July 20, 1948. C. C. CURLEY 2,445,315

DOOR SEAL ASSEMBLY

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FIG. -1

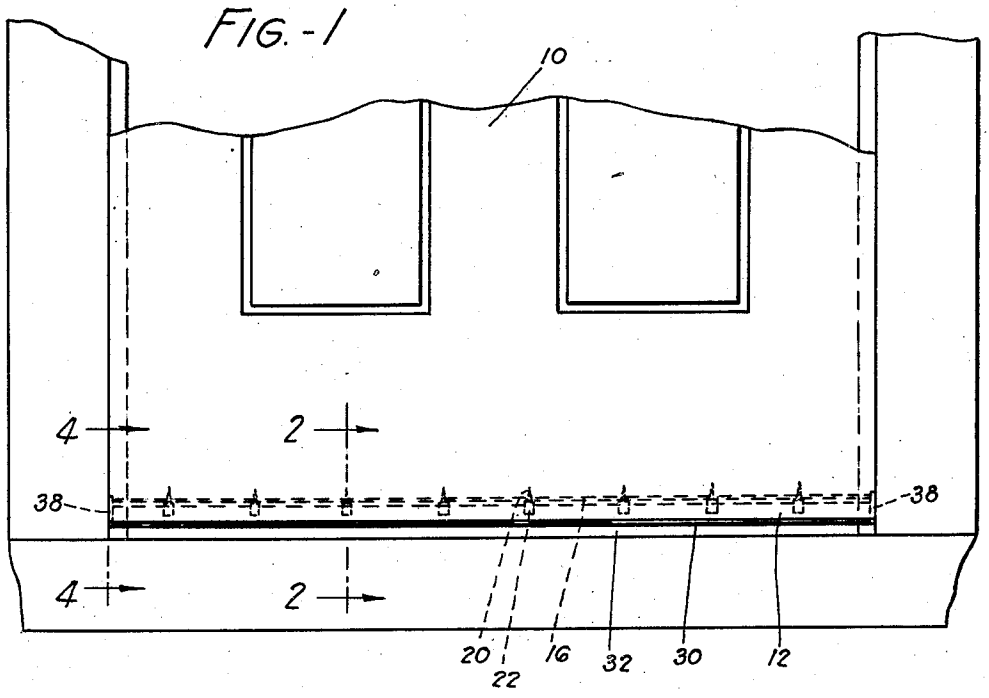


FIG. -2

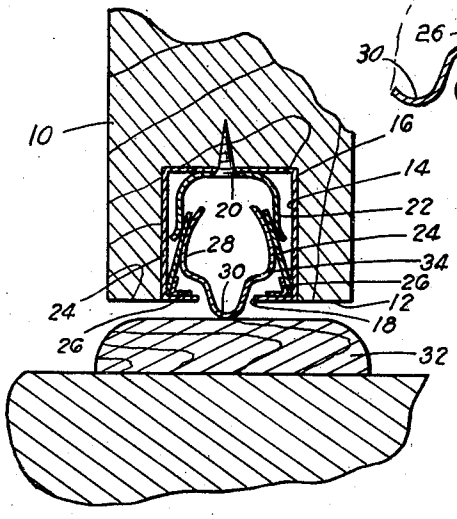


FIG. 8

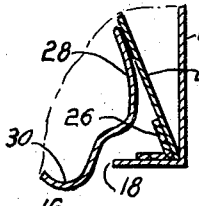
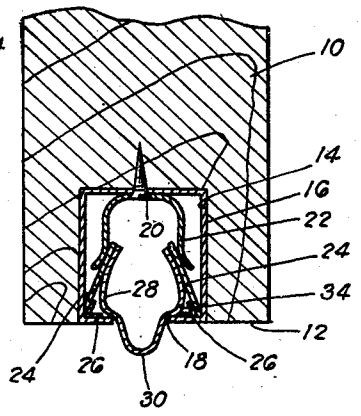


