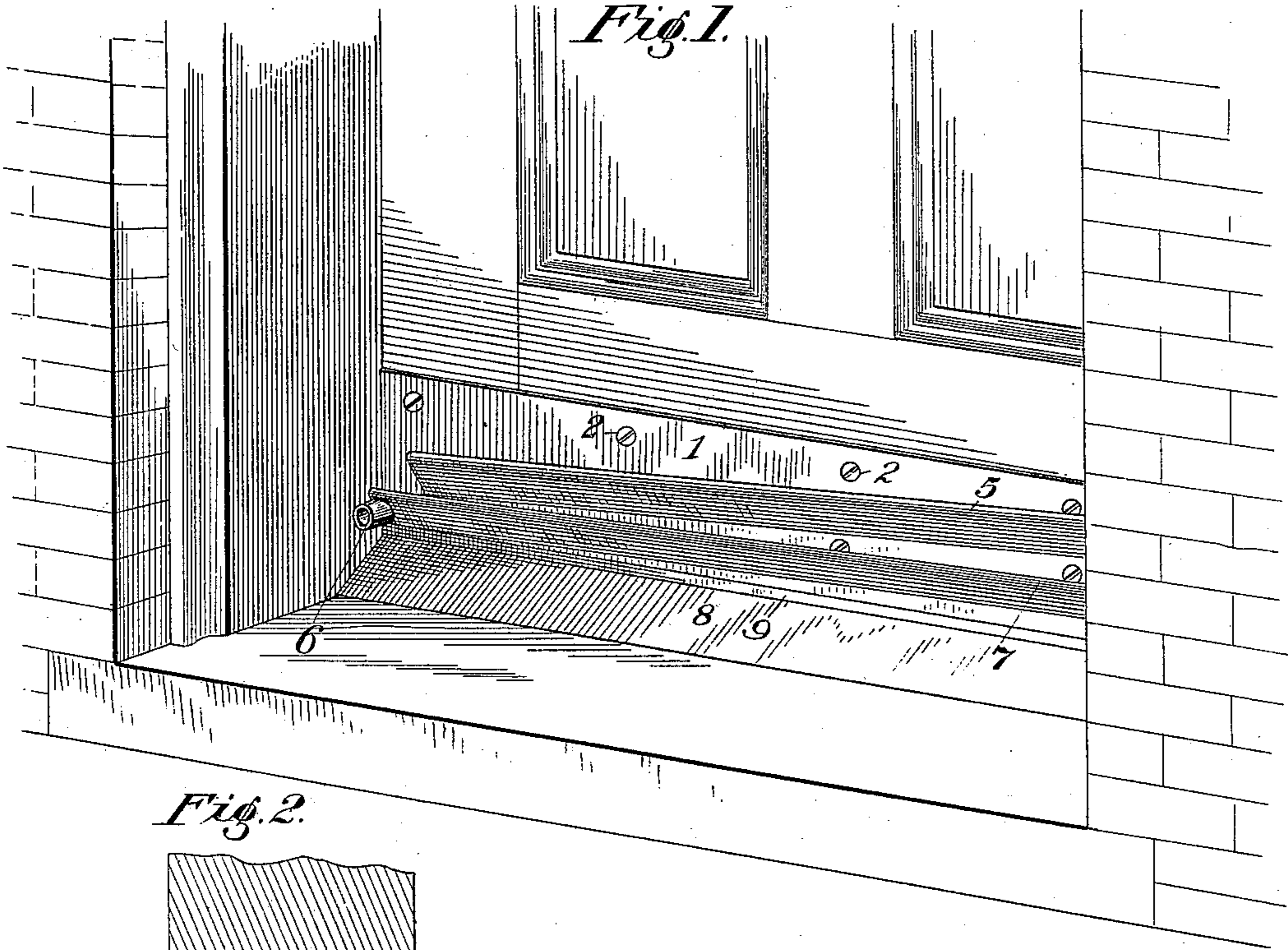


(No Model.)

