

March 22, 1966

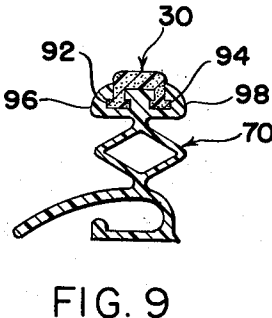
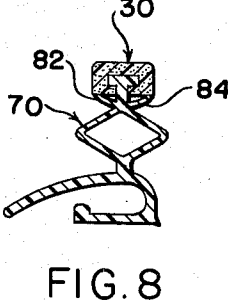
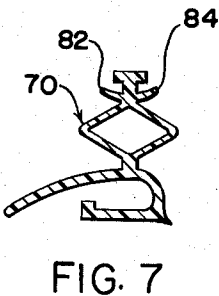
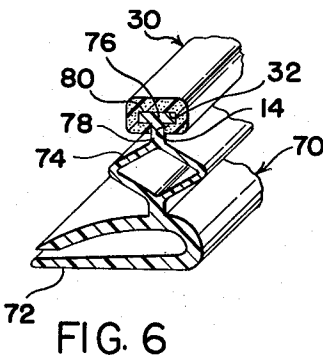
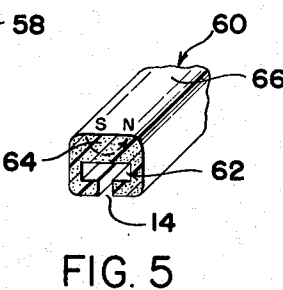
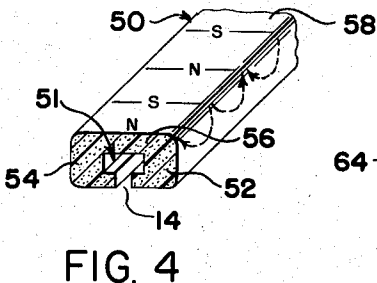
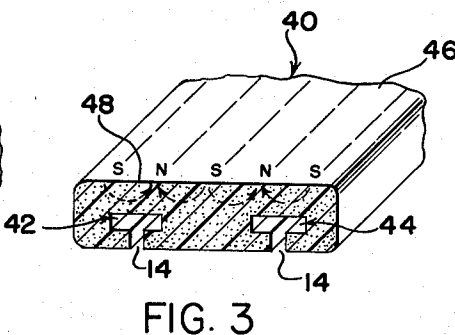
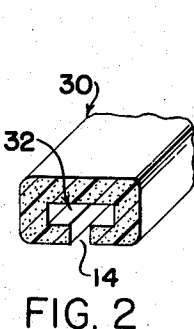
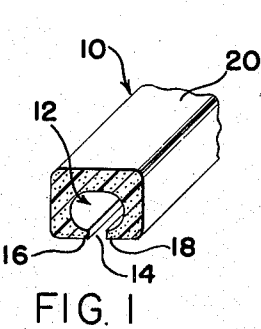
M. BAERMANN

