W. H. WOOD.

Weather Threshold.

No. 164,503. Patented June 15, 1875.

Fig. 1.

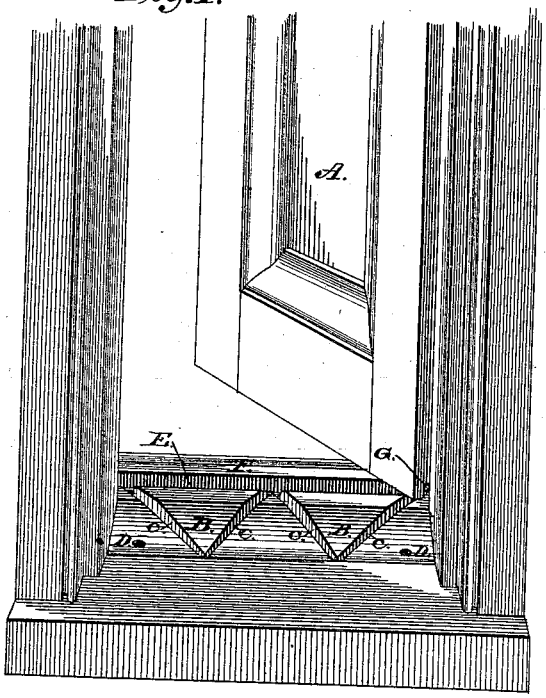
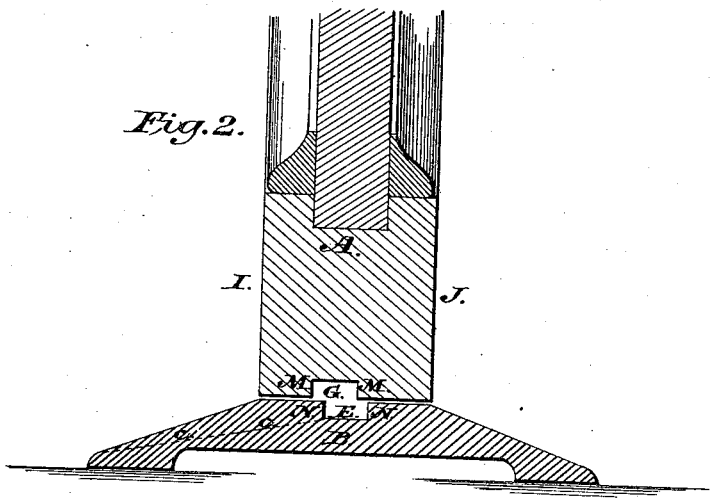


Fig. 2.



Attest:

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UNITED STATES PATENT OFFICE.

WILLIAM H. WOOD, OF TRENTON, NEW JERSEY.

IMPROVEMENT IN WEATHER-THRESHOLDS.

Specification forming part of Letters Patent No. **164,503**, dated June 15, 1875; application filed April 5, 1875.

To all whom it may concern:

Be it known that I, WILLIAM H. WOOD, of the city of Trenton, in the county of Mercer, in the State of New Jersey, have invented a new and improved mode of preventing water from beating or passing under doors during rain-storms by the use of what I call a "Combined Door and Weather Strip," of which the following is a specification:

The nature of my invention consists in providing the door with a weather or door strip which shall collect all the water which may be driven under the door during a driving rain-storm, and return the water immediately to the side of the door from whence it came.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A, in Figure 1 in the accompanying drawing, is an ordinary door, except that it has a groove at the bottom running the entire width of the door, one end of which shows at the hinge edge of the door at letter G, this groove being about three-eighths of an inch in depth and width, or to correspond to a similar groove nearly directly under it (when the door is closed) in the door-strip, which latter is hereafter described. B B is a door-strip, which may be made of wood, iron, brass, or any other metal, marble, or of any other substance desirable. C C C C are grooves or water-ways placed at an angle of forty-five degrees to a line drawn from one end of the door-strip to a corresponding point at the other end of the same. These water-ways may consist of six, four, or any other number made necessary by the exposure of the door and the quantity of water required to be carried off. The depth of these water-ways will be determined by the depth of the water-trough out of which they lead, which I will now proceed to describe. E E is a groove about three-eighths of an inch in depth from the upper surface, and running through the middle of the strip B B from end to end, which groove or trough will be about the same in width as in depth, which latter may be varied, according to the exposure of the door and quantity of water to be conducted away. F is the inside face of the door-strip on the opposite side of the water-trough E E from the water-ways C C C C. These water-ways in depth are, at the upper or inner end, where they join the water-trough E E, the same depth as the said water-trough, the outer end being lower, so that water will readily flow from the trough through these water-ways C C C C as fast as it collects in the trough E E.

The number of grooves or water-ways already described will be determined by the volume of water requiring rapid outlet from the trough E E. The holes D D, when substituted for the open water-ways C C C C, must be made with the outer or lower ends a trifle larger than the upper or inner ends, to prevent dust and dirt from becoming fast should it collect in them.

In Fig. 2, A is an edgewise view of the door. I is the front or side of the door next the weather or storm. J is the inside of the door. The door A is here represented as shut or closed. B B is an end section view of the door-strip. E is the water-trough. G is the groove in the bottom of the door. M M are two angles, which, when the door is being closed, pass over the angles N N, and, when the door is closed, occupy positions about one-eighth of an inch (more or less, as may be required) in advance of the angles N N. *c c* show the course of the open water-ways C C C C in Fig. 1, and the holes or concealed water-ways in Fig. 1, represented by letters D D.

Now, it will appear, upon an examination of these accompanying drawings, that when a rain-storm beats against the door A, and the water is driven under the door, the progress of the water will be arrested by the trough E E in Fig. 1, or in trough E in Fig. 2, and as said trough has such ample outlets for the water through the open water-ways C C C C in Fig. 1, or through the holes or partially-concealed water-ways D D, Fig. 1, it is impossible for the water to accumulate so as to flow over into the house or dwelling, but must pass rapidly out to the side of the door from whence it came.

What I claim as my invention, and desire to secure by Letters Patent, is—

The groove G in the bottom of a door, in combination with water-trough E and the diagonal water-ways C C C C, substantially as specified.

WILLIAM H. WOOD.

Witnesses:

D. COOPER ALLINSON,

W. H. STAUFFER.