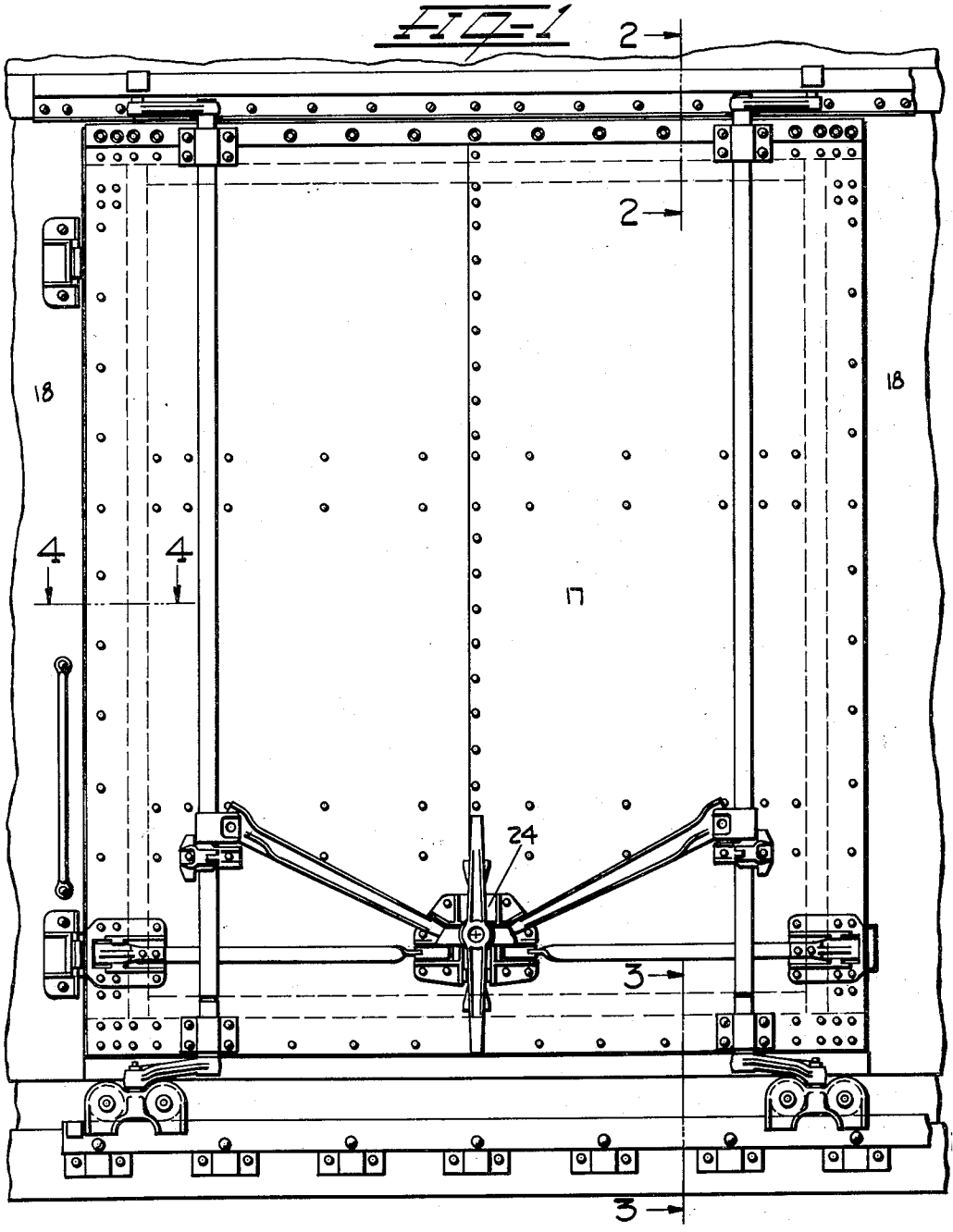
July 25, 1961 W. A. BEAUCHAMP 2,993,243

EXTRUDED GASKETS FOR LATERALLY MOVABLE DOORS OF RAILWAY CARS

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FIG. 1



