No. 860,032. PATENTED JULY 16, 1907.

H. KEAN.

WEATHER STRIP.

APPLICATION FILED JULY 11, 1906.

Fig. 2.

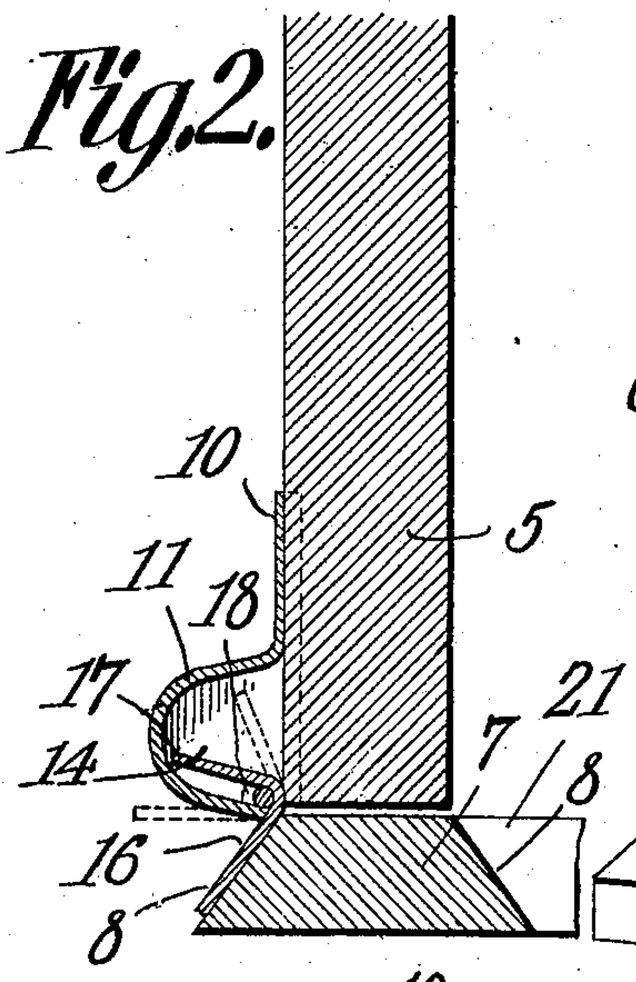


Fig. 1.