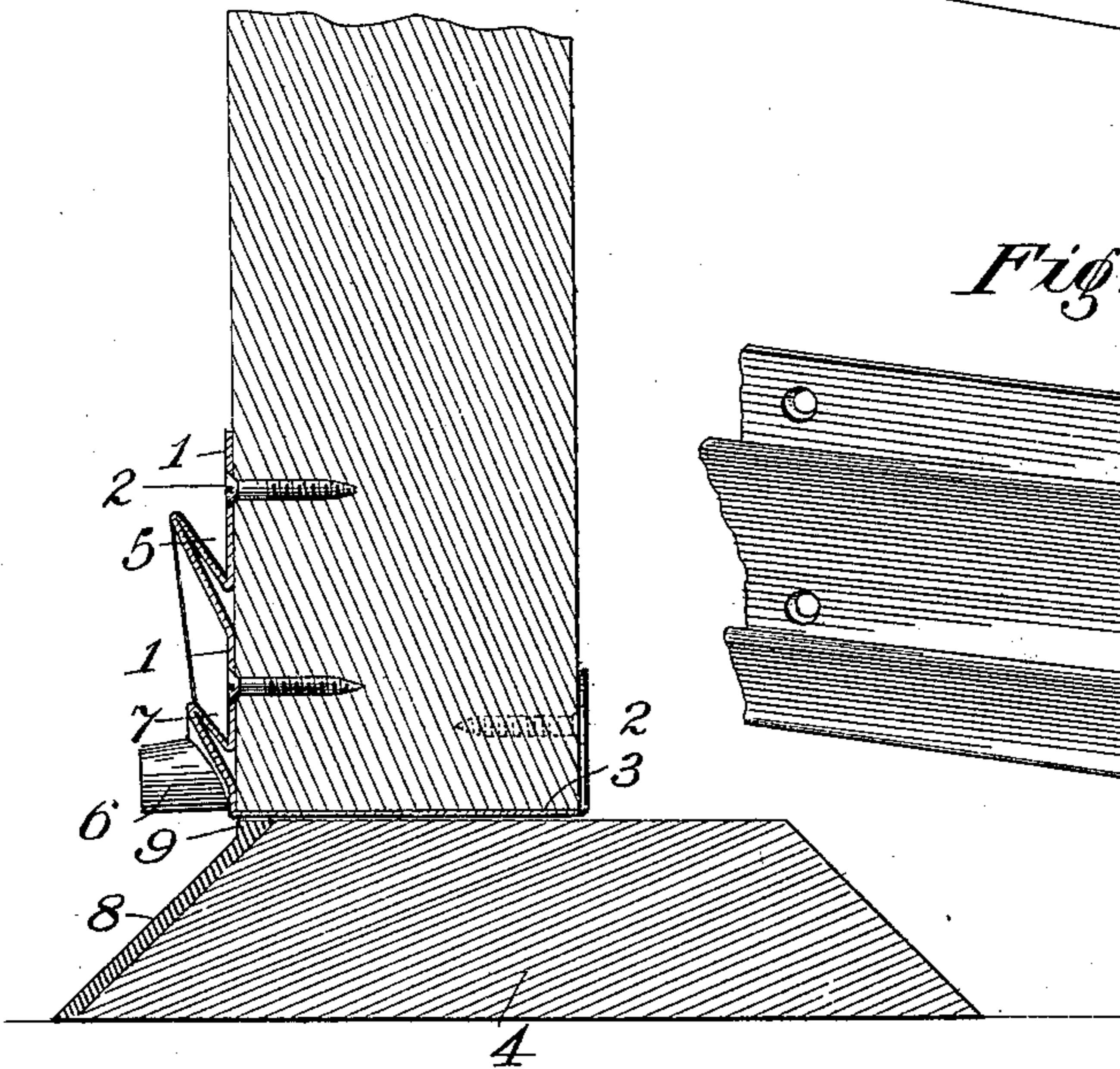
G. A. HILL.  
WEATHER STRIP.

No. 594,623.

