(No Model.)

F. H. MEAD.

WEATHER STRIP.

No. 500,503. Patented June 27, 1893.

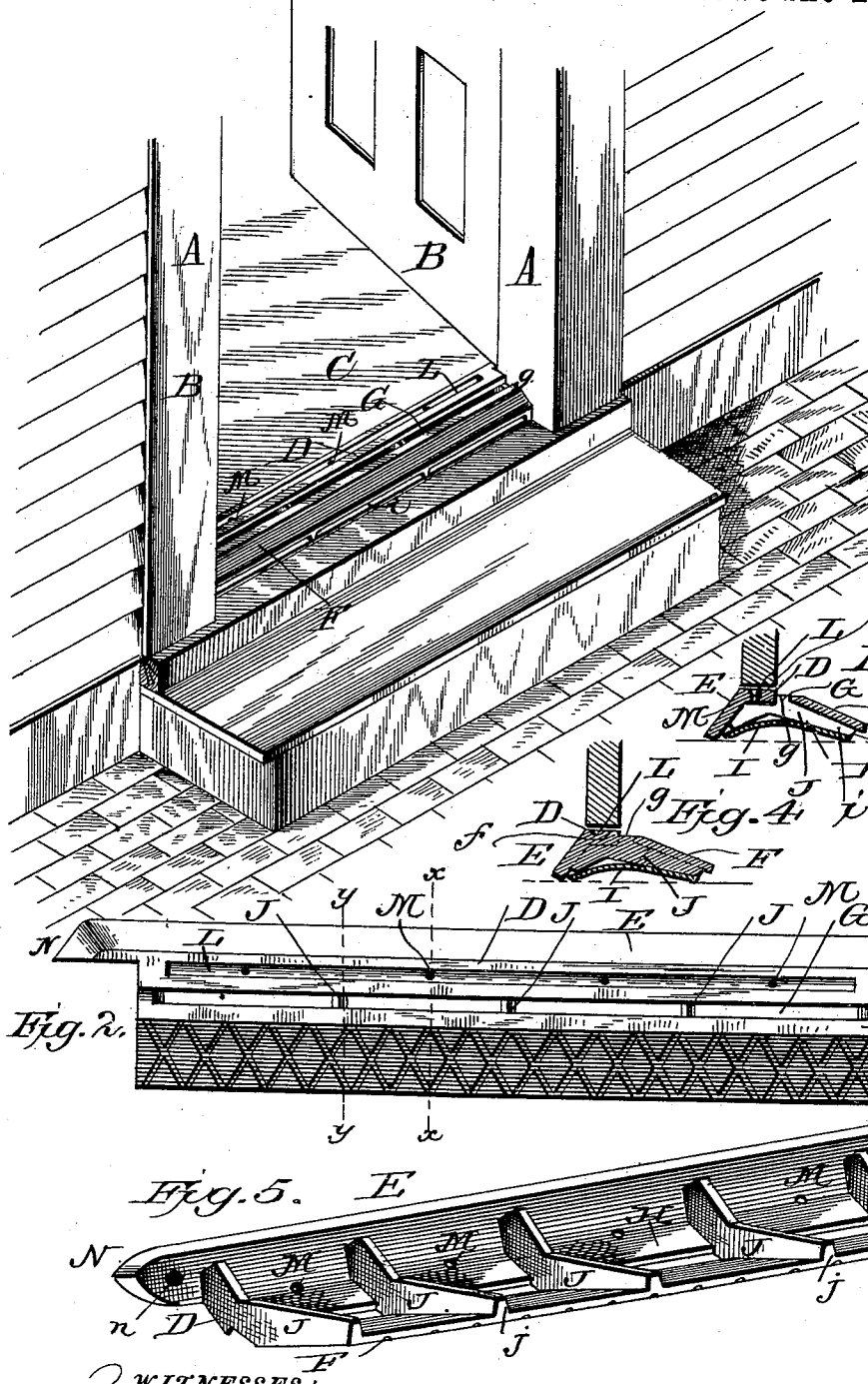

Fig. 1.

Fig. 3.

Fig. 4.

Fig. 2.

Fig. 5. E.

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UNITED STATES PATENT OFFICE.

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WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 500,503, dated June 27, 1893.

Application filed December 5, 1892. Serial No. 454,066. (No model.)

