

No. 803,026.

PATENTED OCT. 31, 1905.

F. N. STUBBS.
WEATHER STRIP.

APPLICATION FILED OCT. 24, 1904.

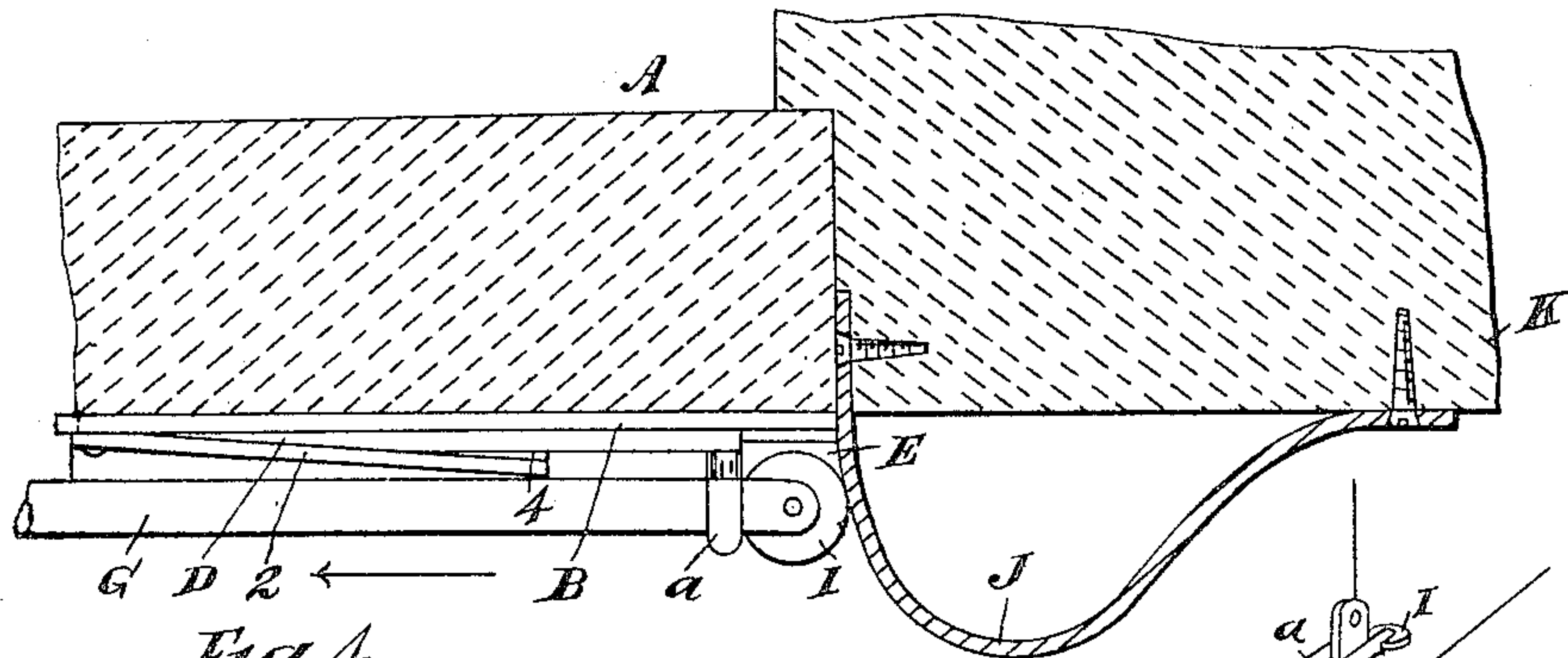


Fig. 4.