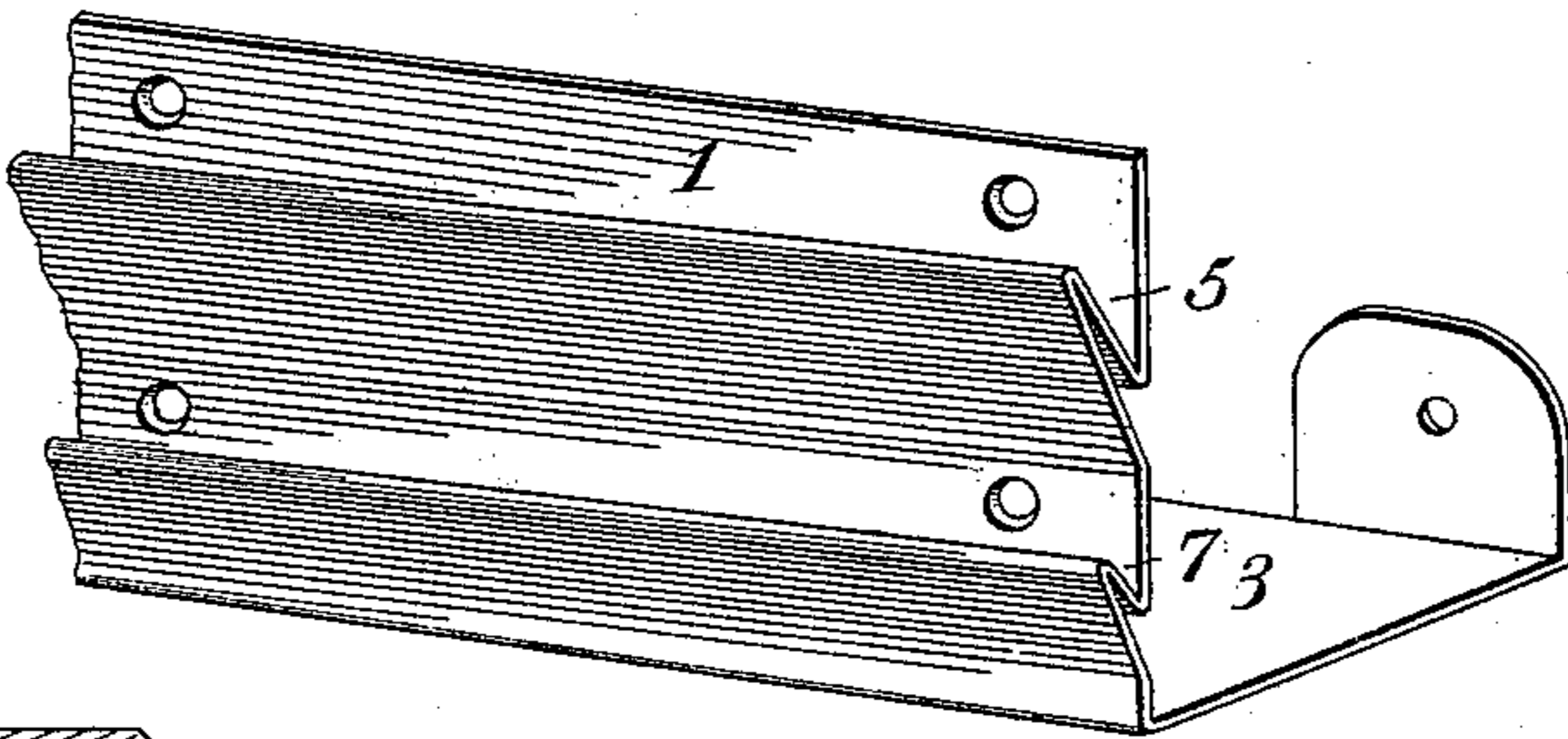
Patented Nov. 30, 1897.



*Fig. 2.*



*Fig. 3.*



Inventor

Witnesses

R. E. Crump

*[Signature]*

By his Attorneys,

George A. Hill.

*[Signature]*

# UNITED STATES PATENT OFFICE.

GEORGE A. HILL, OF MASSENA, IOWA.

## WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 594,623, dated November 30, 1897.

Application filed August 10, 1897. Serial No. 647,712. (No model.)

### *To all whom it may concern:*

Be it known that I, GEORGE A. HILL, a citizen of the United States, residing at Massena, in the county of Cass and State of Iowa, have  
5 invented a new and useful Weather-Strip, of which the following is a specification.