To all whom it may concern:

Be it known that I, FRANK H. MEAD, a citizen of the United States, and a resident of Onawa, in the county of Monona and State of Iowa, have invented certain new and useful Improvements in Weather-Strips for Doors; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of the lower part of a door and threshold equipped with my improved weather-strip, showing the door open. Fig. 2 is a plan or top view of the weather-strip, removed from the door and threshold. Fig. 3 is a transverse sectional view on line *x—x* in Fig. 2. Fig. 4 is a transverse sectional view on line *y—y;* and Fig. 5 is a perspective view of the device, showing the same inverted, or as it appears from the under side.

Like letters of reference designate corresponding parts in all the figures.

This invention relates to weather-strips for doors, and has for its object to construct a device of that class which can be cast of metal in a single piece, so as to be very strong and durable and at the same time effective, so as to absolutely prevent snow or water from entering the house underneath the door.

With these objects in view, my invention consists in the cast-iron combined threshold and weather-strip which will be hereinafter more fully described and claimed, as a new article of manufacture.

Referring to the accompanying drawings, the letter A designates the jambs and B the door; the floor being shown at C.

My improved weather-strip, which also forms the threshold of the door, consists of a plate of cast-iron (or other metal, if desired) of the shape shown on the drawings, *i. e.*, having a flat top-part D, an abrupt slope, E, facing the inside of the room, and an inclined plane, F, facing the outside and extending beyond the door when this is closed. The flat top-part, D, is of a width corresponding to the width of the lower part of the door, and has a slot or cut, G, running longitudinally from end to end, the outer edge of which is slightly inclined and depressed, as shown at *g*, so that the upper rim or edge of that side of the slot will fall a little below the edge, *f*, on the opposite or inner side. The reason for this peculiar construction will be pointed out later on. By the configuration of the plate, with its raised top D and sloping sides E and F, a chamber, H, is formed on the under side, which is closed by a slightly concavo-convex plate, I, of wood or metal. On the under side plate D E F is cast with a series of parallel reinforcing ribs or braces, J, crossing the longitudinal slot or inlet G at right angles and extending to the outer edge of the outward slope F, so as to form feet or supports, *j*, on which that side of the device is slightly elevated, thus forming a series of oblong ports or outlets, *i*, for the escape of the water collected in the chamber H.

The highest part, D, of the threshold plate has a groove or channel, L, running longitudinally from end to end, through which holes, M, are bored equal distances apart, leading down to the chamber. When the door is closed, this channel L with its apertures M will be on the inside of the door, which, in Figs. 3 and 4, is represented in dotted lines. The body of the plate is cast with two ears or extensions, N N, one at each end, forming an abutment against the lower ends of the jambs on the inside, and thus serving to hold the device securely in its place. To this end, holes, *n*, are drilled through these ears, through which nails or screws may be driven for fastening the device firmly upon the floor. The outside slope F is, preferably, corrugated, or indented with a suitable pattern, both for ornament and to provide for a firm foot-hold in slippery weather.

From the foregoing description, taken in connection with the drawings, the operation of my improved all-metal weather-strip will readily be understood. Any sleet, snow or rain beating up against the under side of the door will be deflected down through the long aperture or inlet G into the water-chamber or receiver H from which, owing to the incline

of the bottom I, it finds a ready outlet through the ports *i i*. Any small quantity of water which, through an imperfect fit of the door against the raised top-part D of the weather-strip, may find its way in underneath the door, will be caught up by the channel L and fed through the apertures M down into chamber H below; and by sinking or depressing the outside edge *g* of slot G a little below the inner edge, *f*, the tendency of the exposed part of the plate will be to deflect the sleet and rain driven against it from the outside down into the narrow slot G; the lower edge of the door, on the outside, being about in alignment with the inner edge *f* of the slot.

It will be seen that this whole device, with the exception of the bottom-plate I, can be cast in a single piece, of iron or other suitable metal, the intention being to cast it in various sizes to correspond to the standard sizes of doors. Being made wholly of metal, it is very strong and durable, and will be found to effectually answer the purpose for which it is intended.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

As an improved article, the weather strip for doors herein shown and described, the same comprising the metal threshold having flat top D, inside wall E, sloping abruptly, and outside inclined plane F, forming in combination with the concavo convex bottom plate I, a water chamber or receiver H, open at its outer end, said top being formed with a longitudinal opening G, and parallel gutter or channel L, having equidistant openings M, alternating with transverse ribs or braces J, cast on the under side of the threshold plate, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

FRANK H. MEAD.

Witnesses:
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