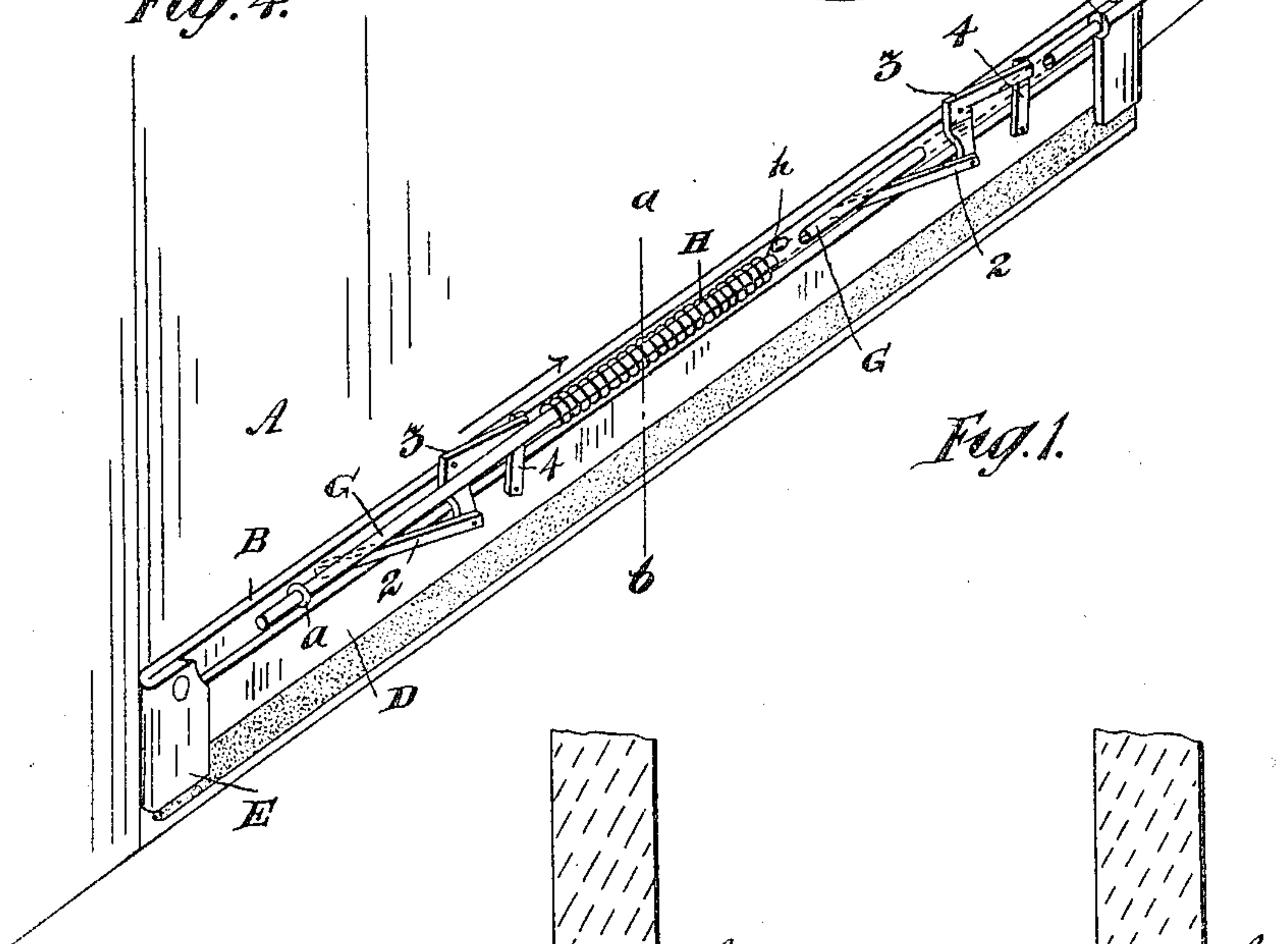


Fig. 1.