3,241,198

PERMANENT MAGNET CLOSURE DEVICE

Filed Aug. 26, 1963

3 Sheets-Sheet 1



INVENTOR.
MAX BAERMANN

BY *Tilberry & Boddy*
ATTORNEYS

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M. BAERMANN

3,241,198

PERMANENT MAGNET CLOSURE DEVICE

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3 Sheets-Sheet 2

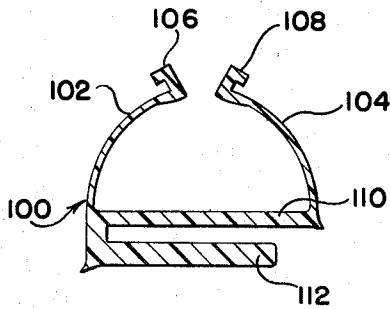


FIG. 10

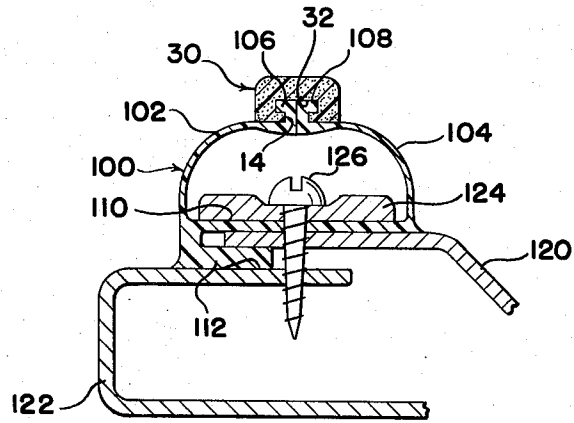


FIG. 11

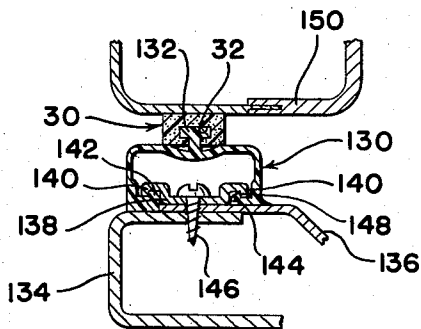


FIG. 12

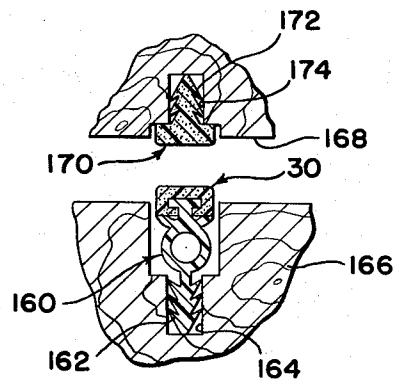


FIG. 13

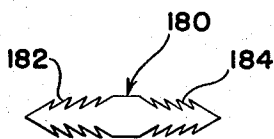


FIG. 14

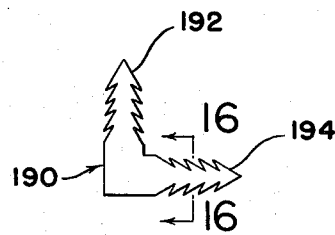


FIG. 15

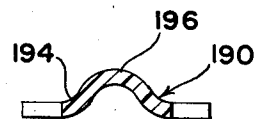


FIG. 16

INVENTOR.
MAX BAERMANN

BY *Tilberry & Body*
ATTORNEYS

March 22, 1966

M. BAERMANN

3,241,198

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3 Sheets-Sheet 3

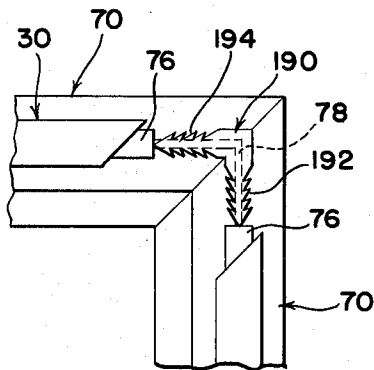


FIG. 17

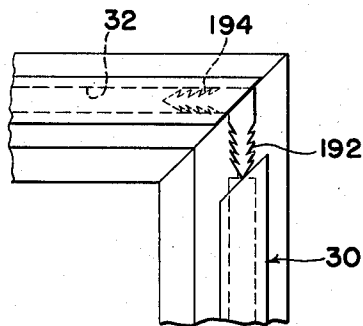


FIG. 18

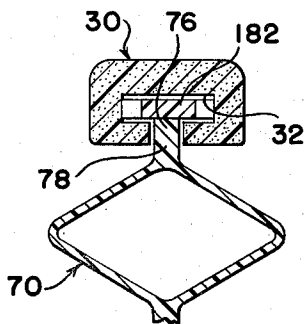


FIG. 19

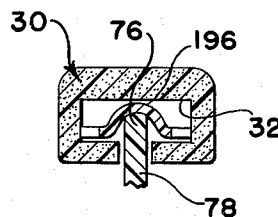


FIG. 20

INVENTOR.
MAX BAERMANN
BY *Tilberry & Body*
ATTORNEYS

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3,241,198

PERMANENT MAGNET CLOSURE DEVICE

Max Baermann, Bensberg Wulfshof,

Bezirk Cologne, Germany

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Claims priority, application Germany, Sept. 8, 1962,

B 68,779; Oct. 4, 1962, B 69,084

9 Claims. (Cl. 20-69)

The present invention pertains to the art of closure devices and more particularly to an improved closure device employing a permanent holding magnet.