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FIG. 2

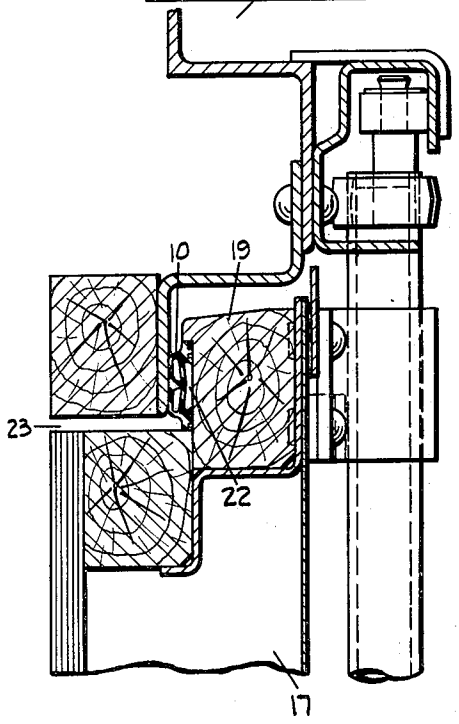


FIG. 3

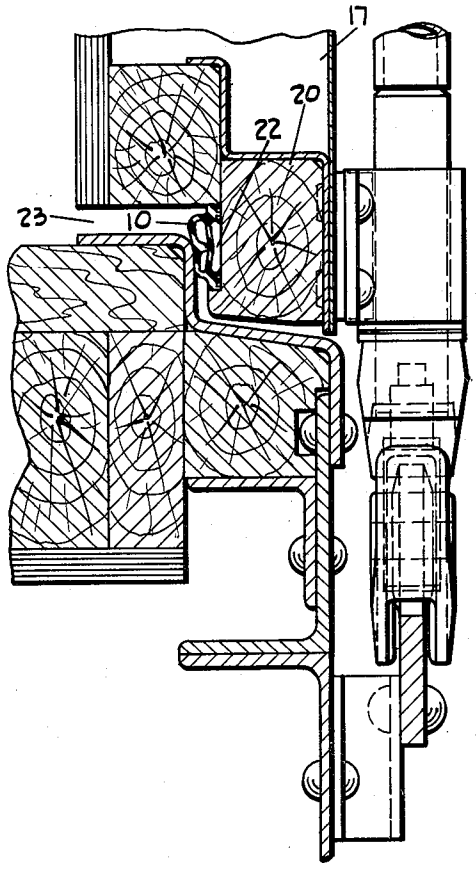
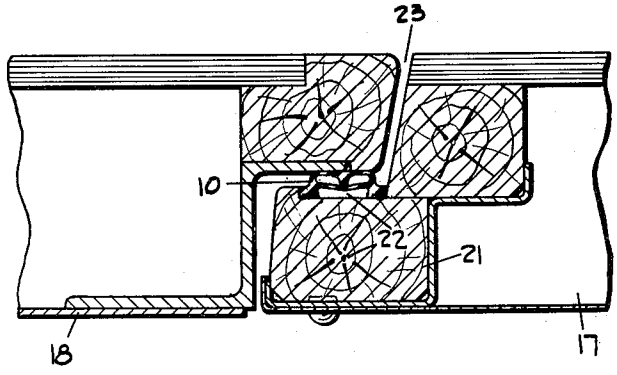


