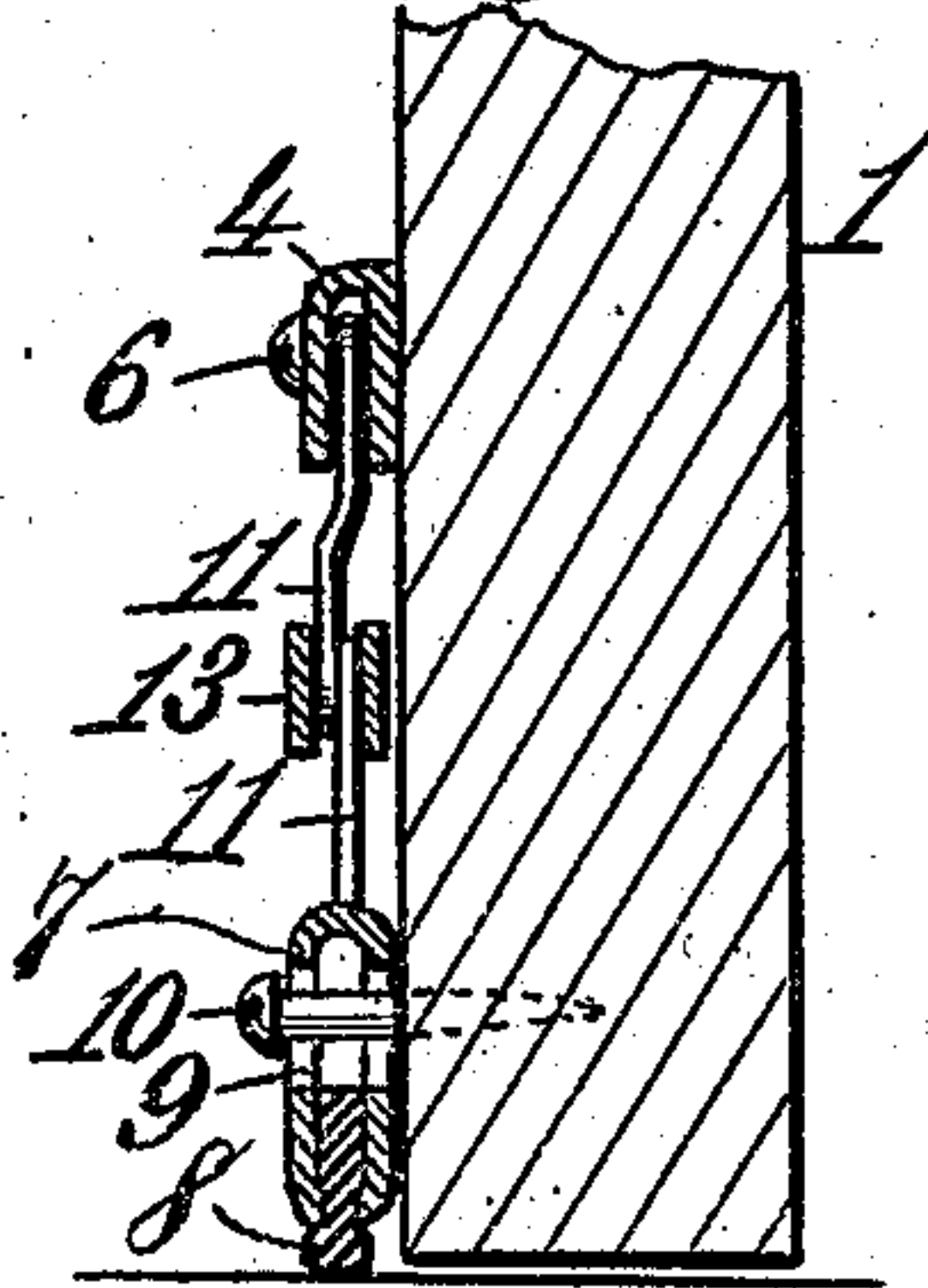
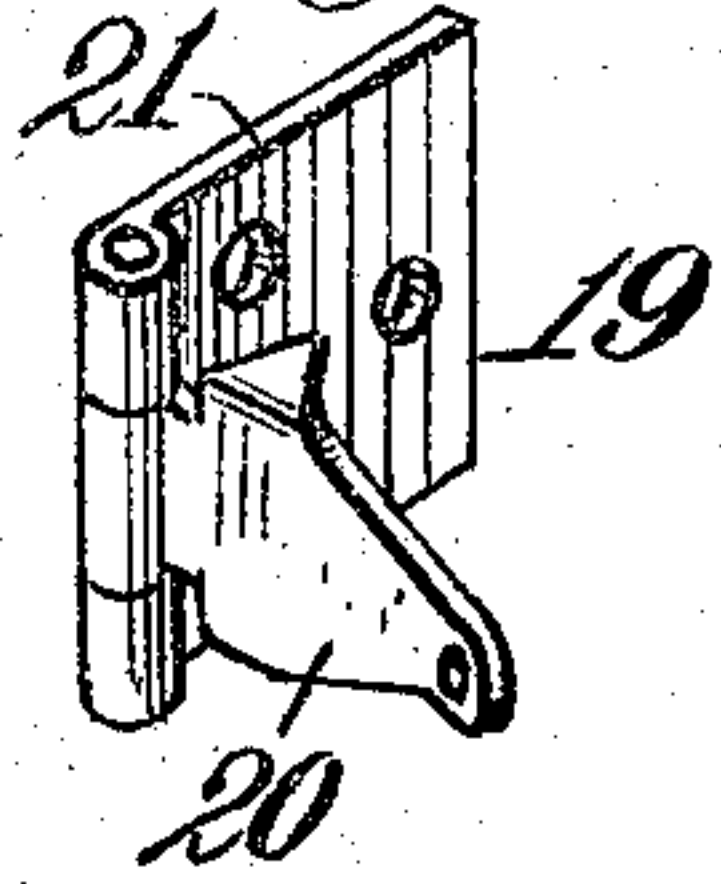