The present invention is particularly applicable to a holding device for securing the swingable door of a refrigerator in its closed position and the invention will be described with particular reference thereto; however, it is to be appreciated that the present invention has much broader applications and may be used as a closure device for securing the door or lid of various cabinet-like structures.

To provide an atmosphere seal around the periphery of a refrigerator door, it has become common practice to secure a flexible gasket around the periphery of the door which gasket is adapted to contact the refrigerator cabinet as the door is closed. The flexible gasket is somewhat compressed between the door and the cabinet by a latch mechanism adapted to hold the door in its closed position with the gasket against the refrigerator cabinet.

In accordance with the teaching of my prior United States Letters Patent No. 2,959,832, many of the latch mechanism for refrigerator doors include an elongated, flexible permanent magnet which is secured onto the resilient gasket so that the gasket itself provides the latch mechanism for holding the door in the closed position. In accordance with this construction, the flexible permanent magnet secured onto the resilient gasket attaches itself to the ferro-magnetic material of the refrigerator cabinet to create a force for holding the refrigerator door closed.

The assembly of the elongated, flexible permanent magnet onto the resilient gasket has been done by various arrangements. For instance, it has become somewhat common practice to provide the resilient gasket with a longitudinally extending pocket or channel having a cross-section substantially matching the cross-section of the elongated, flexible magnet so that the magnet could be inserted longitudinally within the pocket of the resilient gasket. By this construction, the permanent magnet was completely enclosed within the gasket which is formed from a non-magnetic material, such as polyvinyl chloride. Accordingly, the gasket material around the permanent magnet prevented the permanent magnet from coming into direct contact with the refrigerator cabinet and this spacing between the cabinet and the magnet substantially reduced the holding force created by the magnet between the door and the refrigerator cabinet. To overcome this difficulty in the prior art, it was necessary to include a permanent magnet within the gasket which had a substantially increased holding force. Thus, the cost and weight of the magnet was increased.

To overcome the disadvantages realized when the flexible permanent magnet was housed completely within the resilient gasket, a construction similar to that shown in my United States Letters Patent No. 2,959,832 has been employed wherein the elongated, flexible permanent magnet was provided with a longitudinally extending, dove-tail rib and the resilient gasket was provided with a longitudinally extending, dove-tail recess for receiving the rib of the permanent magnet. Although

such a construction allowed the permanent magnet to come substantially in direct contact with the refrigerator cabinet so that a reduction in the size of the flexible permanent magnet was possible, this construction had the disadvantage that the permanent magnet could be accidentally loosened from the recess within the resilient gasket. Consequently, when the magnet was subjected to an abnormally high force perpendicular to the flat surface of the magnet, the magnet could often be pulled from the resilient gasket. Such abnormally high forces may occur if a tacky material finds its way onto the magnetized surface of the magnet or if a child attempts to pull the magnet from the gasket.

If the permanent magnet were provided with a dove-tail rib adapted to be received with a corresponding recess of the resilient gasket, another difficulty was realized. There is no economical and convenient way for securing the abutting ends of adjacent, flexible permanent magnets. Accordingly, at the corners of the refrigerator door where two permanent magnets met at right angles, there were often atmospheric leaks.

These and other disadvantages are completely overcome by the present invention which is directed toward an improvement in the manner by which the flexible permanent magnet is secured onto the resilient gasket which improvement prevents accidental removal of the flexible permanent magnet from the resilient gasket, decreases the cost of assembling the magnet and gasket, and allows easy assembly of abutting ends of adjacent flexible permanent magnets.

In accordance with the present invention, there is provided an improvement in the arrangement for securing the elongated, flexible magnet onto the resilient gasket which improvement comprises a longitudinally extending recess in the flexible magnet, a longitudinally extending rib protruding from the gasket and into the recess with the magnet surrounding the rib, and means for locking the rib into the magnet recess.

By so constructing the elongated, flexible permanent magnet and the resilient gasket, the permanent magnet is securely held onto the resilient gasket without requiring complete enveloping of the magnet by the gasket. In addition, abutting ends of adjacent magnets can be conveniently secured together by a fastener which is adapted to be securely locked within the recesses of the abutting permanent magnets.