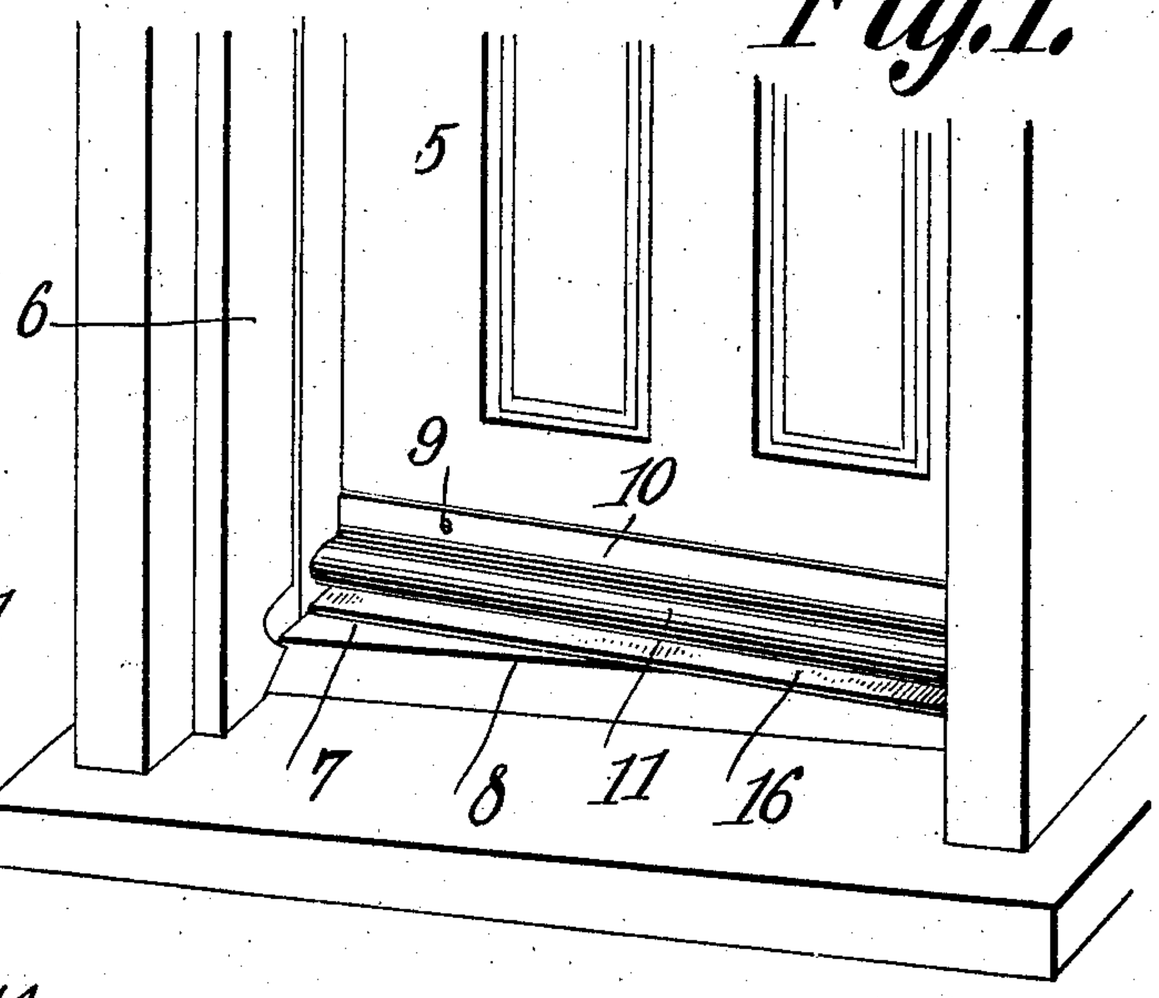


Fig. 3.

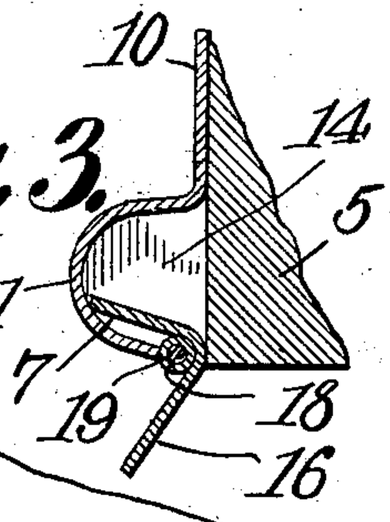
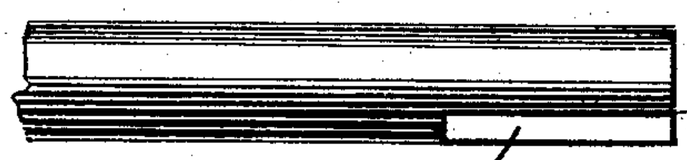


Fig. 5.



