March 22, 1955 J. R. ETLAR 2,704,574

DOOR SEAL

Filed July 14, 1954 2 Sheets-Sheet 1

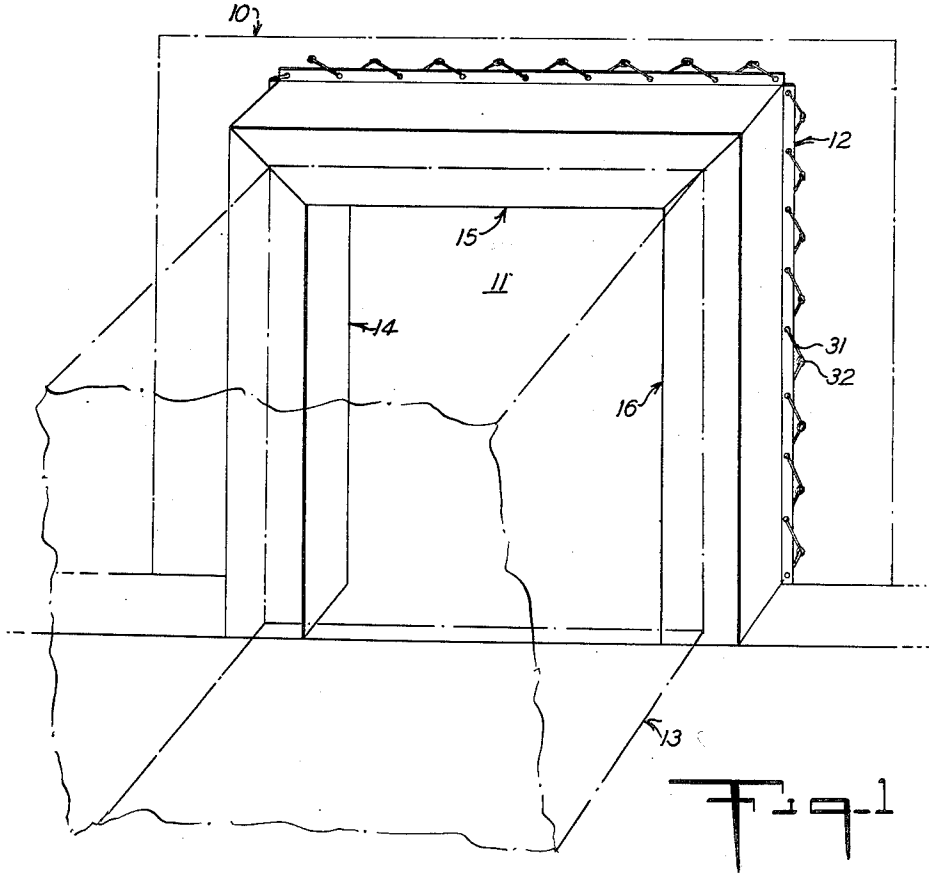


Fig. 1

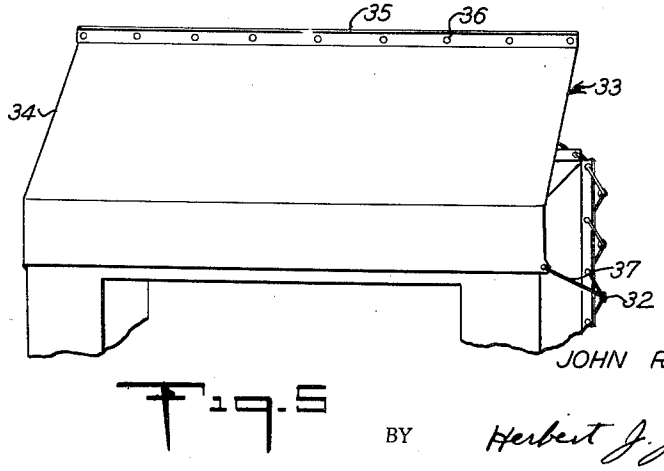


Fig. 5

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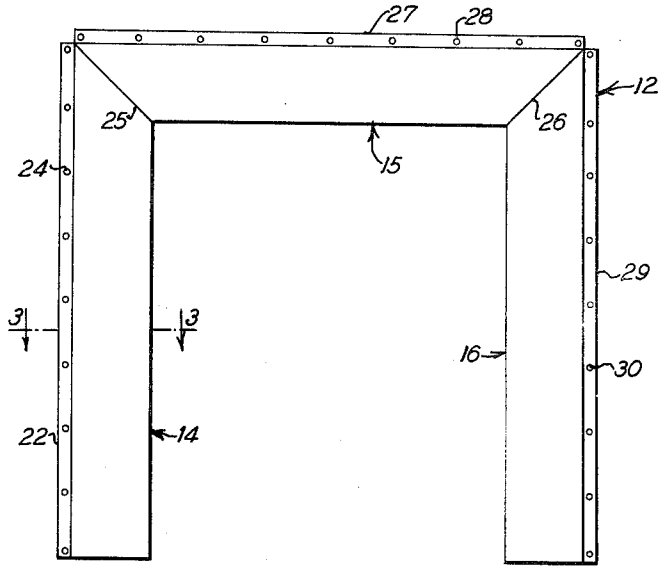