FIG. -3



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FIG. - 5

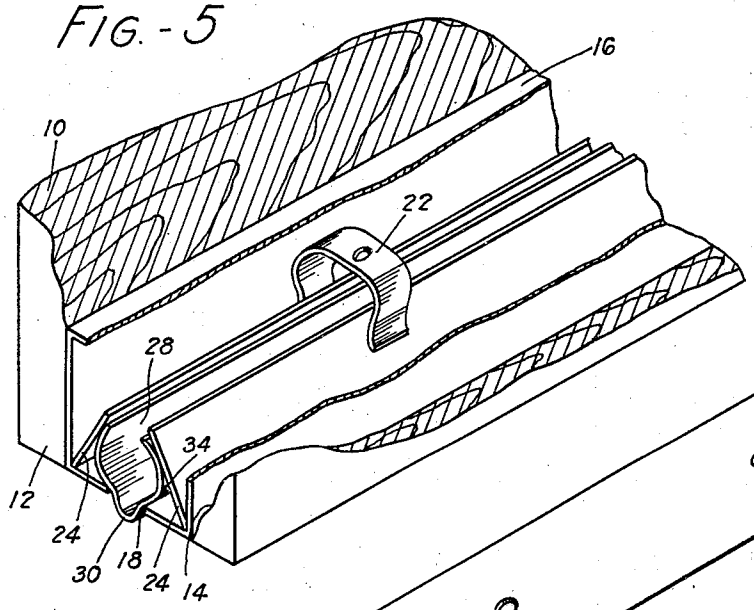


FIG. - 6

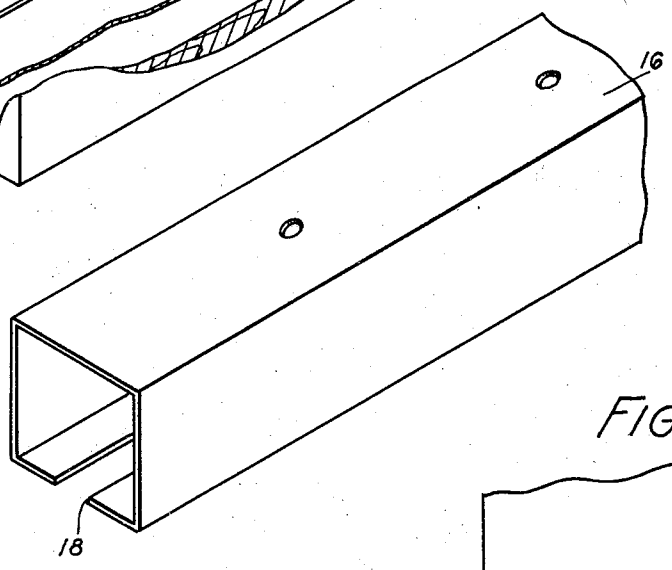


FIG. - 4

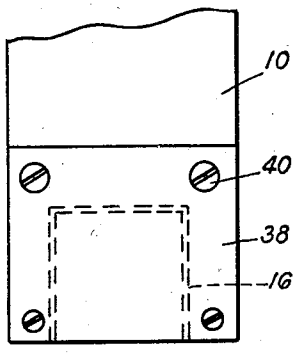
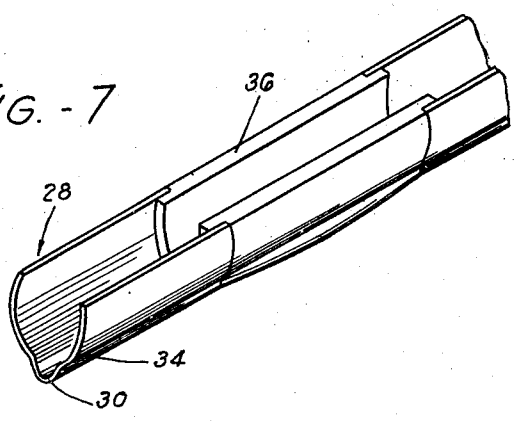


FIG. - 7



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DOOR SEAL ASSEMBLY

Clarke C. Curley, Lorain, Ohio

Application November 30, 1945, Serial No. 632,006

4 Claims. (Cl. 20—68)

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This invention relates to a self-aligning, self-seating spring loaded door seal, which is especially designed to restrict the flow of dust, air, water and temperature around the door installation.

An object of the invention is to provide a device that can be installed in horizontal vertical or curved positions and which will become more efficient through usage as the moving parts will more efficiently seat themselves through wear.

Another object of the invention is to provide a device that is simple in construction, efficient in operation, durable in use and can be manufactured at a low cost.

With the above and other objects and advantages in view the invention consists of the novel details of construction, arrangement and combination of parts more fully hereinafter described, claimed and illustrated in the accompanying drawings in which:

Figure 1 is an elevational view of the device as applied to bottom of a conventional door.

Figure 2 is a sectional view on the line 2—2 of Figure 1, with the device in contact with the door sill.

Figure 3 is the same as Figure 2 out of contact with the door sill.

Figure 4 is an elevational view of the retaining plate.

Figure 5 is a perspective view of the method of installation.

Figure 6 is a perspective view of the housing, and

Figure 7 is a perspective view of the moving part of the device.