FIG. 4



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FIG 5

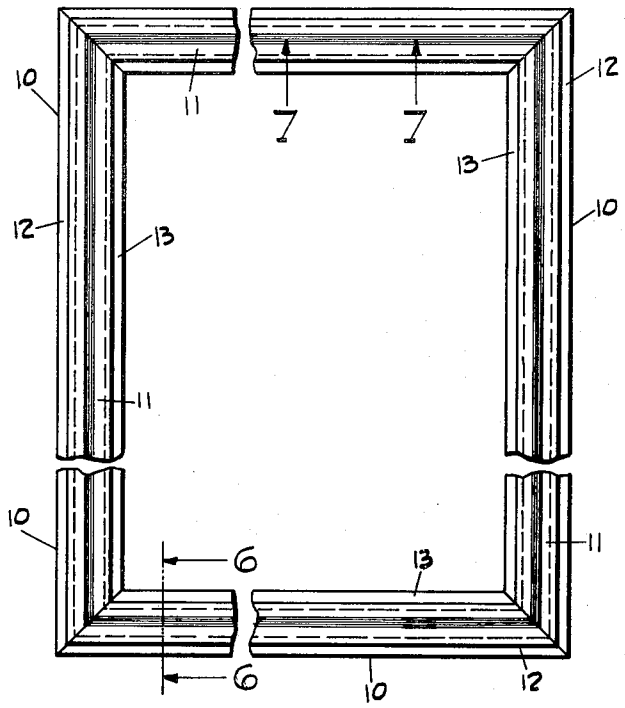


FIG 6

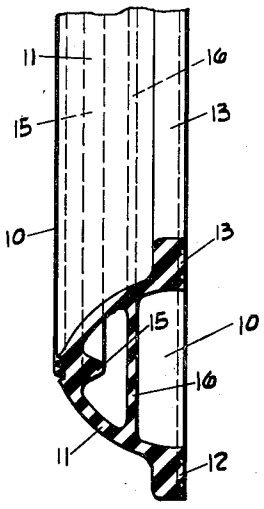


FIG 7

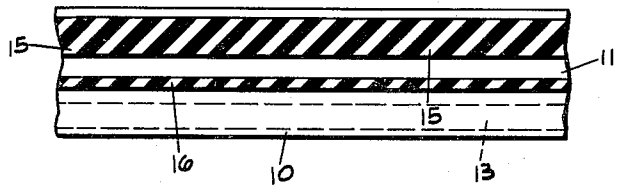
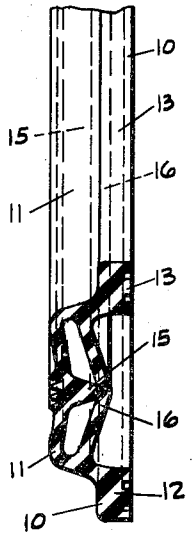


FIG 8



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United States Patent Office 2,993,243 Patented July 25, 1961

2,993,243

EXTRUDED GASKETS FOR LATERALLY MOVABLE DOORS OF RAILWAY CARS

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Filed Dec. 16, 1958, Ser. No. 780,741
4 Claims. (Cl. 20—69)

This invention relates to extruded gaskets formed of rubber or the like for laterally movable doors of railway cars.

It is an object of this invention to provide gaskets for laterally movable doors of railway cars wherein the gaskets shall be made of rubber or the like and so designed as to be capable of being formed by an extrusion process and characterized by their ability to resist permanent set.

A further object is to provide extruded gaskets for laterally movable doors of railway cars wherein the gaskets shall be formed of rubber or the like and so constructed as to insure continuous contact of the gaskets when they are compressed.

A further object is to provide extruded gaskets for laterally movable doors of railway cars wherein the gaskets shall be formed of rubber or the like and so constructed as to offer minimum resistance to compression during the first part of the final closing movement of the doors and increased resistance to compression during the last part of the final closing movement of the doors.

A further object is to provide extruded gaskets for laterally movable doors of railway cars wherein the gaskets shall be formed of rubber or the like and embody means which shall be placed in tension when the gaskets are compressed and act upon the gaskets to substantially minimize permanent set thereof.

Other objects of the invention will become clear as the description thereof proceeds.

In the drawings forming part of this specification:

FIG. 1 is a fragmentary elevation of a railway refrigerator car having a laterally movable door equipped with a gasket embodying the instant invention.

FIG. 2 is a vertical section taken on line 2—2 of FIG. 1.

FIG. 3 is a vertical section taken on line 3—3 of FIG. 1.

FIG. 4 is a horizontal section taken on line 4—4 of FIG. 1.

FIG. 5 is a plan view of a gasket embodying the instant invention, parts thereof being broken away.

FIG. 6 is a vertical section taken on line 6—6 of FIG. 5.

FIG. 7 is a horizontal section taken on line 7—7 of FIG. 5.

FIG. 8 is a vertical section showing a gasket embodying the instant invention under compression.