Fig. 2

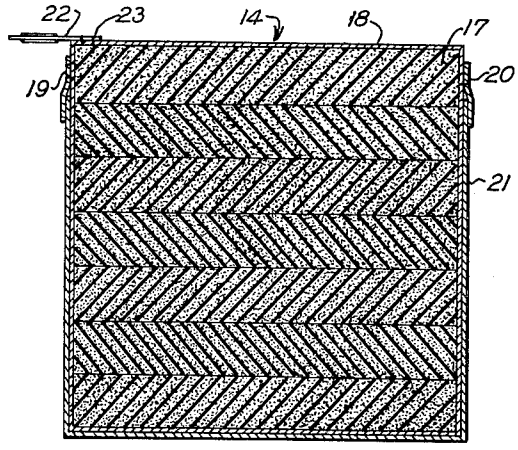


Fig. 3

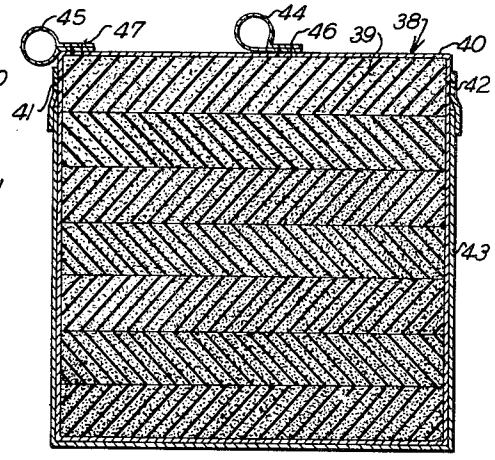


Fig. 4

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2,704,574

DOOR SEAL

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Application July 14, 1954, Serial No. 443,311

9 Claims. (Cl. 160—127)

This invention relates to building construction and more particularly to a structure to be applied to a building adjacent a door opening and adapted to cooperate with the body of a truck or other similar vehicle disposed adjacent the building for discharging or receiving merchandise through the door opening.

As is well known, warehouses and the like which are provided with relatively large door openings for accommodating trucks or other vehicles during the loading or discharging of merchandise therefrom, are particularly difficult to keep well heated in view of the leakage of air around the door opening, since the same must be open when the truck is in loading or discharging position, and heretofore no means has been provided for effectively sealing this opening. As a result such warehouses or buildings during the winter months are frequently subjected to an interior temperature considerably below that which is at all comfortable for the persons working therein. Consequently any means which will permit an exclusion of the elements and cold air from the outside, thus permitting reasonably comfortable temperatures within the building or warehouse, is obviously a step forward in the art.

It is accordingly an object of this invention to provide a structure for sealing the opening around the door of a building such as a warehouse, which structure cooperates with the body of a truck or other vehicle in order to seal such opening.

A further object of the invention is the provision of a structure for cooperating with a truck or other vehicle to seal the opening around a door in a warehouse or other building, which structure may be conveniently applied to the building or removed at will depending upon whether it is necessary to seal such opening against the entrance of air from the outside.

A still further object of the invention is the provision of a structure for attachment to the wall of a building or warehouse adjacent a door opening therein, which structure is adapted to cooperate with the body of a truck or other vehicle to prevent entry of outside air to the building, such structure being compressible to adapt the same to various contours of truck or vehicle bodies, and likewise providing means for facilitating the renewal of portions thereof which are subjected to greatest wear.

Another object of the invention is the provision of a structure for attachment to the wall of a building or warehouse adjacent a door opening therein, which structure is designed to cooperate with the body of a truck to prohibit the entrance of air from the outside, and in which the sealing structure may be installed without material modification of the building structure.

A further object of the invention is the provision of a structure to be attached to the wall of a building or warehouse adjacent a door opening therein to cooperate with a truck body in sealing against the entrance of air from without, which structure may be conveniently and economically manufactured from readily available materials without requiring the use of highly skilled labor, thus maintaining the cost of manufacture at a minimum.

