

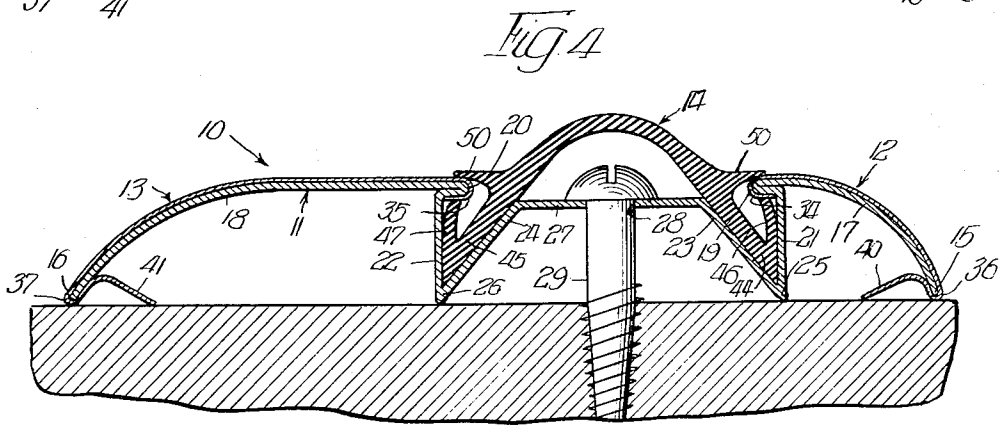
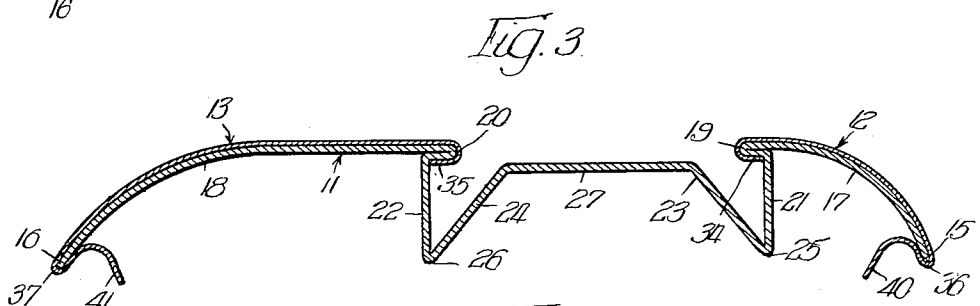
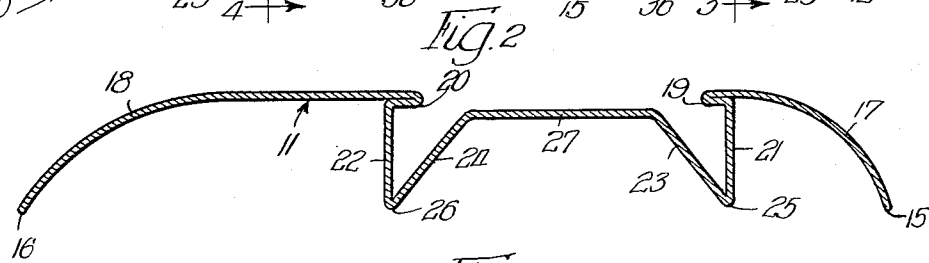
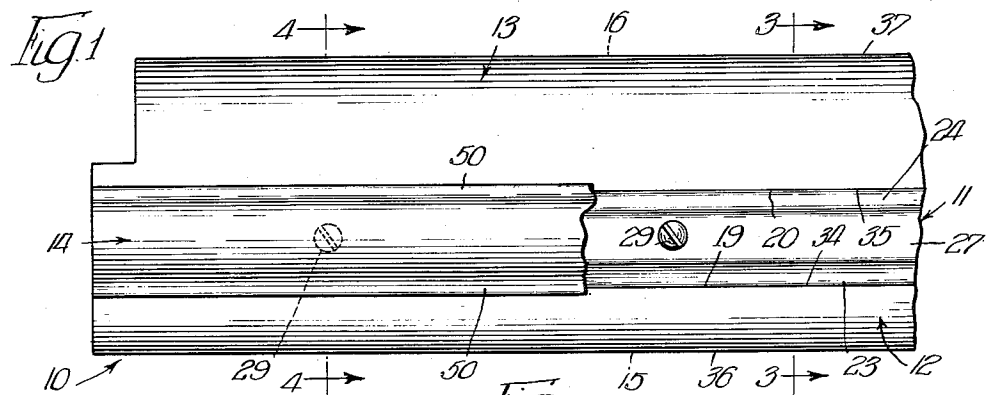
Jan. 21, 1964

C. W. WEST

3,118,192

THRESHOLD

Filed Dec. 12, 1960



INVENTOR.

Clarence W. West,

BY

Loomwell, Christ & Warden

attys

1

3,118,192
THRESHOLD

Clarence W. West, 158 N. Harvey, Oak Park, Ill.
Filed Dec. 12, 1960, Ser. No. 75,241
3 Claims. (Cl. 20-64)

The present invention relates generally to new and improved sealing strip assemblies particularly adapted for use as thresholds with movable closures such as doors and the like.