The primary object of the present invention is the provision of a permanent magnet closure device that includes an elongated, flexible permanent magnet secured onto a resilient gasket which device is economical to produce and durable in operation.

Another object of the present invention is the provision of a permanent magnet closure device that includes an elongated, flexible permanent magnet secured onto a resilient gasket in such a manner that the magnet is held onto the gasket more securely than heretofore possible without surrounding the permanent magnet with the gasket.

Still another object of the present invention is the provision of a permanent magnet closure device that includes an elongated, flexible permanent magnet secured onto a resilient gasket in such a manner that abutting ends of adjacent magnets can be conveniently secured together.

Yet another object of the present invention is the provision of a permanent magnet closure device for a cabinet door that includes an elongated, flexible permanent magnet secured onto a resilient gasket in such a manner that the resilient gasket can be secured, in turn, onto the cabinet door with a minimum of effort and so that, when

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secured onto the door, the gasket cannot be easily removed.

These and other objects and advantages will become apparent from the following description used to illustrate the preferred embodiment of the present invention as read in connection with the accompanying drawings in which:

FIGURE 1 is a partial, pictorial view illustrating an embodiment of the present invention wherein the elongated, permanent magnet is provided with an elliptically shaped, longitudinally extending recess;

FIGURE 2 is a partial, pictorial view illustrating another embodiment of the present invention wherein the elongated permanent magnet is provided with a rectangularly shaped, longitudinally extending recess;

FIGURE 3 is a partial, pictorial view illustrating an embodiment of the present invention wherein the elongated permanent magnet is provided with two longitudinally extending recesses;

FIGURE 4 is a partial, pictorial view illustrating an embodiment of the present invention wherein the elongated permanent magnet is provided with transversely extending, magnetic poles;

FIGURE 5 is a partial, pictorial view illustrating an embodiment of the present invention wherein the elongated permanent magnet is provided with longitudinally extending, magnetic poles;

FIGURE 6 is a partial, pictorial view illustrating the preferred embodiment of the present invention wherein the elongated permanent magnet is secured onto a resilient gasket;

FIGURES 7, 8 and 9 are front elevational, cross-sectional views illustrating modifications of the embodiment of the present invention shown in FIGURE 6;

FIGURES 10 and 11 are end elevational, cross-sectional views illustrating another embodiment of the present invention;

FIGURE 12 is a cross-sectional, end elevational view illustrating still a further modification of the present invention;

FIGURE 13 is a cross-sectional, end elevational view illustrating still a further embodiment of the present invention;

FIGURES 14 and 15 are top plan views illustrating fasteners constructed in accordance with the present invention;

FIGURE 16 is an enlarged cross-sectional view taken generally along line 16—16 of FIGURE 15;

FIGURES 17 and 18 are partial, top plan views illustrating the use of the fastener as shown in FIGURES 15 and 16;

FIGURE 19 is a cross-sectional, partial view illustrating the use of a fastener as shown in FIGURE 14; and

FIGURE 20 is a cross-sectional, partial view illustrating the use of a fastener as shown in FIGURE 15.

Referring now to the drawings, wherein the showings are for the purpose of illustrating preferred embodiments of the present invention only and not for the purpose of limiting same, FIGURE 1 shows an elongated, flexible permanent magnet 10 having a longitudinally extending recess 12 opening into a slot 14 which defines longitudinally extending lips 16, 18. The magnet is flexible and, in accordance with the preferred embodiment of the present invention, comprises a thermoplastic or rubber material into which is incorporated finely divided permanently magnetizable particles of high coercive strength and low permeability. Such a flexible permanent magnet material is disclosed in my United States Letters Patent No. 2,959,832 wherein the permanently magnetizable particles are ferrites of barium, strontium or lead or a mixture of such ferrites which are bound together by a flexible plastic material such as plasticized polyvinyl chloride. The recess 12, in accordance with the embodiment of the invention shown in FIGURE 1, is elliptical in form; however, other forms of the recess may be utilized without departing from the intended spirit and scope of the

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present invention. As will be hereinafter set forth in detail, provision of this longitudinally extending recess is an important part of the present invention. On the opposite side of the permanent magnet 10 from the slot 14, the magnet is provided with a relatively flat continuous surface 20 which surface is magnetized with an appropriate magnetic pole arrangement such as longitudinally extending north and south magnetic poles or transversely extending alternate north and south magnetic poles.

