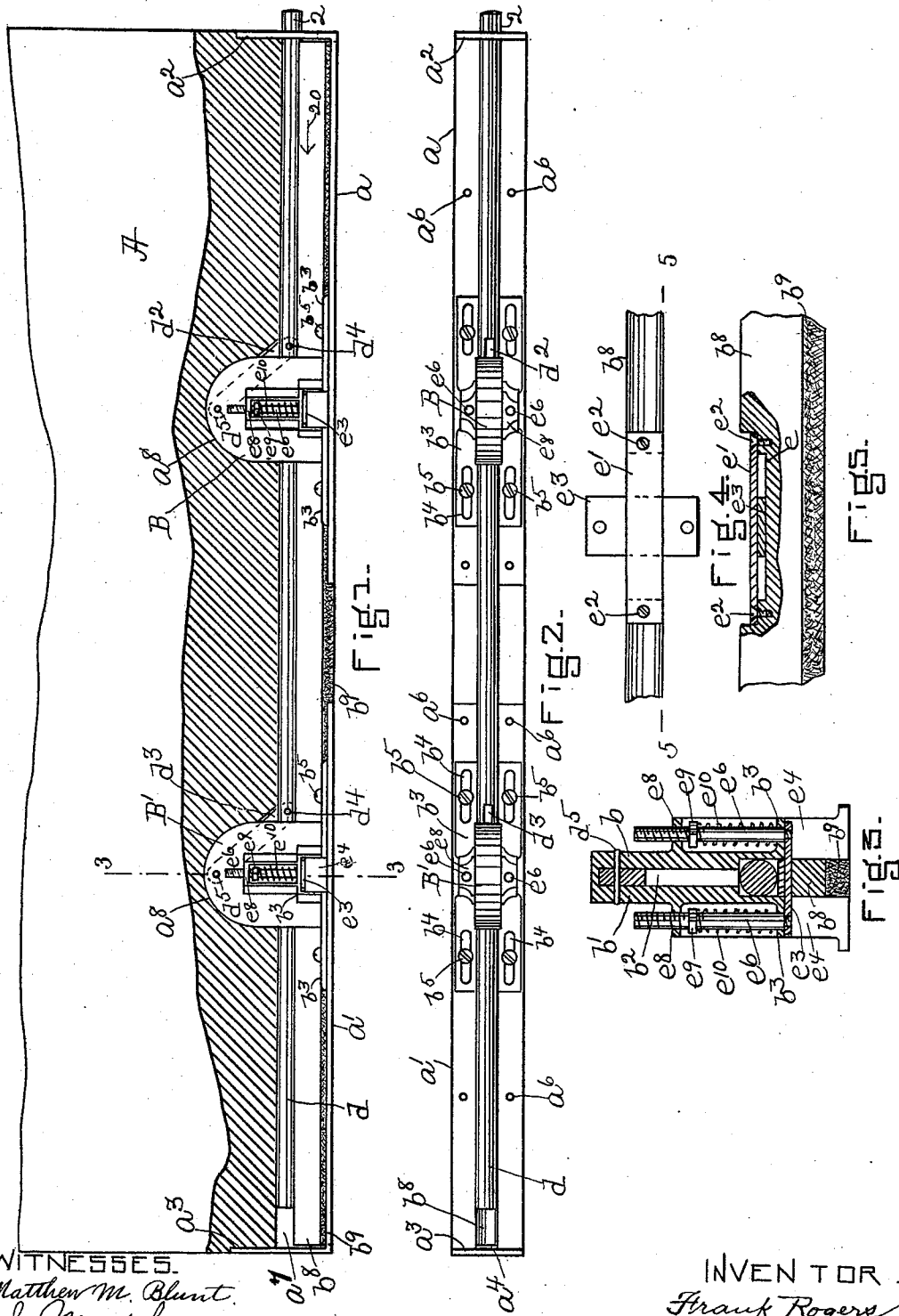


(No Model.)

F. ROGERS.
WEATHER CHECK FOR DOORS.

No. 574,824.

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WEATHER-CHECK FOR DOORS.

SPECIFICATION forming part of Letters Patent No. 574,824, dated January 5, 1897.