Fig. 4.



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UNITED STATES PATENT OFFICE.

EDWARD N. ANDERSON, OF WARREN, PENNSYLVANIA, ASSIGNOR OF ONE-FOURTH TO PAUL S. HORTON, OF WARREN, PENNSYLVANIA.

WEATHER-STRIP.

No. 847,873.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed April 2, 1906. Serial No. 309,391.

To all whom it may concern:

Be it known that I, EDWARD N. ANDERSON, a citizen of the United States, residing at Warren, in the county of Warren and State of Pennsylvania, have invented new and useful Improvements in Weather - Strips, of which the following is a specification.

This invention relates to a novel construction of weather-strip designed for application at the bottom of a door and to operate automatically in the closing movement of the door to cover or close the space between the lower edge of the door and the sill.

The invention has for its object to provide generally a novel construction of such character of weather - strip and specifically novel mechanism for operating the movable member of the strip.

The invention is illustrated in the accompanying drawing, in which—

Figure 1 is a broken view, in front elevation, of a door having my improved weather-strip applied thereto. Fig. 2 is a fragmentary view looking from the exterior and the door being broken away to show the weather-strip applied. Fig. 3 is a cross-section taken on the line 3 3 of Fig. 2, and Fig. 4 is a detail perspective view of a stop.

Referring now to the drawing, the numeral 1 indicates a door, 2 the sill, and 3 the frame thereof.

4 indicates a supporting - strip provided with vertically-disposed slots 5, by means of which it is adjustably secured in position on the door by means of screws 6.

7 indicates the lower or movable member of the device, on the lower edge of which is secured a strip of rubber 8. The strip 7 is provided with vertically-disposed slots 9, through which extend screws 10, which thus hold the strip for slidable movement on the door.

11 12 indicate, respectively, two sets of links which are pivotally mounted at their opposite ends in the respective strips 4 and 7, toward the outer ends thereof, and are centrally connected by means of a bar 13.