Referring now to FIGURE 2, there is illustrated a further embodiment of the present invention wherein the elongated permanent magnet 30 is provided with a generally rectangular, longitudinally extending recess 32 which corresponds in function to the recess 12 as shown in FIGURE 1.

To obtain a wider magnetized surface for the elongated, flexible permanent magnet, the magnet may be constructed in accordance with the embodiment shown in FIGURE 3 wherein the magnet 40 is provided with two generally parallel recesses 42, 44 which recesses are substantially the same as the recess 32 shown in FIGURE 2. The upper flat surface 46 on the magnet 40 is provided with a plurality of alternate north and south magnetic poles coextensive with the magnet which poles combine to substantially increase the pulling force created by the magnet 40. To assure that sufficient permanent magnet material is provided to create the north and south magnetic poles on surface 46, the magnet 40 has a somewhat enlarged top portion 48 above the recesses 42, 44 which top portion has a sufficient thickness to allow magnetization of the upper surface 46 without causing substantial stray lines of force within the recesses 42, 44 which stray lines somewhat deter from the holding characteristics of the permanent magnet.

In some instances, it is desirable to obtain a flexible permanent magnet wherein the holding force at the edges thereof is greater than the holding force in the center or wherein the magnet is to be magnetized to the transverse edges. When this is desired, a magnet, such as elongated magnet 50 shown in FIGURE 4 may be provided which permanent magnet has a longitudinally extending recess 51 defining enlarged side portions 52, 54 and a thin top portion 56. Above the top portion 56, magnetized surface 58 is provided with transversely extending alternate north and south magnetic poles. The strength in the transverse direction of these poles is determined somewhat by the thickness of the material below the pole. Accordingly, since the thickness of the magnet at top portion 56 is less than the thickness of the magnet at the side portions 52, 54, the strength of the magnetic pole will be greater at the sides or edges than at the central portion. Of course, this is only true when the portion 56 has a thickness which does not allow natural flow of the flux lines completely through the material, i.e., the flux lines extend into the recess 51 and thus reduce the pull force above the recess. In addition, the poles extend to the very edge of the magnet which results in efficient utilization of the area of the magnetized surface.

FIGURE 5 illustrates an elongated permanent magnet 60 having a recess 62 and an enlarged top portion 64 which top portion is sufficiently large in thickness to allow flow the flux lines therein as indicated so that longitudinally extending north and south magnetic poles may be conveniently provided on the magnetized surface 66. In this manner, the width of the magnet may be reduced so that it can easily match a groove in the refrigerator cavity for reception of the magnet.

As so far described, the elongated permanent magnets are illustrated to be easily convertible in cross-section to obtain the necessary pole arrangement on the magnetized surface; however, in accordance with the present invention all of the permanent magnets are provided with a longitudinally extending recess on the side opposite from the magnetized surface and this characteristic of the

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elongated permanent magnet forms the essence of the present invention even though the modification of the permanent magnets to obtain the necessary pole arrangement is of some importance.

Referring now to FIGURE 6, there is illustrated the preferred embodiment of the present invention wherein elongated flexible magnet 30 is assembled onto an elongated resilient gasket 70 so that the gasket and magnet are mutually coextensive. In accordance with this embodiment of the present invention, the gasket 70 includes a mounting portion 72 which is adapted to be connected onto the door of a refrigerator or onto a similar cabinet structure in a manner commonly known in the art of producing gaskets for such cabinets. Between the magnet 30 and the mounting portion 72 there is provided an intermediate, accordion-like portion 74 which, in accordance with this embodiment of the invention, includes a tubular flexible portion which allows movement of the magnet 30 in a direction perpendicular to its upper flat, magnetized surface. To join the magnet onto the gasket 70, the gasket is provided with an integral mounting rib 76 which includes a web 78 extending through slot 14 and a head 80 received within the recess 32 and having a shape which corresponds to the shape of the recess and substantially fills the recess. The longitudinally extending head 80 is held within the recess 32 by the inherent non-compressibility of the plastic material forming the head 80. In order to lock the mounting rib in the recess 32, it is contemplated to provide an adhesive material between the rib and the recess although such adhesive is not always necessary.