My invention relates to weather-strips, and has for its object to provide a simple and efficient water-excluding device for attachment  
10 to doors, said device having for its function to catch the water dashed in the form of rain against the exterior surface of a door and convey it to a point of discharge, from which it cannot gain access to the interval between  
15 the lower edge of the door and the sill.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

20 In the drawings, Figure 1 is a perspective view of a weather-strip constructed in accordance with my invention applied in the operative position to a door. Fig. 2 is a detail transverse section of the strip, showing the  
25 contiguous portions of the door and sill. Fig. 3 is a detail view in perspective of a portion of the strip detached.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.  
30

The weather-strip embodying my invention consists, essentially, of a plate 1, preferably of sheet metal, secured to the exterior surface of a door contiguous to its lower edge by  
35 means of screws 2 or similar fastening devices, the lower edge of the strip being extended to form tongues 3, which pass under the lower edge of the door, between the same and the sill 4, and are terminally secured by  
40 suitable fastening devices to the inner surface of the door.

The strip is provided with collecting grooves or troughs which project outwardly from the plane of the door to receive water dashed  
45 against the surface thereof, and in the construction illustrated in the drawings the plate is folded upon itself to form these troughs or gutters, thus simplifying the construction and minimizing the cost of manufacture. The upper  
50 trough or gutter 5 is preferably arranged at a comparatively abrupt inclination and is of considerable depth, as it is designed to re-

ceive the water deposited against the outer surface of the greater portion of the door, said upper trough or gutter communicating  
55 with and being adapted to discharge into an outwardly-projecting spout 6, located contiguous to the hinged edge of the door. Below this main trough or gutter 5 is arranged  
60 an auxiliary trough or gutter 7, arranged at a slight inclination, and hence approximately parallel with the lower edge of the door and contiguous to the latter, in order to receive  
water deposited against the outer surface of the door below the main trough or gutter. 65  
This auxiliary trough or gutter also communicates with and discharges into the spout 6, which extends outwardly a sufficient distance to deposit water upon a portion of the door-sill, which is located at a sufficient distance  
70 from the plane of the door to prevent it from finding its way between the lower edge of the door and the sill.

Thus it will be seen that the essential function of the device embodying my invention is  
75 to catch water which is thrown against the exterior surface of a door and convey it to a point at a distance from the plane of said surface and preferably deposit it upon the inclined outer surface of the door-sill, from  
80 which point it cannot pass through the interval between the lower edge of the door and the sill. In order, however, to reduce this interval to the minimum, I have found it desirable to employ a guard-plate 8, secured to  
85 the exterior inclined surface of the door-sill and having at its upper end an enlargement 9, of which the upper surface is horizontal and fits closely against the lower surface of the  
90 plate 1. This enlargement also has a vertical front wall adapted to be located approximately flush with the plane of the exterior surface of the door, and thus oppose an obstruction to the passage of water under the  
95 lower edge of the door.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. A weather-strip having upper and lower main and auxiliary troughs or gutters declin-  
100

ing toward and communicating with a common outlet-spout, projecting outwardly and adapted to discharge the contents of the troughs or gutters at a point remote from the exterior surface of a door, substantially as specified.

2. A weather-strip having a plate adapted to be secured to a door contiguous to its lower edge, and provided with an upper abruptly-inclined main trough or gutter, and a lower slightly-inclined auxiliary trough or gutter, arranged approximately parallel with and contiguous to the lower edge of the door, to receive water deposited upon the surface of the door below the main trough or gutter, and a spout for receiving the contents of the troughs or gutters, the same extending outwardly and terminating at a point remote from the exterior surface of the door, substantially as specified.

3. A weather-strip consisting of a plate folded or doubled upon itself to form upper and lower main and auxiliary troughs or gutters 5 and 7, and a spout arranged to receive the contents of said troughs or gutters and discharge the same at a point remote from the plane thereof, substantially as specified.

4. A weather-strip having a sheet-metal

plate doubled upon itself to form main and auxiliary troughs inclined in a common direction and communicating with a common spout, said plate being provided with extensions or tongues adapted to lie in contact with the lower edge of a door and to be terminally secured to the inner surface thereof, substantially as specified.

5. The combination with a weather-strip having a trough or gutter communicating at its lowermost point with an outwardly-extending spout, and adapted to be secured to the exterior surface of a door contiguous to its lower edge, of a stationary inclined guard-plate adapted to be secured to the exterior surface of a door-sill, and provided at its upper edge with an enlargement having a horizontal upper surface arranged contiguous to the lower edge of said strip, and having a vertical exterior surface, substantially as specified.

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

GEORGE A. HILL.

Witnesses:

W. B. HILL,  
J. H. SCOTT.