Sept. 13, 1927. 1,642,176

A. C. SCHNAKE

WEATHER STRIP

Filed Aug. 29. 1924

Fig. 1.

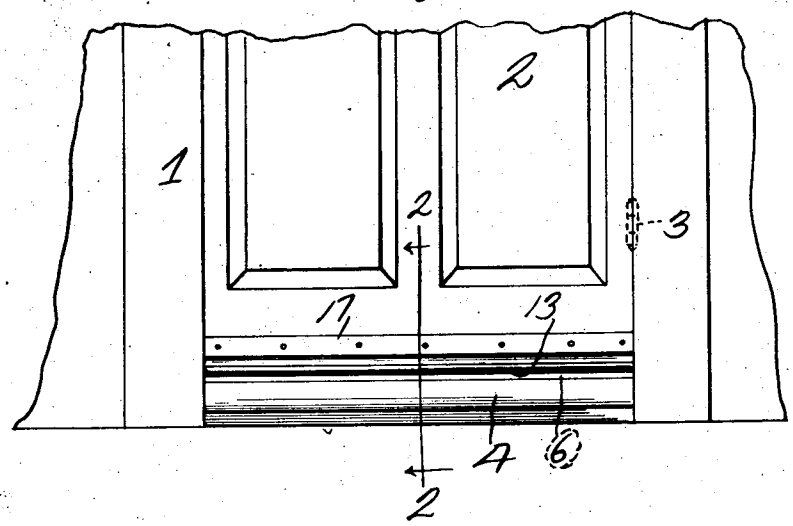


Fig. 2.

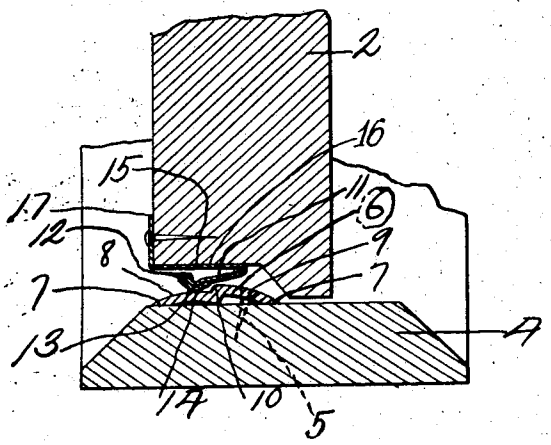
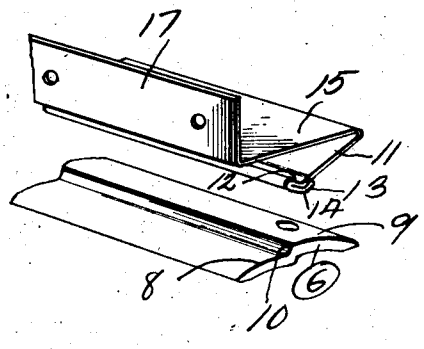


Fig. 3.



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UNITED STATES PATENT OFFICE.

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WEATHER STRIP.

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The invention relates to weather strips and has for its object to provide a device of this character disposed in a rabbet in the lower end of a door, and provided with a downwardly and outwardly extending spring flange, which terminates in an angularly shaped bead, which cooperates with a convexed plate, for forming a water tight joint. Also to provide the convexed plate with a longitudinal rib for preventing water from being forced under the door, which water may pass under the spring flange.

A further object is to provide the device with an angularly shaped member formed from a double layer of material bent upon itself, thereby forming a relatively sharp rib for engaging the convexed plate and at the same time forming a maximum amount of material which may be worn away incident to constant opening and closing of the door.

A further object is to form the extra layer of material in a manner whereby it is disposed on the under side of the angularly shaped bead, and which layer of material, when worn through, will expose the sharp edge of the main body of the bead to the convexed plate, which would not be the case if the extra layer of material was disposed on the upper side of the bead, as the bead would wear through at its sharp edge and the layer of material would drop off the spring flange.

With the above and other objects in view the invention resides in the combination and arrangement of parts as hereinafter set forth, shown in the drawing, described and claimed, it being understood that changes in the precise embodiment of the invention may be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawing:—

Figure 1 is a view in elevation of the lower end of a conventional form of door and door frame, showing the weather strip applied thereto.

Figure 2 is a detail sectional view taken on line 2—2 of Figure 1.

Figure 3 is a collective detail perspective view of a portion of the weather strip and the convexed plate.

Referring to the drawing, the numeral 1 designates a conventional form of door frame and 2 a conventional form of door which is hingedly connected in the usual manner to the door frame as at 3. Disposed beneath the door 2 is a door sill 4 of a conventional construction, and secured to the upper side of the sill by means of screws 5 is a plate 6. Plate 6 is preferably channeled on its under side whereby its sides 7 will closely engage the upper side of the sill 4, and positively prevent water from being blown or driven under the plate, which is a common difficulty with plates as at present constructed, which plates are generally formed without a channel or hollow on their under sides, consequently it is practically impossible to secure a close engagement of the plate with the sill, which engagement is a water-tight one. The plate 6 is preferably stamped from a single strip of metal whereby it is provided with convexed portions 8 and 9, and the convexed portion 9 higher than the convexed portion 8, thereby forming a longitudinally disposed rib 10 which will additionally prevent any water, which may be driven, or seeps under the spring flange 11, from entering a room beyond the door. The spring flange 11 inclines downwardly and outwardly and terminates in an angularly shaped bead 12 having an angularly shaped flange 13 underlying the same, thereby forming a relatively sharp longitudinal edge 14, which will closely engage the convexed portion 18 of the plate 6 when the door is closed and form a relatively close joint for preventing water from passing between the edge 14 and the convexed portion 8 of the plate. It will be noted that the flange 13 underlies the angularly shaped bead 12 of the spring flange 11 and consequently a greater wearing surface is provided. For instance, if the flange 13 is worn through incident to opening and closing of the door, the bead 12 would form a contacting member with the convexed portion of the plate 6, which would not be the case if the reinforcing flange 13 were disposed on the upper side of the bead 12.

Spring flange 11 extends downardly and outwardly from the horizontally disposed member 15, which extends into the rabbet 16 in the lower end of the door in engagement with the underside of the door and is carried by a flange 17 secured to the side of the door, therefore it will be seen that the weather strip is formed from a single piece of material bent to form, and the reinforcing flange 13 is also formed from the same sheet of material, therefore the reinforced

binding bead is provided which will also be formed from the same sheet of material, and which will stand the maximum amount of wear, as well as positively bind against the plate 9.

From the above it will be seen that a weather strip is provided which is particularly adapted for use on doors or hinged windows, and said weather strip is positive in its operation and provided with means whereby a maximum amount of wear may take place thereon and at the same time will present a relatively sharp engaging edge to the convexed plate, thereby insuring a water tight joint.

The invention having been set forth what is claimed as new and useful is:—

The combination with the free end of a hinged closure, of a weather strip for said closure, said weather strip comprising an angularly shaped member, one flange of the angularly shaped member being secured to the outer side of the closure, the other side of said angularly shaped member being disposed in a rabbet of the closure, said last named flange terminating in an acutely disposed flange extending outwardly, a bead V-shaped in vertical transverse cross section carried by the acutely disposed flange, a fixed plate, said fixed plate being provided with differently positioned convexed surfaces thereby forming a shoulder, said shoulder inclining upwardly and outwardly, said bead cooperating with said surfaces of the plate for forming a water tight joint, one side of said bead inclining upwardly and outwardly and the other side upwardly and inwardly.

In testimony whereof I have signed my name to this specification.

AUGUST C. SCHNAKE.