It is appreciated that the gasket 70 may be extruded as a single plastic unit or it may be made as a composite unit without departing from the intended spirit and scope of the present invention. In some instances, the head 80 may be forced into the recess 32 in a direction transverse to the magnet 30; however, a more rigid joint is obtained by providing a rather large head with respect to the slot 14 so that the magnet is connected to the resilient gasket by sliding the magnet over the rib 76.

By constructing the joint between the gasket and magnet as illustrated in FIGURE 6, it is difficult to pull the magnet away from the gasket when pulling the magnet in a direction perpendicular to its upper magnetized surface. Consequently, in operation, the magnet is not easily removed from the gasket. The remainder of the description pertains to other embodiments whereby the elongated, flexible magnet is coupled onto the resilient gasket in a manner as disclosed in FIGURE 6 and including certain modifications or appliances which can be advantageously used with the permanent magnet and gasket assembly as shown in FIGURE 6.

Referring now to FIGURES 7 and 8, there is illustrated a modification of the resilient gasket 70 which enhances the sealing quality between the magnet and the gasket. In accordance with this embodiment of the present invention, the extruded gasket 70 is provided with oppositely extending sealing lips 82, 84 which, as shown in FIGURE 8, are adapted to be biased against the lower surface of magnet 30 when the magnet is secured onto the gasket 70. Another arrangement for sealing the joint between the gasket and the magnet is illustrated in FIGURE 9 wherein auxiliary shoulders 92, 94 are provided on the flexible magnet 30 and upwardly extending flanges 96, 98, which are integral with the gasket 70, are adapted to wrap around the shoulders 92, 94, respectively, to effectively seal the joint between the magnet and the gasket. It is appreciated that other such modifications of the preferred embodiment as shown in FIGURE 6 could be accomplished for improving the sealing qualities at the joint between the gasket and the flexible magnet.

Another embodiment of the present invention is illustrated in FIGURES 10 and 11 wherein the extruded, resilient gasket 100 includes intermediate lips 102, 104 terminating in contoured locking flanges 106, 108 respec-

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tively. The lips are joined at their lower ends by bottom wall 110 spaced slightly above a sealing flap 112. When the gasket 100 is used to support a flexible magnet, such as elongated magnet 30, onto a cabinet represented by elements 120, 122 in FIGURE 11, the sealing flap 112 is placed between the elements 120, 122, as is common in the art, and the mounting strip 124 is placed between the lips 102, 104 so that a screw 126 can secure the gasket 100 onto the cabinet. After so securing the gasket, the locking flanges 106, 108 are pressed, one after the other, through slot 14 into recess 32 or the locking flanges are held together and the magnet 30 is slipped longitudinally thereover. To enhance the holding qualities between the magnet and the gasket, it is within the contemplation of the present invention to provide an adhesive at the joint between the magnet and the gasket. The construction as shown in FIGURES 10 and 11 provides a convenient arrangement for securing the magnet onto the gasket and the outer appearance of the gasket-magnet assembly is continuous so that the flange joint within the magnet does not provide an unpleasing appearance.

Referring now to FIGURE 12, there is illustrated a further embodiment of the present invention wherein a gasket 130 is provided with a rib 132 adapted to be secured within the recess 32 of the flexible magnet 30. Cabinet elements 134, 136 are adapted to hold the gasket 130 by a holding strip 138 having oppositely extending flanges 140 adapted to engage a large shoulder 142 on one side of the gasket 30 and a smaller shoulder 144 on the opposite side of the gasket. The holding strip 138 is secured onto the cabinet elements 134, 136 by appropriate means such as a metal screw 146. In construction, the large shoulder 142, has a somewhat rectangular cross-section so that it is permanently locked between the flange 140 and the cabinet element 134. The smaller shoulder 144 has a somewhat tapered innermost portion and a rearward locking edge 148 so that the shoulder may be forced transversely under the flange 140 after the strip 138 has been secured onto the cabinet with the edge 148 holding the shoulder 144 in place.