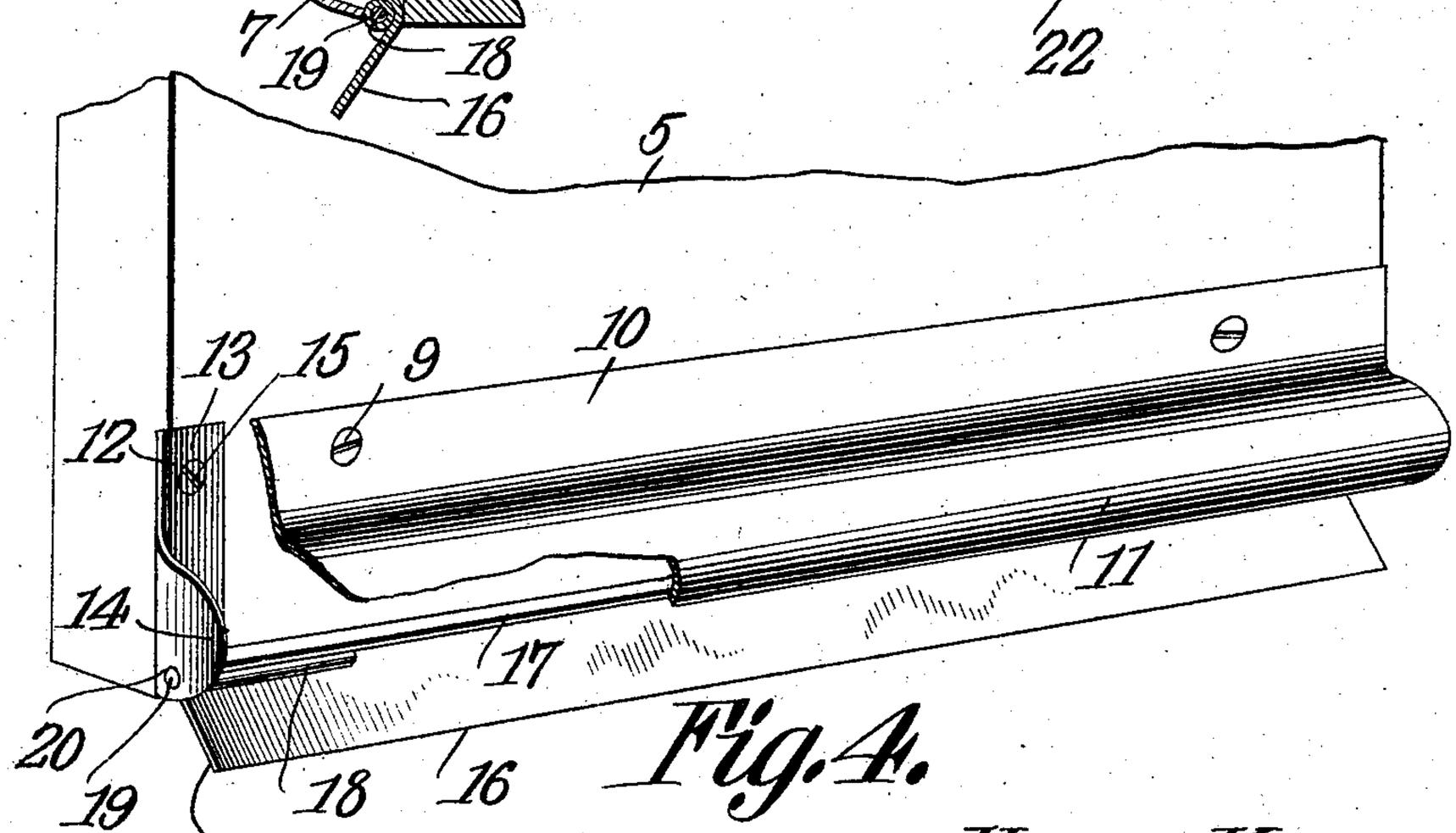


Fig. 4.

WITNESSES:

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WEATHER-STRIP.

No. 860,032. Specification of Letters Patent. Patented July 16, 1907.

Application filed July 11, 1906. Serial No. 325,698.

To all whom it may concern:

Be it known that I, HENRY KEAN, a citizen of the United States, residing at Hammond, in the county of St. Croix and State of Wisconsin, have invented a new and useful Weather-Strip, of which the following is a specification.

This invention relates to weather-strips and has for its object to provide a comparatively simple and inexpensive device of this character adapted to form a closure for the opening between the door and sill so as to prevent the wind, rain or snow from entering the room through said opening.

A further object of the invention is to provide a weather-strip including a stationary member for attachment to the door and having a pivoted member associated therewith and movable by gravity into engagement with the door-sill when the door is swung laterally to closed position.

A further object is to form the pivoted member with angularly disposed arms adapted to engage the sill and stationary member, respectively, thereby to form a double closure at the juncture of the door and sill.

A still further object is to generally improve this class of devices so as to increase their utility, durability and efficiency as well as to reduce the cost of manufacture.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, and illustrated in the accompanying drawings, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a perspective view of a door provided with a weather-strip constructed in accordance with my invention. Fig. 2 is a vertical sectional view taken through the center of the strip and showing the door in closed position. Fig. 3 is a similar view taken through one end of the strip. Fig. 4 is a perspective view showing the pivoted member in lowered or operative position. Fig. 5 is a bottom plan view of one end of the stationary member.