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To all whom it may concern:

Be it known that I, FRANK ROGERS, residing in Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Weather-Checks for Doors, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to a protecting device or weather-check designed and adapted to be applied to doors to obtain a substantially air-tight fit between the door and its casing. Prior to this invention I am aware that weather-strips have been nailed or screwed onto the outside of the door; but such strips are objectionable when applied to the more costly doors on account of the defacing of the door by the nails or screws and also on account of their unsightly appearance.

My present invention has for its object to provide a weather-check or protecting device which is substantially concealed from view, does not mar or deface the door when applied to it, and which may therefore be permanently secured to the door, but which can be readily removed for repairs or other purpose.

In the present instance I have represented my improved weather-check as applied to the bottom of the door; and the said weather-check consists, essentially, of a weather-strip which is movable with relation to the threshold of the door, a supporting-framework for said movable weather-strip, and means to move said strip into the said frame, as will be hereinafter described. These and other features of this invention will be pointed out in the claim at the end of the specification.

Figure 1 represents in elevation, with parts broken away, a sufficient portion of a door provided with a weather-check embodying this invention; Fig. 2, a top or plan view of the weather-check shown in Fig. 1; Fig. 3, a section of the weather-check on the line 3 3, Fig. 1; Fig. 4, a detail in plan view to be referred to; and Fig. 5, a detail in side elevation, partially broken away, to be referred to.

Referring to Fig. 1, A represents the lower portion of a door, which may be of any suitable or usual construction and to which is secured a weather-check or protecting device embodying this invention.

The weather-check referred to consists, essentially, of a weather-strip-supporting frame, preferably made as herein shown and consisting of two parts or members a a' , preferably flat metal bars having upturned flanges a^2 a^3 and provided with longitudinal slots or guideways a^4 in line with each other and only one of which is shown in Fig. 2.

The members or parts a a' are designed in practice to be secured to the outer edge of the door, and in the present instance are shown as secured to the bottom of the door, which may be accomplished by screws or other suitable fastening devices, (not shown,) but which may be inserted into the door through the holes a^6 in the members a a' . The door A at its sides is mortised or cut away for the reception of the flanges a^2 a^3 , which may also be fastened to the door by screws (not shown) inserted through suitable holes in the said flanges, if desired. The bottom edge of the door A is also provided with a longitudinal and preferably central mortise, groove, or channel a^7 for the reception of the weather-strip and its actuating device, and the said bottom edge is further provided with sockets, recesses, or openings a^8 for the reception of suitable housings B B', preferably made as herein shown, and each consisting of two side pieces b b' , (see Fig. 3,) separated to form a space or chamber b^2 and connected at their upper ends, the said side pieces having extended from their lower portions flanges or feet b^3 , provided with slots or openings b^4 for the passage of screws b^5 into suitable sockets (not shown) in the members a a' of the supporting-frame.

The chamber b^2 of each housing is enlarged at its lower portion, as herein shown, for the reception of the upper portion of the weather-strip, which latter may be made of a bar or piece b^8 , of wood or other suitable material, but preferably wood, of a length substantially equal to the width of the door A, the said bar having secured to its lower edge a facing b^9 , of felt, rubber, or other suitable yielding material, which is adapted to be brought into contact with the threshold of the door to make a tight joint when the latter is closed.

The facing b^9 , of felt or other suitable material, may be glued, tacked, or otherwise se-

cured to the bar b^8 . The weather-strip extends substantially the width of the door and projects through the longitudinal slot a^4 in the frame $a a'$, and is movable bodily in the mortise or channel a^7 in the door, which movements are effected automatically, as will be described. The weather-strip may and preferably will be moved outward from its supporting-frame through the slot a^4 by means of a rod or bar d , which extends substantially the entire length of the weather-strip and in contact with the upper surface thereof, so that movement of the bar downward will cause the weather-strip to move outward beyond the face of the supporting-frame $a a'$ and into contact with the threshold of the door. This downward movement of the actuating bar or rod d may and preferably will be effected, as herein shown, by means of links or levers $d^2 d^3$, pivotally connected at one end to the bar or rod d and at their opposite ends to the housings $B B'$, so that longitudinal movement of the bar or rod d in one direction will cause the links or levers d^2 to turn on the housing-pivots as a center and force the bar or rod d downward as it is moved longitudinally.

