S. LEECH.

WEATHER STRIP.

APPLICATION FILED NOV. 4, 1913.

1,115,319.

Patented Oct. 27, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

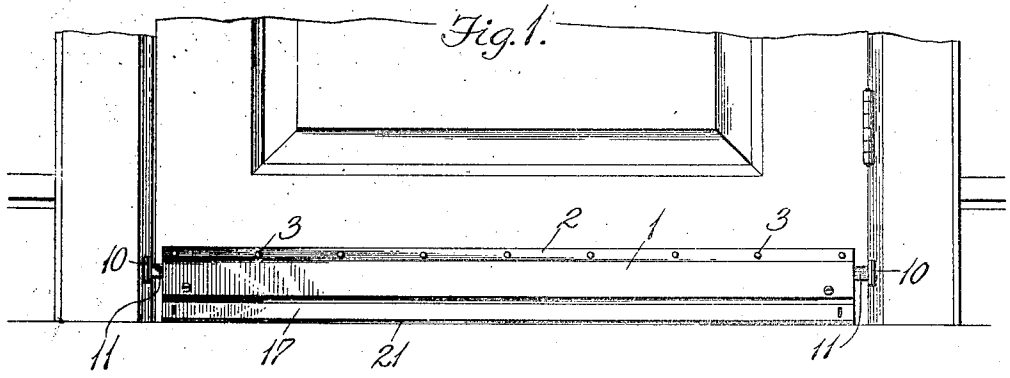


Fig. 2.

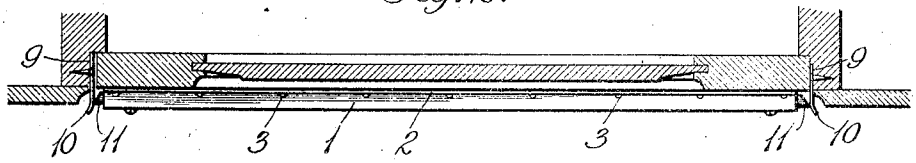


Fig. 3.

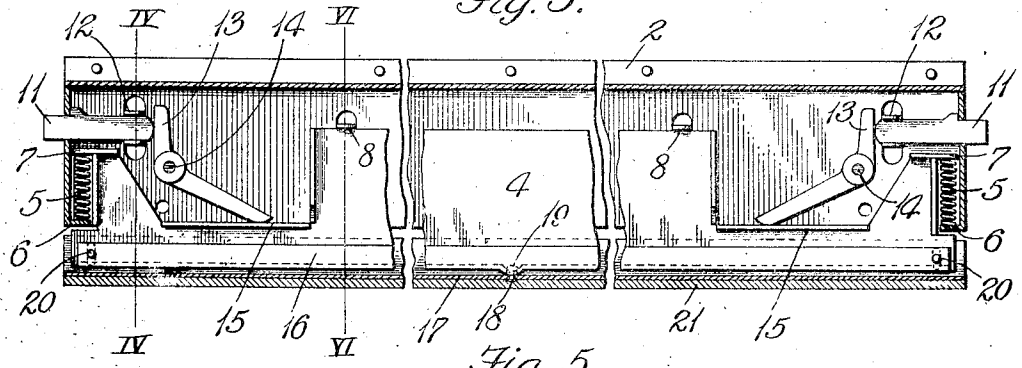


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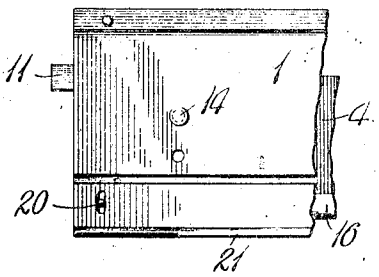


Fig. 4.

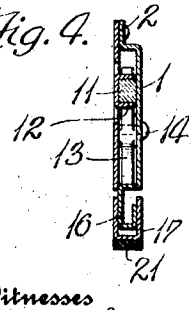
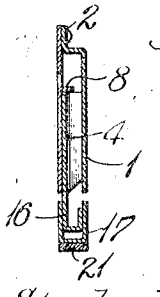


Fig. 6.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 7.

