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J. R. REPLOGLE

SEALING STRIP

Filed Feb. 21, 1921

Fig. 1.

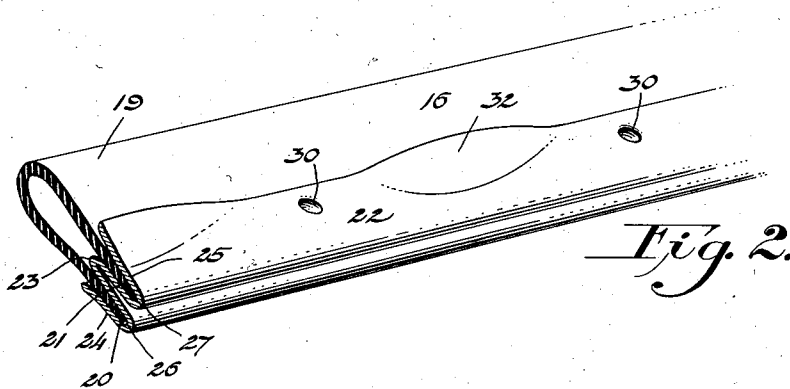
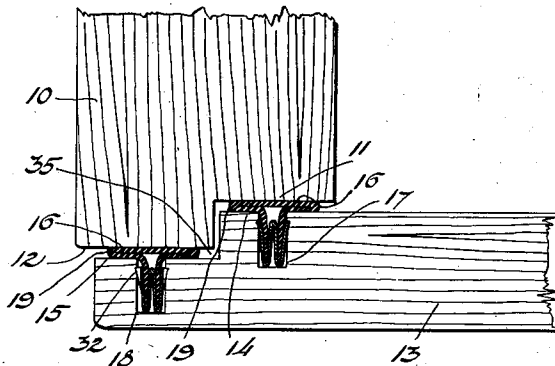


Fig. 2.

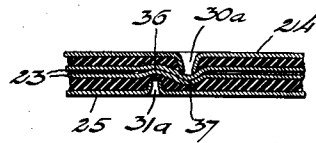
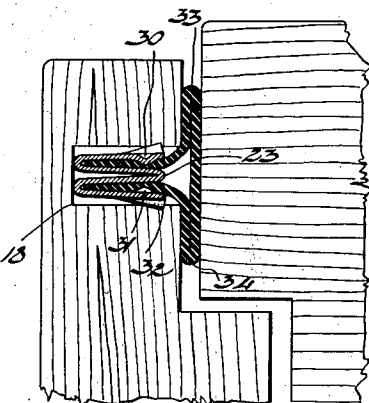


Fig. 4.

Fig. 3.



Witness:
G. L. Perry

Inventor
John R. Replogle
By his Attorneys
Blackmore, Spencer & Flint

UNITED STATES PATENT OFFICE.

JOHN R. REPLOGLE, OF DETROIT, MICHIGAN, ASSIGNOR TO THE SECURITY TRUST COMPANY, TRUSTEE, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

SEALING STRIP.

Application filed February 21, 1921. Serial No. 446,925.

To all whom it may concern:

Be it known that I, JOHN R. REPLOGLE, a citizen of the United States, and a resident of Detroit, county of Wayne, and State of Michigan, have invented certain new and useful Improvements in Sealing Strips, of which the following is a full, clear, concise, and exact description, such as will enable others skilled in the art to which the invention relates to make and use the same, reference being made therein to the accompanying drawings, which form a part of this specification.

This invention relates in general to sealing strips and more particularly to sealing strips for closures for compartments where it is desirable to prevent the passage of air about said closure.

One of the objects of the invention is the construction of a sealing strip that is efficient in operation, simple in construction, cheap to manufacture, easy to install and that is not likely to get out of order.

Another object of the invention is a cheap and simple method of making the sealing strip.

Other and further objects and advantages of the invention will appear as the description proceeds.

On the drawings,—

Figure 1 is a horizontal section of a compartment wall and closure, parts broken away, showing the sealing strip in position therebetween;

Figure 2 is an enlarged perspective view of a portion of the sealing strip;

Figure 3 is an enlarged horizontal section of a portion of a compartment wall and closure therefor showing the sealing strip in position therebetween; and

Figure 4 is a longitudinal section of a modified form of the backing strip, parts broken away.

The numeral 10 designates a door contacting member, wall or door frame of a receptacle, such for instance as a refrigerator. This frame has a main contacting portion 11 and a stepped extension 12. The free edge of the door 13 is rabbetted, or in other words, it is provided with a main contacting portion 14 and a stepped extension 15. The main portion and stepped extension of the door are opposite and adjacent to the corre-

sponding main portion and stepped extension of the wall, when the door is closed.