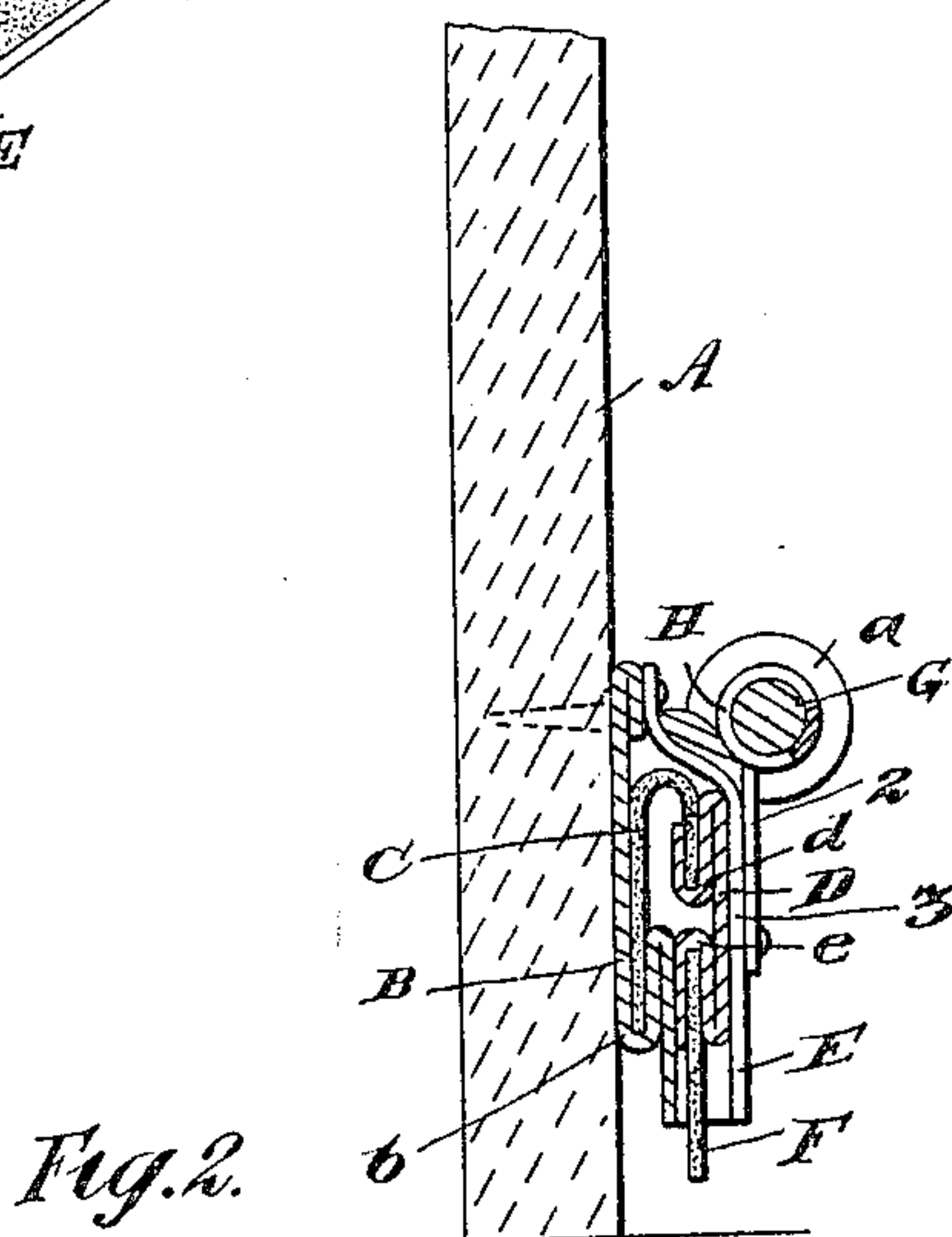


Fig. 2.