In the present instance the links $d^2 d^3$ have their lower ends inserted into suitable slots or openings in the bar or rod d and secured thereto by pivot-pins d^4 , while their upper ends extend into the chamber b^3 of the housings $B B'$ and are secured thereto by the pivot-pins d^5 , as clearly shown in Figs. 1 and 3. The longitudinal movement of the actuating rod or bar d may be effected automatically by the closing of the door by extending one end of the rod through the upturned flange of one of the members $a a'$, herein shown as the flange a^2 , a substantially short distance, so that when the door is closed the projecting end of the rod or bar d may engage the casing of the door, and preferably a metal plate secured thereto, and be forced or moved longitudinally until the projecting end 2 is brought flush with the outer surface of the upturned flange a^2 . This movement of the bar or rod d in the direction indicated by the arrow 20, Fig. 1, causes the links $d^2 d^3$, which are practically anchored by the housing-pivots d^5 , to force the rod d in a direction substantially transverse to its longitudinal movement, and thereby move the bar b^8 outward until the felt or other facing or yielding strip b^9 is brought into engagement with the threshold of the door or preferably into contact with a metal bar laid on or in the threshold and secured thereto.

If the threshold is made of wood, I prefer to use the metal bar referred to, but if the threshold is made of marble or other hard substance not easily worn the metal bar may be dispensed with, as the facing-strip of felt or other yielding material will make close contact with the same. When the door is opened, the weather-strip is automatically drawn up into the mortise or channel a^7 in

the bottom of the door, and the actuating-bar d is at the same time returned to its normal position. (Shown in Figs. 1 and 2.) This result may be accomplished as herein shown and as will now be described.

Referring to Figs. 3, 4, and 5, the bar b^8 , of wood, is represented as cut out or provided with a transverse mortise or slot e , which is covered by a removable bar or plate e' , secured to the bar b^8 , as herein shown, by screws e^2 , and below the bar e' is located a cross-bar e^3 , extended through the slot or mortise e and through suitable openings e^4 in the lower portion of the housings $B B'$, the said plate on its opposite sides having secured to it upright posts e^5 , which are extended up through suitable openings in the flanges or feet b^3 of the sides of the housing and through top flanges e^6 , secured to or forming part of the sides of the housing. The bars or rods e^6 are preferably screw-threaded at their upper end and provided with adjustable nuts e^9 , between which and the flanges or feet b^3 are interposed spiral springs e^{10} , which encircle the rods e^6 and which springs are compressed by the downward movement of the rods e^6 , which takes place when the weather-strip is moved out of its mortise or slot a^7 by the actuating-bar d , and when the pressure is relieved upon the end of the actuating-bar the weather-strip and the said bar are returned to their normal position by means of the springs e^{10} , which expand and lift the rods e^6 , thereby lifting the plate e^3 and the weather-strip, and consequently moving upward the actuating-bar, which by reason of its housing-pivots is forced longitudinally into its normal position. (Represented in Fig. 1.)

It will be understood that each housing is provided with the rods e^6 and springs e^{10} . By making the supporting-frames for the housings in two parts and securing the housings to them by the screws b^5 the parts or members $a a'$ of the frame may be extended so as to fit any size of door within limits, and this extension of the members $a a'$ may be effected by unloosening the screws b^5 and moving the members and screws in the slots b^4 of the housings.

It will be understood that the housings when inserted in their sockets in the door become practically stationary. By reference to Fig. 1 it will be seen that when the weather-check is once placed in position it is practically concealed from view and is not unsightly and can be applied to costly doors without marring or otherwise defacing the same.

I claim—

A weather-check for doors consisting of the housings $B B'$ adapted to fit into sockets in the bottom of the door, means to secure said housings to the door, the bar b^8 movable vertically in a slot in the bottom of the door and in the said housings, cross-bars e^3 secured to the bar b^8 and extended transversely through the housings $B B'$, upright posts secured to the said cross-bars on opposite sides of the

5 housings B B' and extended through side flanges on the said housings, springs encircling the said posts between the said flanges, means on said posts to adjust the tension of the said springs, an actuating-rod *b* extended through the housings above the bar *b*⁸, and links connecting the said rod to the said housings, substantially as described.

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

FRANK ROGERS.

Witnesses:

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J. MURPHY.