An important object of the invention is to provide an improved economically fabricated threshold assembly.

Another important object of the invention is to provide a new and improved threshold assembly which includes an elongated generally arch-shaped rigid plate member formed of cold rolled steel and having a pair of laterally spaced outwardly and downwardly inclined approach surfaces, and a relatively thin flexible outer sheathing formed of stainless steel, bronze, or any like material positioned contiguously against and completely covering each of the approach surfaces.

A still further important object of the invention is to provide a new and improved threshold assembly of the character described wherein the outer sheathing edges are provided with marginal extensions which extend below the level of the outer edges of the approach surfaces for resiliently yieldable engagement with a floor surface when the rigid plate member is clamped against the same whereby to render the threshold assembly self-sealing.

While the foregoing statements are indicative in a general way of the nature of the invention, other more specific objects and advantages will be apparent to those skilled in the art upon a full understanding of the construction, arrangement and function of the several parts which have been combined to form the improved threshold assembly.

A preferred embodiment of the invention is presented herein but it will of course be appreciated that the invention is susceptible of incorporation in other forms coming equally within the scope of the appended claims.

In the accompanying drawings:

FIG. 1 is a fragmentary plan view in reduced scale of the threshold assembly of the present invention with a portion of the sealing gasket broken away;

FIG. 2 is an enlarged transverse vertical section taken through the rigid plate member of the threshold assembly;

FIG. 3 is an enlarged vertical section taken generally on the line 3-3 of FIG. 1 prior to installation of the threshold assembly; and

FIG. 4 is an enlarged vertical section taken generally on the line 4-4 of FIG. 1 after installation of the threshold assembly.

As best illustrated in FIG. 4, a threshold assembly 10 embodying the invention includes an elongated generally arch-shaped rigid plate member 11 formed of cold rolled steel, two elongated relatively thin flexible sheathing strips 12 and 13 formed of stainless steel, bronze, or any like material, and an upwardly directed bowed sealing gasket 14 formed of rubber or rubber-like material and adapted for sealing engagement with the underside of a door.

As best illustrated in FIG. 2, the rigid plate member 11, which is formed of a single piece of cold rolled steel, is generally arch-shaped with its opposite edges 15 and 16, which are adapted for engagement with a floor surface, being curved upwardly and inwardly whereby to provide a pair of inclined laterally spaced approach surfaces 17 and 18 with the approach surface 18 having a greater lateral dimension than the approach surface 17 in the embodiment illustrated. The inner edges of the portions of the plate member 11 forming the approach surfaces 17 and 18 are bent downwardly and outwardly upon themselves whereby to provide a pair of laterally spaced con-

2

fronting shoulders 19 and 20. The shoulder-defining portions are then bent downwardly to provide vertical runs 21 and 22 and then inwardly and upwardly to provide inclined runs 23 and 24 with each set of vertical and inclined runs 21-23 and 22-24 serving as supporting legs 25 and 26, respectively, disposed intermediate the outer edges 15 and 16 of the rigid plate member 11. The upper ends of the inclined runs 23 and 24 of the legs 25 and 26, respectively, are bent inwardly where they meet to provide a horizontally disposed portion 27 which is disposed slightly below the shoulders 19 and 20. The unitary rigid plate member 11 may therefore be described as including a pair of laterally spaced approach surfaces 17 and 18 which are inclined downwardly and outwardly from a centrally located recessed portion defined by the legs 25 and 26 and the horizontal portion 27 with the inner edges of the approach surfaces 17 and 18 projecting somewhat inwardly of the recessed portion whereby to define the shoulders 19 and 20, respectively. The horizontal portion 27 of the rigid plate member 11 is provided with a series of longitudinally spaced drilled holes 28 (FIG. 4) which are adapted to receive threaded fasteners 29 for clamping the rigid plate member 11 to a floor surface.

The approach surfaces 17 and 18 are provided with outer coverings in the form of the two relatively thin flexible metallic sheathing strips 12 and 13 which are positioned contiguously against and completely covering the approach surfaces 17 and 18, respectively. The innermost edge portions 34 and 35 of the sheathings 12 and 13 are wrapped around the inwardly projecting shoulders 19 and 20, respectively, of the rigid plate member 11, whereby to firmly anchor the innermost edge portions of the sheathings 12 and 13 thereto. The outermost edge portions 36 and 37 of the sheathings 12 and 13 are wrapped around the outer edges 15 and 16, respectively, of the rigid plate member 11 and are provided, inwardly of the outer edges 15 and 16, with marginal extensions 40 and 41, respectively, which are curved first upwardly and then downwardly with the lower ends thereof terminating a relatively short distance below the level of the outer edges 15 and 16 of the rigid plate member 11. When the rigid plate member 11 is clamped to a floor surface by the threaded fasteners 29, as illustrated in FIG. 4, the marginal extensions 40 and 41 of the sheathings 12 and 13, respectively, are disposed in resiliently yieldable engagement with the floor surface whereby to render the threshold assembly 10 self-sealing. Even though the floor surface may not be absolutely flat and smooth, the seal provided will be an effective one because of the resiliently yieldable characteristics of the marginal extensions 40 and 41 of the sheathings 12 and 13.