Further objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawings wherein:

Fig. 1 is a view in perspective showing the door sealing structure of this invention applied to a building wall which is shown in dotted outline, and also the manner

in which the structure cooperates with a truck body which is also shown in dotted outline;

Fig. 2, an elevational view of the door sealing structure constructed in accordance with this invention;

Fig. 3, a sectional view on the line 3—3 of Fig. 2;

Fig. 4, a sectional view similar to Fig. 3 but showing a modified form of the invention; and

Fig. 5, a fragmentary view in perspective showing a canopy utilized to prevent entry of rain or snow at the upper portion of the door sealing structure.

With continued reference to the drawing there is shown in Fig. 1 the wall of a building **10** which may be provided with a door opening **11**, and around this opening there is installed the door sealing structure **12** of this invention. The structure **12** is designed to cooperate with the rear edge of a truck body **13** in order to seal the opening **11** and prevent entry of air from the exterior of the building in a manner to be later described.

As best shown in Figs. 2 and 3, the door seal **12** of this invention is constructed in three sections, **14**, **15** and **16**, which may be installed around three sides of the door opening **11** and each of these sections is identical except for length and the manner of finishing the ends thereof.

The section **14** may be constructed as shown in Fig. 3, in which a plurality of layers **17** of foam rubber or other suitable compressible material are encased in a fabric tube or casing **18**, which may be secured around the foam rubber fillers **17** in any desired manner. The casing **18** is provided at opposite sides thereof with tabs **19** and **20** which may be secured to the casing **18** by stitching or in any other suitable manner, and these tabs serve to provide a securing means for attaching a wear casing **21** which may be of the same fabric as the casing **18** or may be of other suitable abrasion-resistant fabric. The wear casing **21** may be secured to the tabs **20** by lacing, not shown, or by any other suitable means and obviously as the wear casing **21** becomes worn or otherwise damaged, the same may be conveniently replaced by releasing the attaching means and securing a new casing in place to the tabs **19** and **20**.

The section **14** is likewise provided with a laterally extending securing strip **22** which may be attached to the casing **18** by stitching **23** or other suitable means, and the strip **22** is provided with a plurality of grommets **24** which serve to provide a convenient means for facilitating securing of the section **14** to the wall **10** of the building.

As shown in Fig. 2 the section **14** is provided at the upper end thereof with a beveled end wall **25** which is designed to cooperate with a beveled end wall on the end of section **15**, and likewise cooperating beveled end walls on the opposite end of section **15** and the upper end of section **16** permit installation of the three sections **14**, **15** and **16** around the three sides of the door opening **11**. The sections **15** and **16** are constructed in exactly the same manner as section **14** described above, and section **15** will be provided with an attaching strip **27** having grommets **28** therein, and likewise section **16** will be provided with an attaching strip **29** having grommets **30** therein.

As shown in Fig. 1, the sections **14**, **15** and **16** may be attached to the wall **10** of the building by a flexible member **31** threaded through the grommets **24**, **28** and **30**, and engaging hooks or other suitable fastening means **32** extending from the wall **10** of the building. It will thus be seen that the sections **14**, **15** and **16** may be conveniently installed on the wall of the building or removed therefrom and obviously no alteration of the building wall is required except the installation of the fastening means **32**.

With the sections **14**, **15** and **16** installed on the wall **10** of the building as shown in Fig. 1, it is only necessary for a truck to back up to the door opening **11** until the rear edges of the truck body **13** contact the outer sides of the sections **14**, **15** and **16** and compress the foam rubber fillers **17** which will, of course, accommodate the sections to irregularities in the edges of the truck body **13** and will thus provide a substantially air-tight seal around the door opening **11**. The structure will automatically operate to provide such a sealing func-

tion, and obviously no manual manipulations are required in order to accomplish this result.

Since there may be leakage of rain or snow around the upper section **15** between the rear portion of the same and the wall **10** of the building, as shown in Fig. 5 there may be provided a canopy **33** which may take the form of a sheet of fabric **34** of substantially the same length as the section **15**, which sheet of fabric may be provided with an attaching strip **35** having suitable fastening means **36** which permit convenient attachment of the same to the wall **10** of the building. The canopy **33** extends downwardly and over the outer side of the section **15** and may be secured in place at the ends thereof by a flexible member **37** which may also be secured to the fastening means **32** projecting from the wall **10** of the building. The canopy **33** thus provides an efficient means for preventing leakage of rain or snow between the section **15** and the wall of the building, since the canopy **33** is in the nature of an inclined roof section which will act to shed such rain and snow.

A slightly modified form of the invention is shown in Fig. 4, in which a section **38** may include the same filler pieces or blocks **39** of foam rubber or other suitable material enclosed in a fabric casing **40** in the same manner as described above in connection with the construction of section **14**. Likewise there will be provided securing tabs **41** and **42** for attaching a wear casing **43** in the same manner as described in connection with section **14**.