14 indicates a link which is pivotally connected at one end to the bar 13 and at its other end to a crank 15, which is secured on one end of a crank - pin 16, which extends through the door from front to rear thereof. At its opposite end the crank-pin 16 is provided with a crank 17, to the outer end of

which is secured one end of a chain 18, the opposite end of which has connection with an attaching means (designated in a general way by 19) secured on the door-frame 3 adjacent to the inner edge of the door.

As shown in the drawing, the stop may be in the form of an arm 20, hinged to a plate 21, which latter is secured by screws to the frame 3, the chain being secured in the outer end of the arm 20. This construction permits the said arm to swing backward to permit the full opening movement of the door in case this is desired, and thus prevent injury to the door.

22 indicates a spring one end of which is secured to the strip 4 and the other to the bar 13.

In operation as the door is closed the chain 18 will turn the crank 17 and through the medium of the crank-pin 16 turn the crank 15 toward the inner side of the door. This movement, through the medium of the connecting-link 14, will pull the bar 13 in the same direction, thereby tending to straighten the links 11 and 12 and depress the strip 7, so that when the door is completely closed this operation will have resulted in forcing the rubber strip 8 downward in contact with the sill of the door. The movement of the bar 13 described is made against the resistance of the spring 22. As one starts to open the door the action of the spring 22 is at once effective to draw the bar 13 in the opposite direction to that first described, and thereby bend the sets of links so as to raise the strip 7 and carry the strip 8 thereof out of contact with the sill. As the strip 8 wears away the screws 6 may be loosened and the strip 4 adjusted a suitable distance downward to compensate for the wear of said strip.

I have shown the operating parts of the device mounted on the exterior face of the door and fully exposed to view in the interest of simplicity of construction. In practice, however, the device illustrated would be inclosed in a suitable casing, or, indeed, the device might be mounted in a groove in the bottom of the door, all of which matters are well known and need not be illustrated, as they would not change in any manner the construction or operation of the device.

I claim—

1. A weather-strip for doors comprising an adjustable member and a movable member

carried by the door, a shiftable element having link connection with the respective members, a crank carried by the door and having connection with the shiftable element, a plate secured to a door-frame, a hinged arm carried by said plate, a chain connected to the arm and the crank for moving the shiftable element to cause one of the members to move in a direction away from the other of said members upon the closing of the door, and a spring connected to the shiftable element and one of the members for bringing the movable member toward the adjustable member when the door is being opened.

2. A weather-strip for doors comprising a relatively fixed but adjustable member and a freely-movable member, links having connection with the members, a spring-controlled bar connected to said links, and means carried by the door and operatively associated with said bar and having connection with a hinged member carried by the frame of a door for actuating said links against resistance of said spring in the movement in one direction of the door.

3. A weather-strip for doors comprising a fixed and a movable member, links connecting the said members, a spring-controlled bar connecting said links, a crank-pin rotatably mounted in the door, a crank on one end of said pin, a link pivotally connecting said crank and the bar, a second crank on the other end of said pin, a plate fixed to a door-frame, a hinged arm on said plate, and flexi-

ble means connected to the hinged arm and the bar for actuating the movable member upon movement of the door in one direction, said spring adapted to actuate the movable member in an opposite direction upon movement of the door in another direction.

4. A weather-strip for doors comprising members arranged in parallelism and supported by the door, one of the members being adjustably fixed to the door and the other movable relative thereto, shiftable means having link connection with the respective members, an oscillatory element carried by the door, a rod pivotally connected to the oscillatory element and the shiftable means, means hingedly associated with the door-frame, a flexible means connected to the hinged means and oscillatory element for causing a pull on the shiftable means to move one of the parallel members in a direction away from the other of said members upon the closing of the door, and a spring connected to the shiftable means and the fixed member for bringing the movable member toward the said fixed member when the door is being opened.

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

EDWARD N. ANDERSON.

Witnesses:

A. G. ELDRED,
G. C. SWANSON.