After the magnet 30 has been secured onto the gasket 130, the gasket is secured onto the cabinet elements 134, 136 by first placing the larger shoulder 142 against the cabinet element 134 and then applying the holding strip 138 over the shoulder with the flange 140 securing the shoulder 142 against the cabinet element. Thereafter, the holding strip is tightened into its final position and the smaller shoulder 144 is forced transversely under the flange 140 until it snaps into place under the flange so that it is securely locked in place. It is appreciated that the relative size of the shoulders 142, 144 is not an important factor since the primary feature of this embodiment is that one shoulder can be secured onto the cabinet by the holding strip 138 and the other shoulder can be forced under the holding strip as a final assembly step. This provides a convenient arrangement for assembling the magnet onto the cabinet so that the magnetized surface of the magnet comes into contact with cabinet 150.

Referring now to FIGURE 13, there is illustrated a further embodiment of the present invention wherein the gasket 160 is adapted to support the elongated flexible magnet in a manner described previously in detail and the gasket includes a lower mounting portion 162 adapted to hold the gasket within a groove 164 in cabinet member 166. The mounting portion 162 is provided with outwardly extending barbs to prevent removal of the gasket from the groove and, in accordance with this illustrated embodiment of the invention, an adhesive may be placed within the groove 164 to assure that the gasket cannot be removed therefrom. As so far described, the magnet 30 may hold the member 166 against a ferro-magnetic base; however, when the base is not ferro-magnetic, such as base 168, a ferro-magnetic armature 170 is provided. This armature includes a mixture of iron powder dispersed throughout and embedded within a flexible binder

such as plasticized polyvinyl chloride. In accordance with the illustrated embodiment of the present invention, the armature has a mounting portion 172 secured into a groove 174 of base 168 in a manner similar to the connection between the mounting portion 162 and groove 164.

The provision of the longitudinally extending recess in the flexible magnet greatly improves the ability to secure abutting ends of adjacent magnets together in a manner to be hereinafter described in detail. To accomplish this joining operation, there is provided a fastener 180 as is shown in FIGURE 14 which fastener has barbed ends 182, 184. The barbed ends are so constructed that they can be forced into the recesses of adjacent permanent magnets so that they coact with the recesses to hold the magnets in abutting relationship. In the past, the abutting magnets had to be glued together because there was no structural element of the magnet which would lend itself to connecting abutting magnet ends.

Referring now to FIGURE 15, there is illustrated a fastener 190 having orthogonally positioned barbed ends 192, 194. As will be described in detail, this fastener is utilized for connecting mitered ends of the permanent magnet as is shown in FIGURES 17 and 18. In accordance with one embodiment of the invention, the barbed ends 192, 194 are provided with a crimped portion 196 as shown in FIGURE 16. The function of this crimped portion will be described hereinafter in more detail.

Referring now more particularly to FIGURES 17 and 18, the fastener 190 is positioned at the junction between two mitered gaskets 70 each of which have had the head 80 (see FIGURE 6) removed from the mounting rib 76 so that the fastener 190 can take the place of the head within the recess 32 of magnet 30. The magnets, with mitered ends, are shifted along the ribs 76 until the barbed ends 192, 194 are moved into recesses 32 as is shown in FIGURE 18 in which position the barbed ends lock the two mitered magnets together to form abutting joints between these magnets. It is appreciated that an adhesive may be provided on the barbed ends to increase the bond between the mitered magnets.

Referring now to FIGURE 19, a spliced joint between the barbed end 182 and the permanent magnet 30 is shown in detail. With the head 80 removed from rib 76, only the web 78 remains and this web engages the lower surface of end 182 to provide a seal between the magnet and the gasket 70. To increase the sealing qualities at the spliced joint, the crimped portion 196 is used in a manner shown in FIGURE 20 wherein the web 78 is extended inwardly a distance allowed by the crimped portion 196 so that a labyrinth seal is provided between the magnet and the gasket.

Since the permanent magnet is somewhat stiff in comparison with the resilient gasket 70, the recess 32 is not distorted as a force is applied perpendicular to the magnetized surface of the magnet. Consequently, the rib 76 is not easily removed from the recess by such a force. This is a primary aspect of the holding device constructed in accordance with the present invention.

The flexible magnet may be coated by spraying, dipping or other processes with a coloring agent so that the color of the magnet is compatible with the color of the cabinet on which it is mounted.

Various structural changes may be made in the preferred embodiment of the present invention as illustrated herein without departing from the intended spirit and scope of the present invention as defined in the appended claims.