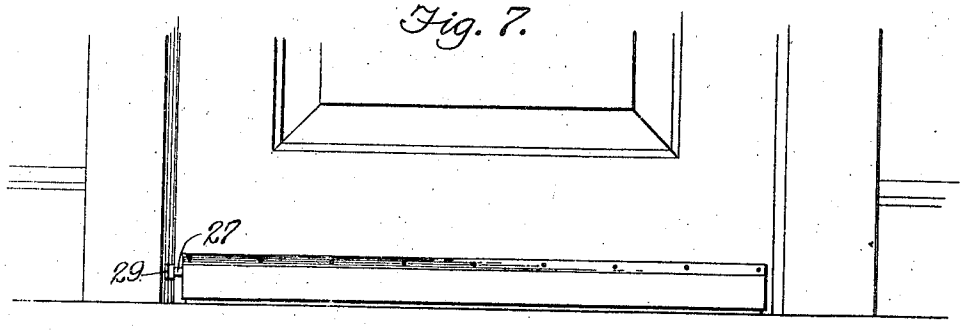


Fig. 8.

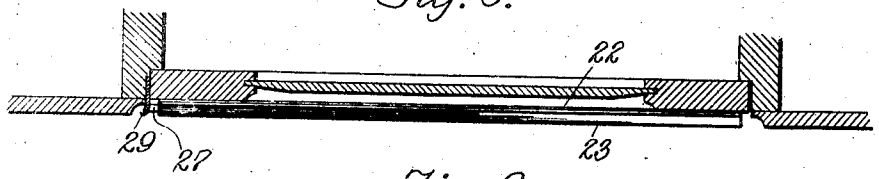


Fig. 9.

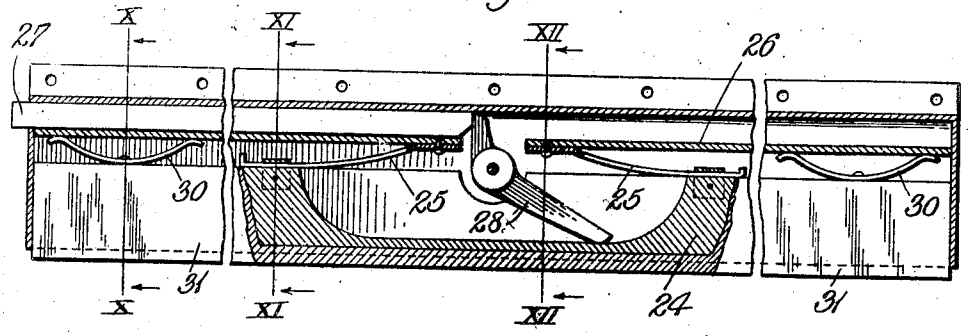


Fig. 10.

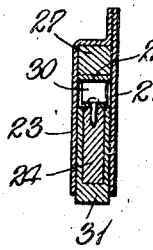


Fig. 11.

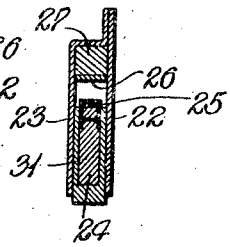
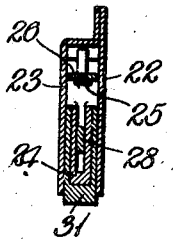


Fig. 12.



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UNITED STATES PATENT OFFICE.

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WEATHER-STRIP.

1,115,319. Specification of Letters Patent. Patented Oct. 27, 1914.

Application filed November 4, 1913. Serial No. 799,096.

To all whom it may concern:

Be it known that I, STANLEY LEECH, a subject of the King of England, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Weather-Strips, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a weather strip for doors and to means whereby the lower edge thereof is made to conform to a snug seat on the floor when the door is closed and to clear the floor as the door is opening, thereby permitting free movement of the door.

The invention consists in the matters hereinafter set forth and particularly pointed out in the appended claim.