After the rigid plate member 11 has been clamped to a floor surface, the threshold assembly 10 is completed by inserting the sealing gasket 14 downwardly into the recessed portion of the rigid plate member 11. As best illustrated in FIG. 4, the lower edges 44 and 45 of the upwardly directed bowed sealing gasket 14 are inserted into the spaces defined between the vertical and inclined runs of the legs 25 and 26. The lower edges 44 and 45 of the bowed sealing gasket 14 are provided with upwardly directed portions 46 and 47, respectively, which are engageable with the undersides of the shoulders 19 and 20 of the rigid plate member 11 whereby to retain the sealing gasket 14 in the recessed portion of the threshold assembly 10. Preferably, the opposite side surfaces of the sealing gasket 14 are provided with outwardly projecting flap portions 50 which are adapted to extend over the innermost portions of the top surfaces of the shoulders 19 and 20 of the rigid plate member 11.

In the past, it has been common practice in the fabrication of threshold assemblies of the character described to form the rigid plate member of relatively expensive

3

aluminum or brass extrusions whereby to provide a suitable rigid plate member having an acceptable appearance. The threshold assembly 10 disclosed herein may be fabricated far more economically inasmuch as the one-piece rigid plate member 11 is formed of relatively inexpensive cold rolled steel by means of a relatively inexpensive forming operation with the exposed surfaces thereof being covered either by the sealing gasket 14 or by the relatively thin flexible metallic sheathing strips 12 and 13 which provide hard wearing approach surfaces which are attractive in appearance. The same cold rolled steel rigid plate members 11 may, of course, be provided with sheathings formed of thin flexible strips of stainless steel, bronze, or other like materials whereby to provide prospective users with a selection of attractive economical threshold assemblies. The resiliently yieldable marginal extensions 40 and 41 of the sheathings 12 and 13, respectively, serve to render the threshold assembly 10 self-sealing upon installation thereof.

I claim:

1. A threshold assembly comprising, an elongated generally arch-shaped rigid plate member formed of cold rolled steel and being characterized by a pair of laterally spaced approach surfaces each of which is inclined downwardly from a centrally located recessed portion adapted to receive an upwardly directed bowed sealing gasket with the innermost edges of such surfaces terminating inwardly of said recessed portion whereby to define anchoring shoulders and with the outermost edges of said approach surfaces terminating in bearing edges for engagement with a floor surface, a relatively thin flexible stainless steel outer sheathing disposed against and completely covering each of said approach surfaces whereby to provide a decorative appearance therefor, which sheathings have their innermost edge portions wrapped around said shoulders provided at the innermost edges of said approach surfaces for anchoring engagement therewith and their outermost edge portions wrapped around said bearing edges of said approach surfaces, and said outermost edge portions of said sheathings being provided with marginal extensions which are disposed inwardly of said bearing edges of said approach surfaces and which are curved first upwardly and then downwardly below the outermost edge portions of said approach surfaces for resiliently yieldable engagement with a floor surface when said rigid plate member is clamped against the same.

2. In a threshold assembly of the type including an elongated generally arch-shaped rigid plate member hav-

4

ing a pair of laterally spaced approach surfaces inclined downwardly and outwardly from a centrally located recessed portion, and an upwardly directed bowed sealing gasket received in the recessed portion, the improvement which comprises, two flexible outer sheathing strips secured to said plate member in substantial co-extensive contact with respective approach surfaces for covering the latter, each of said sheathing strips having a longitudinally extending edge portion adjacent the outer edge portion of its respective approach surface doubled back against the underside of said outer edge portion and being provided with a marginal extension which extends upwardly, inwardly and then downwardly a relatively short distance below said outer edge portion, whereby when the rigid plate member is clamped against a floor surface said marginal extensions are yieldably engageable with the same.

3. In a threshold assembly of the type including an elongated generally arch-shaped rigid plate member having a pair of laterally spaced approach surfaces inclined downwardly and outwardly from a centrally located recessed portion, and an upwardly directed bowed sealing gasket received in the recessed portion, the improvement which comprises, two flexible outer sheathing strips in substantial co-extensive contact with respective approach surfaces for covering the latter, each of said sheathing strips having opposite longitudinally extending edge portions doubled back against the underside of respective inner and outer edge portions of the corresponding approach surface for securing the sheathing strips to the rigid plate member, each sheathing strip having the edge portion thereof which is doubled back against the underside of the outer edge portion of the corresponding approach surface provided with a marginal extension which extends upwardly, inwardly and then downwardly a relatively short distance below the outer edge portion of its approach surface, whereby when the rigid plate member is clamped against a floor surface said marginal extensions are yieldably engageable with the same.

References Cited in the file of this patent

UNITED STATES PATENTS

2,010,609	Shogren	Aug. 6, 1935
2,570,336	Foots	Oct. 9, 1951
2,718,677	Cornell	Sept. 27, 1955
2,734,602	Dawson	Feb. 14, 1956
2,794,220	Libman	June 4, 1957
2,849,763	Leigh	Sept. 2, 1958