One or more bands of sealing strips are secured between the door and its frame in such a manner that when the door is closed portions of the sealing strip material will be compressed between the door and the frame at each side of the retaining means.

As shown, an inner band and an outer band of sealing strips 16 are arranged between the contacting faces of the door and door frame. It is immaterial whether these bands of sealing strips are secured to the door or the door frame. As shown, however, they are secured to the door. They may be secured in position by any suitable retaining means. As shown in Figs. 1 and 3 the door is provided about its edge with an inner groove or kerf 17 and an outer groove or kerf 18, in which the sealing strips 16 are secured.

The sealing strips consist each of a sheet of rubber bent back upon itself to form a fold 19. The two edges 20 and 21 of the fold are held by a backing or attaching member 22 of metal or other suitable material. This backing may be made from copper or other material suitable for the purpose. The backing 22 if made from a single strip of metal may be bent in the form of an M with a re-entrant fold 23, which with the free edges 24 and 25 form two recesses 26 and 27 in which the free edges 20 and 21 of the rubber strip are placed. The edges 24 and 25 are then pressed down at intervals to retain the edges of the rubber strip in position. In order to more firmly secure the edges of the rubber strip in position the metal at the depressed portions may be indented as shown at 30 and 31 on Fig. 3.

The portions 32 of the side edges 24 and 25 that are not depressed form retaining barbs or catches 32 that extend laterally somewhat and are adapted to engage the sides of the grooves 17 and 18 to hold the strip in position without the use of other fastening means.

In applying the strip it is only necessary to provide grooves or kerfs in the contacting face of the door or door frame and force the backing strip either transversely or longitudinally into these grooves or kerfs. The barbs or projections 32 will retain the

strip in position. By arranging the backing strip in the groove at right angles to the door, the rubber fold will extend beyond the surface of the door in such a manner that when the same is closed it will be formed into folds 33 and 34 at the two sides of the groove (see Fig. 3). In other words, by securing the edges of the fold 19 on the door adjacent to each other and at substantially right angles to the face of the door a fold at each side of those edges is formed when the door is closed. These folds being compressed between the door and its abutment seal the joint at each side of the groove. This is an important feature of this invention because it prevents air passing through the joint by passing through or around the attaching means.

By arranging an inner and an outer band of sealing strips there is formed a dead air space 35 between the bands which constitutes an air space insulation which tends to prevent an interchange of heat between the interior and exterior of the compartment.

A slightly modified form of the backing strip and its indentations is shown in Fig. 4. In this form of the device the indentations or perforations 30^a and 31^a are arranged slightly offset from each other. The indenting tools are forced through the outer edges 24 and 25 of the backing strip 22, into or through the edges of the rubber strip 19 and form indentations 36 and 37 in the fold 23 of the backing strip. The inner edges of the indentations or perforations 30^a and 31^a interlock with the indentations 36 and 37 in the fold 23 and serve to retain the edges of the rubber sealing strip 19 in position therebetween.

It will be understood that various changes in the form, construction, composition and arrangement of the several parts may be resorted to without departing from the

spirit or scope of my invention, hence I do not wish to limit myself strictly to the structure herein set forth, but

What I claim is:

1. A sealing strip for refrigerators, consisting of a sheet metal backing strip bent to form a plurality of longitudinally extending recesses opening in the same direction, and a fold of sealing material having each of its longitudinal edges in one of said recesses and secured therein by spaced compressed portions in said backing strip, said backing strip having outwardly projecting portions between said compressed portions constituting means for retaining it in a groove, substantially as shown and described.

2. A sealing strip for refrigerators or the like comprising a sheet metal backing strip bent to form a plurality of longitudinally extending recesses opening in the same direction, and a fold of sealing material having each of its longitudinal edges in one of said recesses and secured therein by spaced indentations in said backing strip, said backing strip having outwardly projecting portions between said indentations adapted to engage the sides of a groove and retain the strip therein.

3. A method of forming sealing strips which consists in longitudinally folding a strip of sheet metal so as to form a plurality of recesses opening in the same direction, forming a strip of sealing material into a longitudinally extending fold, placing the edge portions of said fold within said recesses, forming compressed portions in the outer edges of said folded sheet metal at intervals along the same and then indenting the compressed portions into the sealing material to secure the same.

In testimony whereof I affix my signature.

JOHN R. REPLOGLE.