In the drawings, Figure 1 is a view in elevation of the lower part of a door fitted with a weather strip that embodies features of the invention; Fig. 2 is a view in longitudinal section through the door showing the strip in plan view; Fig. 3 is a view in longitudinal section, enlarged and partially broken away, of the strip; Fig. 4 is a view in cross section taken on line IV—IV of Fig. 3; Fig. 5 is an enlarged view in detail of an end portion of the strip; Fig. 6 is a view in section of the strip taken on or about line VI—VI of Fig. 3; Fig. 7 is a view of a modified form of strip, applied to a door; Fig. 8 is a plan view of the applied modified strip with the door and parts in section; Fig. 9 is a view, partially in longitudinal section and partially broken away and in elevation of the modified strip; Fig. 10 is a view in section on or about line X—X of Fig. 9; Fig. 11 is a view in section on or about line XI—XI of Fig. 9, and Fig. 12 is a view in section on or about line XII—XII of Fig. 9.

Referring to the drawings, an exterior casing 1 is formed of sheet metal or the like with an upper flange 2 whereby it may be secured, as by screws 3 or the like against the face of a door. A tongue 4 of sheet metal projects below the lower margin of the casing 1 between the front and back plates thereof within which it is yieldingly supported by springs 5 which may conveniently lie in compression between inturned ledges 6 of the casing and inturned flanges 7 on the upper portion of the tongue 4. Suitably disposed stops 8 or the like struck up or otherwise formed from the body of the casing limit the upward movement of the tongue.

A pair of striker plates 9 are secured on the door jamb in such manner that the door closes past them, their outer slightly curved end portions 10 acting as cams to force latch bars 11 that slide longitudinally of the casing between suitable guide lugs 12, inwardly against oppositely disposed bell cranks 13. The latter are arranged to be hinged on suitable pivot pins 14 in such manner that their depending arms bear against marginal flanges 15 formed on the tongue 4 to project the latter in opposition to the action of the springs 5.

The lower portion 16 of the tongue is reverted to form a channel bar over which another channel bar or shoe 17 is vertically movable, the central portion of the shoe being pivoted as by a pin 18 on a slight fulcrum lug 19 on the channel portion of the tongue. Guide pins 20 on the ends of the shoe engage guide slots in the channel portion 16 of the tongue to retain the shoe which is made of such material as to bend on the fulcrum if desired. A felt lining 21 or the like is attached to the face of the shoe.

When the door is closed the striker plates force the bell cranks to project the tongue toward the floor to which the yielding shoe conforms closely, thereby obtaining the required close joint. When the door is opened, a slight movement of the outer end of the door releases the outer end of the shoe at once and shortly thereafter the inner end, which has less motion is also retracted by the spring.

It is to be understood that the construction may be varied within the limits of good shop practice to suit slight changes in construction and material without changing the general method of operation of the weather strip. Thus as shown in Figs. 7 to 12 inclusive, a back plate 22 and front plate 23 form a pocket in which a tongue 24 is yieldingly suspended by spring fingers 25 from a transverse strip 26 between the plates. A latch bar 27 reciprocable on the strip 26, operates a bell crank 28 to depress the tongue 24, when the latch encounters a striker plate 29 on the door casing or jamb. End springs 30, considerably weaker than the springs 25, yieldingly project the tongue ends and permit a felt or rubber shoe 31 to conform to the floor. As a result the weather strip effectively seals the door when it is closed

and does not impede the free movement of the door when open. As there are no projecting parts, the strip takes up but little room and as the working mechanism is housed, it is not liable to disarrangement, while it is effectively closed against dust or the like.

Obviously, changes in the details of construction may be made without departing from the spirit of my invention and I do not care to limit myself to any particular form or arrangement of parts.

What I claim is:—

The combination with a door casing, jamb and door, of a weather strip consisting of a sheet metal tongue having the upper edge thereof cut away, a hollow casing secured against the face of the door and housing said strip, a ledge projecting from the lower margin of the casing, means in the ends of said casing for movably supporting the tongue, striker members on the door jamb, latches projecting from the casing to contact with the striker members when the door is closed, levers in the cut away upper edge of the tongue operated by the latches to depress the tongue, and a shoe pivotally connected to the tongue with the end portions thereof loosely held for downward projection by said levers.

In testimony whereof I affix my signature in presence of two witnesses.

STANLEY LEECH.

Witnesses:
ANNA M. DORR,
C. R. STICKNEY.