The numeral 10 designates a gasket embodying the instant invention which because of its contemplated use is rectangular in shape. The gasket 10 includes a curved or arched body 11. From the lower ends of the body and extending in opposite directions therefrom the gasket provides flanges 12 and 13 through which nails (not shown) are driven to secure the gasket in position upon laterally movable doors of railway cars. At the top of the body 11 and disposed inwardly thereof the gasket is provided with a longitudinally extending rib 15. Below the rib 15 and in spaced relation thereto the gasket carries a web 16 which is preferably located in the plane where flexure of the body occurs when the gasket is subjected to compression. As indicated in FIG. 7 of the drawings both the rib 15 and the web 16 are preferably continuous.

The gasket is designed more particularly for application to laterally movable doors of railway cars. Such

a door is indicated at 17 mounted upon a railway refrigerator car 18. The door 17 may be of any desired construction and as shown includes upper and lower horizontal wooden rails 19 and 20 and front and rear vertical stiles, one of which is indicated at 21. The stiles and rails are formed with a continuously extending rectangular groove 22 within which the gasket of the instant invention is seated and by which it is retained in position. When seated within the groove the gasket is nailed to the stiles and rails in order to secure it within the groove.

To impart lateral movement to the door 17 into and out of the door opening 23 formed in the car 18, mechanism indicated generally by the refernece numeral 24 is provided. This mechanism is fully described and claimed in applicant's Patent No. 2,658,243, granted November 10, 1953, which is incorporated herein by reference. This mechanism provides a large mechanical advantage in order to impart final lateral movement to the door. The pressure which it exerts upon the door and hence the pressure tending to compress the gasket of the instant invention against the door frame of the car is approximately 1500#. FIGS. 2, 3 and 4 of the drawings make it clear that when the door has been moved laterally into the door opening the inner face of the door lies flush with the inside of the side wall of the car.

During the first part of the final lateral movement of the door into the door opening the gasket is readily compressed so as to insure its continuous contact with the door frame of the car regardless of any irregularities which might be found in the door frame. At the conclusion of this lateral movement the continued lateral movement of the door into the door opening will bring the rib 15 into engagement with the web 16. Whereupon resistance of the gasket to compression is increased. This increased resistance insures that the gasket will remain in firm contact with the door frame after the door has been fully sealed in the door opening.

The engagement between the rib 15 and the web 16 and the continued compression of the gasket during the latter part of its final lateral movement into the door opening causes the web 16 to bow downwardly so as to place it in tension. Accordingly when the compressive force is removed from the gasket the web 16 returns to its normal position and in so doing restores the body 11 to its original contour. The normal tendency of the body 11 to take a permanent set under the application of compressive forces upon it is thereby substantially minimized and the effectiveness of the gasket as a sealing member is materially increased.

It will be apparent that numerous changes and modifications in the details of the invention will be clear to those skilled in the art. It is intended, therefore, that all such modifications and changes be comprehended within this invention which is to be limited only by the scope of the claims appended hereto.

I claim:

1. An extruded gasket formed of rubber or the like for laterally movable doors of railway cars, having a curved body, a base comprising securing flanges extending laterally outwardly from the sides of said body, and a resilient web extending across and along said body, said web lying above said base and substantially in the plane of flexure of said body when said gasket is compressed, said body engaging and stretching said web crosswise of said body when said body is compressed, said web resuming substantially its original condition and acting upon said body to restore the latter substantially to its original shape when said body is relieved from compression.

2. An extruded gasket formed of rubber or the like for laterally movable doors of railway cars comprising a curved body, securing flanges extending from said body,

and a resilient web extending across and along said body, said web lying substantially in the plane of flexure of said body when said gasket is compressed, and means extending along and downwardly from said body above said web, said means engaging and stretching said web crosswise of said body when said body is compressed, said web being relieved from the action of said means and resuming substantially its original condition and acting upon said body to restore the latter substantially to its original shape when said body is relieved from compression.

3. The combination defined in claim 2 wherein said means is a rib integral with said body.

4. An extruded gasket formed of rubber or the like for laterally movable doors of railway cars comprising a curved body, securing flanges extending from said body, and a resilient web extending across and along said body, said web lying substantially in the plane of flexure of said body when said gasket is compressed, and means extending along and downwardly from said body above said web, said means terminating in spaced relationship to said web, said means engaging and stretching said web crosswise of said body when said body is compressed, said means becoming disengaged from said web and said web resuming substantially its original condition and acting upon said body to restore the latter substantially to its original shape when said body is relieved from compression.

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