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

The improved weather-strip is principally designed for attachment to doors and similar closures and by way of illustration is shown in connection with a swinging door of the ordinary construction in which 5 designates the door, 6 the frame, and 7 the door-sill having its opposite faces inclined or beveled as indicated at 8.

Secured to the front face of the door in any suitable manner as by screws or similar fastening devices 9, is a stationary member or plate 10 the lower edge of which is curved outwardly and thence rearwardly to form a semi-circular extension 11 the free edge of which is spaced from the adjacent face of the door and also from the bottom edge thereof, as shown.

Secured to the opposite edges of the door at the lower end thereof and seated in suitable recesses 12 are supporting brackets 13 provided with laterally extending ears 14 which form closures for the opposite ends of the cylindrical extension 11, said brackets being secured in position by suitable fastening devices 15 and also by engagement with the stationary member or plate 10.

Pivotally mounted for swinging movement between the ears 14 is a movable member preferably formed of a single piece of metal having its intermediate portion bent to form a pair of angularly disposed arms 16 and 17 adapted to engage the threshold and interior walls of the extension when the door is moved to closed position, as best shown in Fig. 2 of the drawings, thereby forming a double closure for the door and effectually preventing the ingress of wind, snow or rain through the opening at the bottom of the door. The opposite ends of the movable member at the juncture of the arms 16 and 17 are provided with cylindrical reinforcements or lugs 18 provided with terminal trunnions 19 which engage the openings 20 in the ears 14 and serve to pivotally support the movable member.

Secured to the door-sill or threshold 8 at the inner face of the door is a bearing block 21 the upper face of which is preferably disposed in horizontal alinement with the sill 7 so that when the door is swung inwardly to open position the longitudinal edge of the arm 16 will bear against the block 21 and support the movable member in elevated or inoperative position, said member being movable by gravity in engagement with the inclined face of the door-sill when the door is moved to closed position.

The lower longitudinal edge of the cylindrical extension 11 is formed with recesses 22 to accommodate the reinforcements or lugs 18 so that the longitudinal edge of the extension 11 will bear against the movable member at the juncture of the angular arms and also against the reinforcements 18 thus preventing the entrance of rain, and snow through the openings between the bottom of the door and door-sill.

In operation when the door is moved to closed position the arm 16 of the movable member will ride over the face of the door-sill until the free end of said arm clears the adjacent longitudinal edge of the sill in which position the movable member will drop by gravity with the longitudinal edge of the arm 16 bearing against the inclined face of the door-sill and with the longitudinal edge of the arm 17 bearing against the interior walls of the extension 11, as best shown in Fig. 2.

Attention is here called to the fact that when the movable member is in lowered or operative position

the arms 16 and 17 not only contact with the extension 11 and door-sill 7, respectively, but also bear against the free edge of said extension so as to form in effect three water-tight joints at the lower end of the door or closure. When the door is swung inwardly to open position the free end of the arm 16 will ride up the inclined face of the door-sill and engage the bearing-block 21 thus supporting the movable member in elevated or inoperative position while the door is open.

The opposite ends of the angular arm 16 are preferably inclined in opposite directions towards the center of the door as indicated at 23 so that when the door is closed the ends of said arm will clear the adjacent walls of the door-frame, as will be readily understood.

Having thus described the invention what is claimed is:

The combination with a door, of a stationary member secured thereto and having its free end curved laterally to form a semi-cylindrical extension, the free edge of which is spaced from the door and provided with oppositely disposed recesses, supporting brackets secured to the door and provided with laterally extending perforated ears forming closures for the opposite ends of the extension, a movable member pivotally mounted between the supporting bracket and provided with angularly disposed arms adapted to engage the door-sill and the interior walls of the extension when the door is moved to closed position, reinforcements disposed at the juncture of the angular arms of the movable member and provided with terminal trunnions seated in the perforations of the ears, the free edge of the extension being disposed at the intersection of the angularly disposed arms with the reinforcements seated in the recesses of said extension.

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

HENRY KEAN.

Witnesses:

PETER C. ANDERSON,

RAS RASMUSSEN.