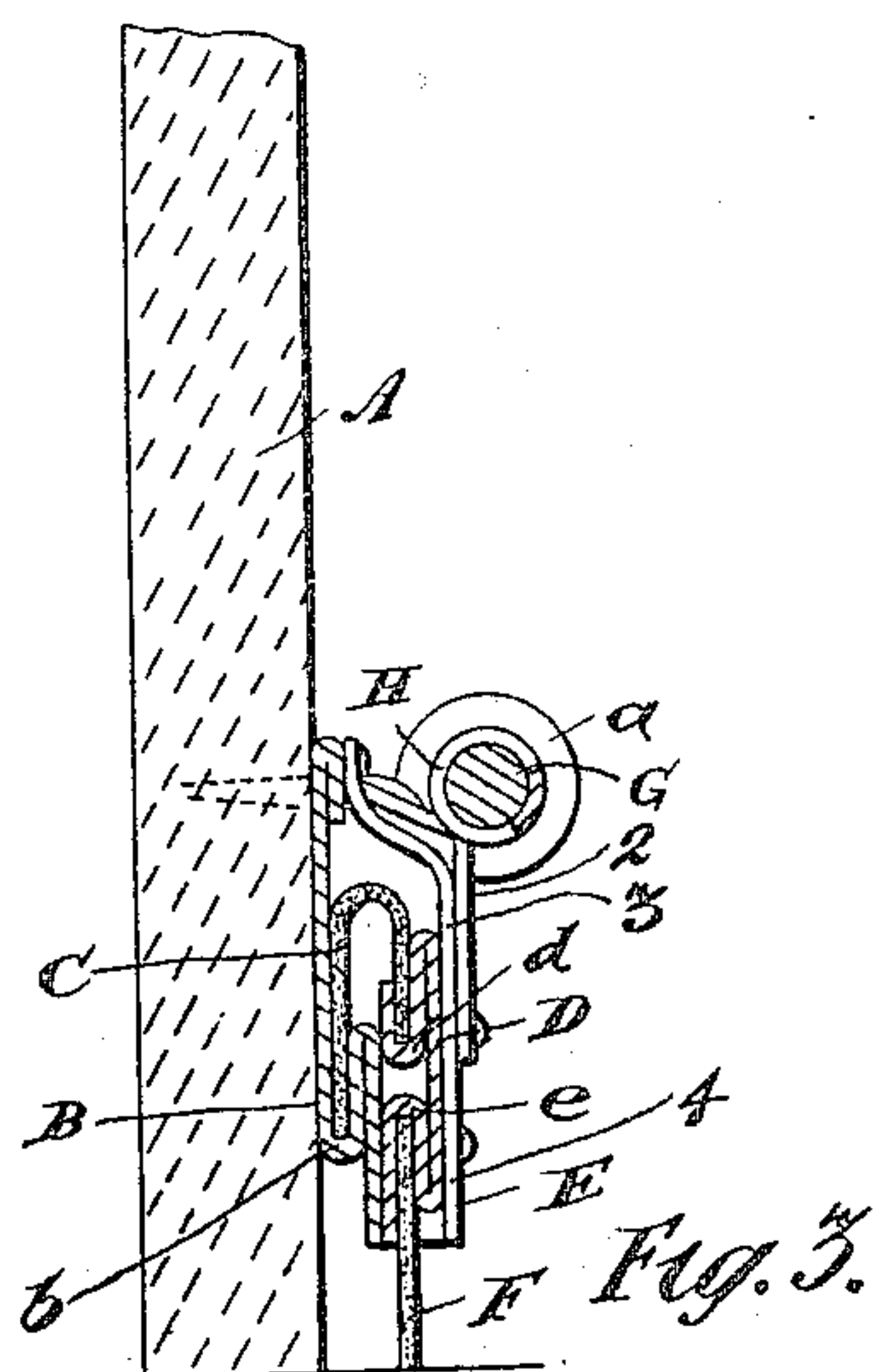


Fig. 3.

Witnesses.

W. R. Blackhall.

C. H. Matheson.

Inventor.

F. N. Stubbs
by Egerton R. Case,
att'y.

UNITED STATES PATENT OFFICE.

FRED NEELANDS STUBBS, OF IONIA, MICHIGAN.

WEATHER-STRIP.

No. 803,026.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed October 24, 1904. Serial No. 229,758.

To all whom it may concern:

Be it known that I, FRED NEELANDS STUBBS, shingle manufacturer, a subject of the King of Great Britain, and a resident of Ionia, county of Ionia, State of Michigan, have invented certain new and useful Improvements in Weather-Strips, of which the following is a specification.

My invention relates to improvements in weather-strips; and the object of my invention is to more particularly design a weather-strip to be attached to doors and operated by the opening and closing of same in order to be raised up from the floor or moved down there-onto.

The invention consists, essentially, of a back plate designed to be secured to the door and a front plate sliding against said back plate, a strip of suitable material suitably secured to said front plate, a spring-controlled rod horizontally held in suitable bearings in said back plate and suitably connected to said front plate, and other details of construction, as hereinafter more particularly explained.

Figure 1 is a general perspective view of my weather-strip, showing same attached to the bottom of a door. Fig. 2 is an enlarged cross-section on the line *a b*, Fig. 1. Fig. 3 is an enlarged cross-section similar to Fig. 2, showing the front plate moved downward. Fig. 4 is a transverse sectional view through the door and part of frame, showing a plan view of part of my weather-strip and also the means used for operating same.

In the drawings like characters of reference indicate corresponding parts in each figure.

A is the door, and B the back plate suitably secured thereto. The back plate B is preferably bent, as shown at *b*, so that a strip C of suitable material, such as rubber or oil-cloth, may be secured thereto.

D is the front plate. This front plate has sliding movement against the front side of the back plate B. As will be seen from the drawings, the ends E of the back plate are bent over, so as to form guideways for the ends of the front plate. The front plate D is bent, as shown at *d*, so that the free end of the material C may be attached to said plate. The said plate D is further bent, as shown at *e*, so that a strip F of rubber or other suitable material may be secured to said plate.

Having longitudinal movement in the guides *a*, secured to or forming part of the back plate B, is a rod G, on which is a spring H, one end

of which is secured to said rod and the other end to the back plate B, as shown at *h*. The spring H is always exerting a force on the rod G in the direction shown by arrow in Fig. 1. In its normal position the front plate D is up in the position shown in Figs. 1 and 2, thus keeping the strip of rubber F clear of the floor. The door shown in Fig. 1 is slightly ajar. It will be seen from Fig. 1 that the end of the rod G projects beyond the side of the door and is provided with a small roller or wheel I. When the door is closed, the wheel or roller I abuts against the contact-piece J, suitably secured to the frame K of the door, thus forcing the rod G in the direction indicated by arrow in Fig. 4, thus moving the front plate D and its strip of rubber F down into the position shown in Fig. 3. In this position it will be understood that the strip of rubber F or a strip of any other suitable material will be forced right down upon the floor, and thus prevent any draft from getting there-under.