Figure 8 is a detail showing a section through a lower corner of the retainer box showing the fabric hinges for mounting the baffle plates.

Referring more in detail to the drawings the numeral 10 designates a conventional door having the bottom edge 12 in which is provided a longitudinally extending recess 14 which is adapted to receive the rectangular shaped retainer box 16, which is provided on its bottom wall with the longitudinally extending guideway slot 18.

Secured to the top wall of the box 16 by means of screws 20 which also retain the box in the recess 14 are the inverted U-shaped springs 22.

Positioned intermediately the legs of the springs 22 are the diametrically opposed longitudinally extending baffle plates 24, which are retained in alignment by means of the compression of the legs of the springs 22 thereon.

The baffle plates 24 are attached to the opposite lower corners of the box 16 by fabric hinges 26

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thus providing a dual seal against air entering the box and through the door.

Positioned intermediate the baffles 24 is the seal 28, which is substantially U-shaped in cross-section having the longitudinally extending rib or tongue 30 on the base thereof which extends through the slot 18 in the box to contact the door sill 32 as shown in Figure 2. The shape of the seal 28 forms longitudinally extending bulging shoulders 34, which are diametrically opposed on opposite sides of the tongue 30 and contact the lower wall of the box on opposite sides of the slot 18, thus providing a triple seal for the door.

The baffles contacting the legs of the seal not only prevent air from passing through the seal but force the seal into close contact with the door sill.

The seal can be cut in segments and joined by an adhesive fabric 36 moulded to the inner wall to allow for sag alignment of worn sills or curved installation as shown in Figure 7 and plates 38 secured to the door by screws 40 close the ends of the box 16.

The box retainer can be made to extend to the outside faces of the doors for old installations which is made by cutting off the required amount of the overall length of the door.

It is believed that the operation and construction of the device will be apparent to those skilled in the art and it is to be understood that changes in the details of construction, arrangement and combination of parts may be resorted to without departing from the spirit of the invention and the scope of the appended claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A weather sealing element comprising an elongated box-like casing having a longitudinally extending slot in the lower surface, a U-shaped tongue positioned in said slot and projecting therethrough with arms thereof bulging outwardly to form shoulders and extending upwardly and inwardly in said casing, inwardly inclined side plates mounted in the lower corners of the casing and positioned against the inwardly extending ends of the arms of the tongue, and means resiliently urging said side plates against the arms of the tongue whereby the tongue is resiliently held outward.

2. A weather sealing element comprising an elongated box-like casing having a centrally disposed longitudinally extending slot in the lower surface, a U-shaped tongue positioned in said slot and projecting therethrough with arms thereof

bulging outwardly to form shoulders and extending upwardly and inwardly in said casing, sealing means contacting the outer surfaces of the arms of the U-shaped tongue, and inverted U-shaped spring clips mounted in the upper part of the casing having downwardly extending arms positioned over the arms of the tongue holding the sealing means in contact with the arms of the tongue and urging the tongue outward.

3. In a weather seal for the lower edges of doors and the like, a longitudinally disposed casing rectangular shaped in cross section and having a centrally disposed slot in the lower surface, a longitudinally disposed U-shaped sealing element with bulging shoulders on the arms thereof positioned in and extending lengthwise of said casing and having an arcuate tongue extending through said slot, the arms of said sealing element above the shoulders having arcuate, upwardly and inwardly extending ends, inclined plates mounted in the lower corners of the casing in engagement with the upwardly and inwardly extending ends of the arms of the sealing element, sealing strips between the inclined plates and casing, and means resiliently urging the inclined plates into engagement with the arms of the sealing element whereby the sealing element is urged outward.

4. In a weather seal for the lower edges of doors and the like, a longitudinally disposed casing rectangular shaped in cross section and having a centrally disposed slot in the lower surface, an elongated U-shaped sealing element with bulging shoulders on the arms thereof positioned in and extending lengthwise of said casing and having an arcuate tongue extending through said slot, the arms of said sealing element having upwardly and inwardly extending arcuate ends above the shoulders therein, inclined plates in the casing positioned against the arms of the sealing element, fabric strips connecting the inclined plates to the lower inner corners of the casing, fabric splicing elements connecting ends of said sealing elements, and inverted U-shaped spring clips mounted on the upper wall of the casing with the arms thereof positioned over the inclined plates and arms of the sealing element.

CLARKE C. CURLEY.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
746,910	Zimmermann	Dec. 15, 1903

FOREIGN PATENTS

Number	Country	Date
470,989	Great Britain	Aug. 26, 1937