Having thus described my invention, I claim:

1. In a closure device for first and second relatively movable members with said first member being formed from a ferro-magnetic material, said arrangement comprising an elongated, flexible permanent magnet with a smooth upper magnetized surface facing said first mem-

ber, an elongated gasket coextensive with said magnet and secured onto said second member and a means for securing said magnet onto said gasket, the improvement comprising: said means including a longitudinally extending recess in said magnet, said recess having at one side thereof two inwardly extending lips defining a slot coextensive with said recess, a longitudinally extending web protruding from said gasket through said slot, a rib having a cross-sectional shape matching said recess and attached onto said web, said rib being coextensive with said web and extending into said recess with said magnet surrounding said rib whereby the magnet is securely locked onto said rib.

2. The improvement as defined in claim 1 wherein said magnet is provided with longitudinally extending magnetic poles on said magnetized surface.

3. The improvement as defined in claim 1 wherein said magnet is provided with transversely extending magnetic poles on said magnetized surface with adjacent poles having opposite polarity.

4. The improvement as defined in claim 3 wherein said magnet has a center portion above said recess and side portions at each side of said recess, and the minimum dimension of said center portion being less than the minimum dimension of said side portion so that the magnetic attraction force adjacent said side portions is greater than the attraction force adjacent said center portion.

5. In a closure device for first and second relatively movable members with said first member being formed from a ferro-magnetic material, said arrangement comprising an elongated, flexible permanent magnet with a smooth upper magnetized surface facing said first member, an elongated gasket coextensive with said magnet and secured onto said second member and a means for securing said magnet onto said gasket, the improvement comprising: said means including a longitudinally extending rib protruding from said gasket into said recess with said magnet surrounding said rib, and means for locking said rib in said recess, said locking means including spaced shoulders on said magnet and coextensive with said recess, and shoulder receiving portions on said rib to interlock said rib and said magnet.

6. In a closure device for first and second relatively movable members with said first member being formed from a ferro-magnetic material, said arrangement comprising an elongated, flexible permanent magnet with a smooth upper magnetized surface facing said first member, an elongated gasket coextensive with said magnet and secured onto said second member and a means for securing said magnet onto said gasket, the improvement comprising: said means including a longitudinally extending recess in said magnet, a longitudinally extending rib protruding from said gasket into said recess with said magnet surrounding said rib, and means for locking said rib in said recess, said gasket having sealing lips extending outwardly from said rib, said sealing lips bearing against the under surface of said magnet.

7. In a closure device for first and second relatively movable members with said first member being formed from a ferro-magnetic material, said arrangement comprising an elongated, flexible permanent magnet with a smooth upper magnetized surface facing said first member, an elongated gasket coextensive with said magnet and secured onto said second member and a means for securing said magnet onto said gasket, the improvement comprising: said means including a longitudinally extending recess in said magnet, a longitudinally extending rib protruding from said gasket into said recess with said magnet surrounding said rib, and means for locking said rib in said recess, said gasket having spaced intermediate lips connected by a mounting wall, each of said lips having a locking flange at the edge spaced from said mounting wall, said locking flanges of each lip being coactable to form said rib.

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8. In a closure device for first and second relatively movable members with said first member being formed from a ferro-magnetic material, said arrangement comprising an elongated, flexible permanent magnet with a smooth upper magnetized surface facing said first member, an elongated gasket coextensive with said magnet and secured onto said second member and a means for securing said magnet onto said gasket, the improvement comprising: said means including a longitudinally extending recess in said magnet, a longitudinally extending rib protruding from said gasket into said recess with said magnet surrounding said rib, and means for locking said rib in said recess, said gasket having two spaced, parallel shoulders on opposite sides of said rib, a plate means for securing one of said shoulders onto said second member, said plate means having a flange parallel to the other shoulder and spaced from said second member, and said other shoulder having a contoured cross-section to allow insertion of said other shoulder between said flange and said second member.

9. The improvement as defined in claim 8 wherein said cross-section of said other shoulder is somewhat inclined toward said flange and has a rearward locking edge to lock the other shoulder under said flange.

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REINALDO P. MACHADO, *Primary Examiner*.

HARRISON R. MOSELEY, *Examiner*.