3 represents bell-crank levers pivoted to the back plate B, and by means of the link 4, pivoted to the front plate D, are connected to said front plate. When the rod G is forced in the direction indicated by arrow in Fig. 4, (by the closing of the door,) it moves the links 2, pivoted thereto, (which links are also attached to said bell-crank levers,) so as to operate said bell-crank levers and force the plate D downward, so as to move the strip F tight upon the floor. It will of course be understood that immediately the door is opened the spring H returns the rod G and its connected parts into the position shown in Figs. 1 and 2. From my invention it will be understood that the strip F has no rubbing contact with the carpet or floor, and consequently is not worn out.

It will of course be understood that the bell-crank levers 3 are pivoted to the front plate D in such position that the said plate will have equal movement throughout its length and is absolutely prevented from bending against the back plate B. I preferably make use of the strip C in order to prevent any draft from entering the room between the plates D and B, but do not confine myself to using same.

It will of course be understood that my weather-strip can be attached to doors or windows that have vertical movement.

I do not confine myself to the exact con-

struction herein shown and described, as same can be altered in various ways without departing from the spirit of my invention.

What I claim as my invention is—

5 1. A weather-strip comprising a back plate; a front plate operating thereagainst; a strip of suitable material secured to said front plate and said back plate and arranged so as to span the opening therebetween; a strip of suitable
10 material secured to said front plate and designed to be moved down upon the floor; a rod held parallel to said plates; a spring controlling movement of said rod so as to keep said front plate and its strip at normal position
15 out of contact with the floor; links pivoted to said rod; bell-crank levers pivoted to said back plate and to said links, and links pivoted to said bell-crank lever and to said front plate, one end of said rod projecting beyond
20 said plates.

2. A weather-strip comprising a back plate; a front plate operating thereagainst; a strip of suitable material secured to said front plate and said back plate and arranged so as to span
25 the opening therebetween; a strip of suitable material secured to said front plate designed to be moved down upon the floor; a rod held parallel to said plates; a spring controlling movement of said rod so as to keep said front
30 plate and its strip at normal position out of contact with the floor; links pivoted to said rod; bell-crank levers pivoted to said back plate and to said links; links pivoted to said bell-crank lever and to said front plate, one
35 end of said rod projecting beyond said plates, and a roller pivoted in said end.

3. A weather-strip comprising a back plate the ends of which are bent or lapped round so as to form guideways for the front plate;
40 a front plate operating in said guideways; a strip of suitable material secured to said back plate and said front plate and arranged so as to span the opening therebetween; a strip of suitable material secured to said front plate
45 and designed to be moved down upon the floor; a rod held parallel to said plates; a spring controlling movement of said rod so as to keep said front plate and its strip at normal posi-

tion out of contact with the floor; links pivoted to said rod; bell-crank levers pivoted to
50 said back plate and to said links; links pivoted to said bell-crank lever and to said front plate, one end of said rod projecting beyond said plates, and a roller pivoted in said end.

4. In combination with a door, and a contact-piece, of a weather-strip comprising a
55 back plate the ends of which are bent or lapped round so as to form guideways for the front plate; a front plate operating in said guideways; a strip of suitable material secured to said back plate and said front plate
60 and arranged so as to span the opening therebetween; a strip of suitable material secured to said front plate and designed to be moved down upon the floor; a rod held parallel to
65 said plates; a spring controlling movement of said rod so as to keep said front plate and its strip at normal position out of contact with the floor; links pivoted to said rod; bell-crank
70 levers pivoted to said back plate and to said links; links pivoted to said bell-crank lever and to said front plate, one end of said rod projecting beyond said plates, and a roller pivoted in said end, the said roller, when the
75 door is closed, designed to abut said contact-piece so as to operate said rod and depress said front plate.

5. A weather-strip comprising a back plate; a front plate operating thereagainst; a strip of suitable material secured to said back plate
80 and to said front plate and arranged so as to span the opening therebetween; a rod held parallel to said plates; a spring controlling movement of said rod so as to keep said front plate at normal position out of contact with
85 the floor, and means connecting said rod to said front plate so that said front plate will be moved when said rod is moved.

In testimony whereof I have signed my name to this specification in the presence of two
90 subscribing witnesses.

FRED NEELANDS STUBBS.

Witnesses:

THERON M. NESBITT,
JAS. H. LADEN.