The casing **39** of section **38** may be provided with loops **44** and **45** of fabric material which may be secured to the casing **40** by stitching **46** and **47** or other suitable means, and these loops **44** and **45** may extend throughout the entire length of the section **38** or may be secured thereto at spaced intervals. The loops **44** and **45** serve to receive pipes or rods, not shown, which in turn would be secured to the wall of the building by suitable pipe clamps and which structure would serve to conveniently and removably secure the section **38** to the wall of the building. This would provide a more rigid attaching structure than that provided by the lacing shown in Fig. 1, and might in some instances be more desirable.

It will be seen that by the above described invention there has been provided a relatively simple yet highly efficient door seal structure which will permit loading or unloading of a truck parked adjacent the door opening of a warehouse or other building, and which at the same time will prevent entry of air or rain and snow to the interior of the building, but without in any way requiring substantial modification or alteration of the building. Furthermore, the structure is one which accommodates itself automatially to varying contours of the rear edge of the truck body and no manual operations are required to effect the sealing operation other than the ordinary parking of the truck in alignment with the door opening. The structure may be easily applied or removed from the building, and consequently it need only be utilized during the winter months or during inclement weather.

It will be obvious to those skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof, and therefore the invention is not limited by that which is shown in the drawings and described in the specification, but only as indicated in the appended claims.

What is claimed is:

1. A sealing structure for cooperating with the rear edge of a truck body to seal around a door opening in a building, such structure comprising a plurality of elongated sections removably secured to the wall of the building around the door opening, each section comprising an elongated tubular fabric casing filled with slabs of foam rubber, a fabric wear casing removably secured to said tubular casing and extending around a portion of the outer surface thereof, an attaching strip secured to said tubular casing and extending laterally therefrom and grommets in said strip for receiving a flexible element for attaching the section to the wall of the building.

2. A sealing structure as defined in claim 1 in which a canopy is provided over the upper section extending across the upper side of the door opening, said canopy comprising a strip of fabric material detachably secured to the wall of the building and extending outwardly and downwardly over the outer edge of the upper sealing section and secured to the wall of the building by a flexible element.

3. A sealing structure for cooperating with the rear edge of a truck body to seal around a door opening in a building, said structure comprising a plurality of elongated sections removably secured to the wall of the building around the door opening, each section comprising an elongated tubular fabric casing filled with foam rubber, a fabric wear casing removably secured to said tubular casing and extending around a portion of the outer surface thereof, an attaching strip secured to said tubular casing and extending laterally therefrom and grommets in said strip for receiving a flexible element for attaching the section to the wall of the building.

4. A sealing structure for cooperating with the rear edge of a truck body to seal around a door opening in a building, said structure comprising a plurality of elongated sections removably secured to the wall of the building around the door opening, each section comprising an elongated tubular fabric casing filled with yieldable material, a fabric wear casing removably secured to said tubular casing and extending around a portion of the outer surface thereof, an attaching strip secured to said tubular casing and extending laterally therefrom and grommets in said strip for receiving a flexible element for attaching the section to the wall of the building.

5. A sealing structure for cooperating with the rear edge of a truck body to seal around a door opening in a building, said structure comprising a plurality of elongated sections removably secured to the wall of the building around the door opening, each section comprising an elongated tubular flexible casing filled with yieldable material, a flexible wear casing removably secured to said tubular casing and extending around a portion of the outer surface thereof, an attaching strip secured to said tubular casing and extending laterally therefrom and grommets in said strip for receiving a flexible element for attaching the section to the wall of the building.

6. A sealing structure for cooperating with the rear edge of a truck body to seal around a door opening in a building, said structure comprising a plurality of elongated sections removably secured to the wall of the building around the door opening, each section comprising an elongated tubular flexible casing filled with yieldable material, a flexible wear casing removably secured to said tubular casing and extending around a portion of the outer surface thereof, an attaching strip secured to said tubular casing and extending laterally therefrom and means on said strip for detachably securing the section to the wall of the building.

7. A sealing structure for cooperating with the rear edge of a truck body to seal around a door opening in a building, said structure comprising a plurality of elongated sections removably secured to the wall of the building around the door opening, each section comprising an elongated tubular flexible casing filled with yieldable material, a flexible wear casing removably secured to said tubular casing and extending around a portion of the outer surface thereof and means on said tubular casing for detachably securing the same to the wall of the building.

8. A sealing structure as defined in claim 7 in which the means for detachably securing the casing to the wall of the building comprises vertically spaced loops on said tubular casing for receiving an elongated member secured to the wall of the building thereby securing said tubular casing to the wall of the building.

9. A sealing structure as defined in claim 8 in which the means for detachably securing the tubular casing to the wall of the building comprises members on said tubular casing for receiving an elongated member secured to the wall of the building.

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