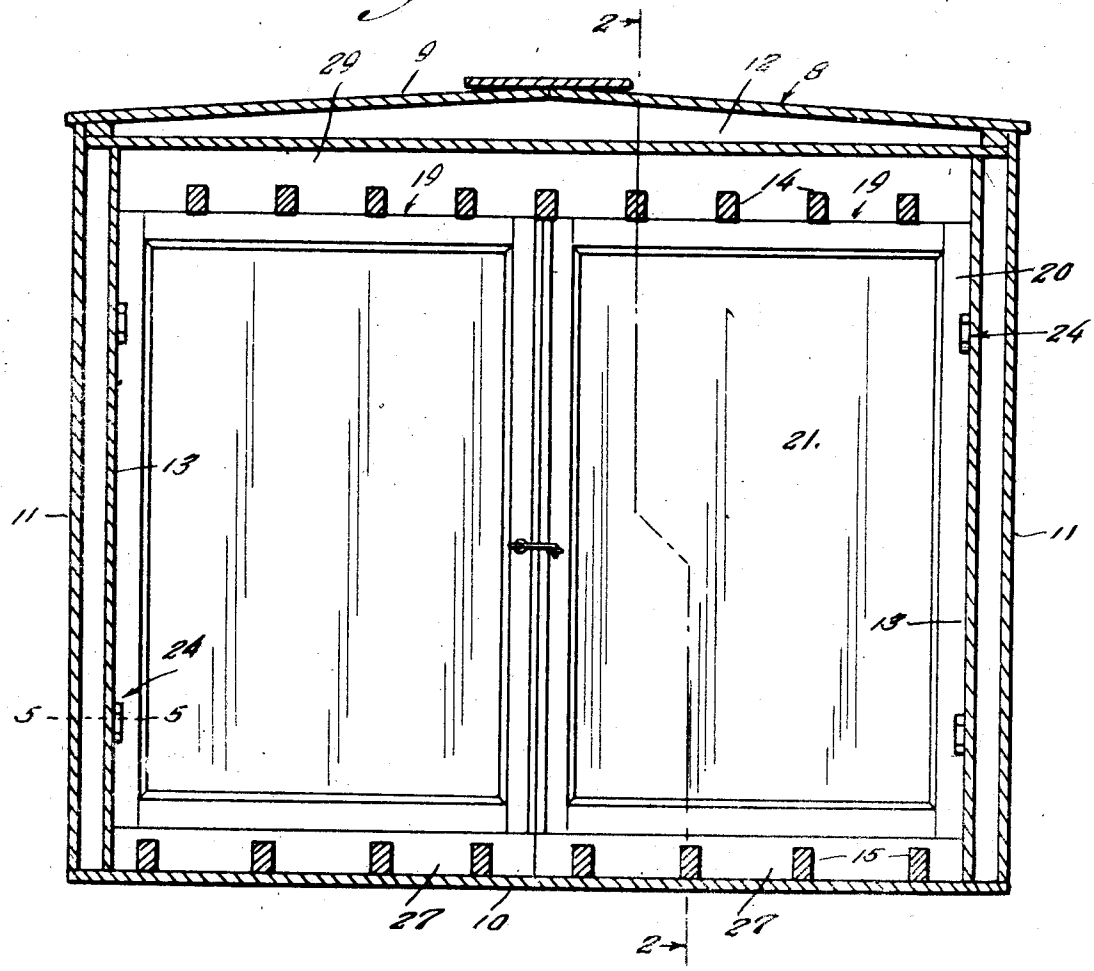
Feb. 7, 1933. M. A. MacMILLAN 1,896,198

REFRIGERATOR CAR DIVIDER

Filed March 30, 1932 3 Sheets-Sheet 1

Fig. 1.



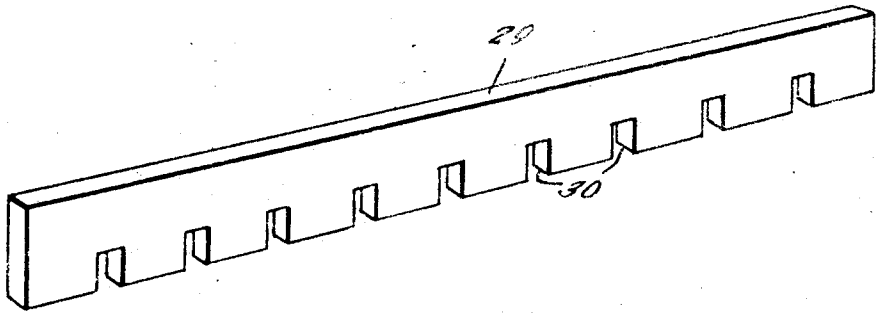


Fig. 6.

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REFRIGERATOR CAR DIVIDER

Filed March 30, 1932 3 Sheets-Sheet 2

Fig. 2.

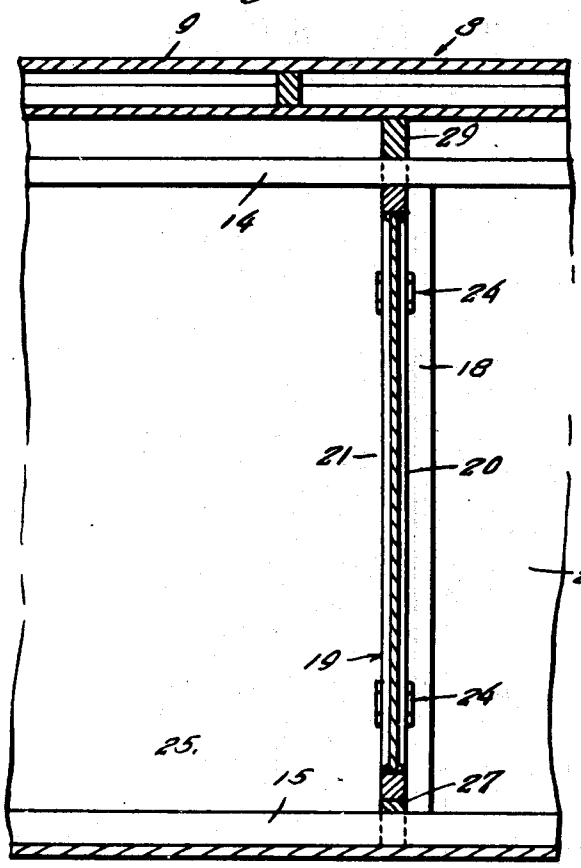


Fig. 3.

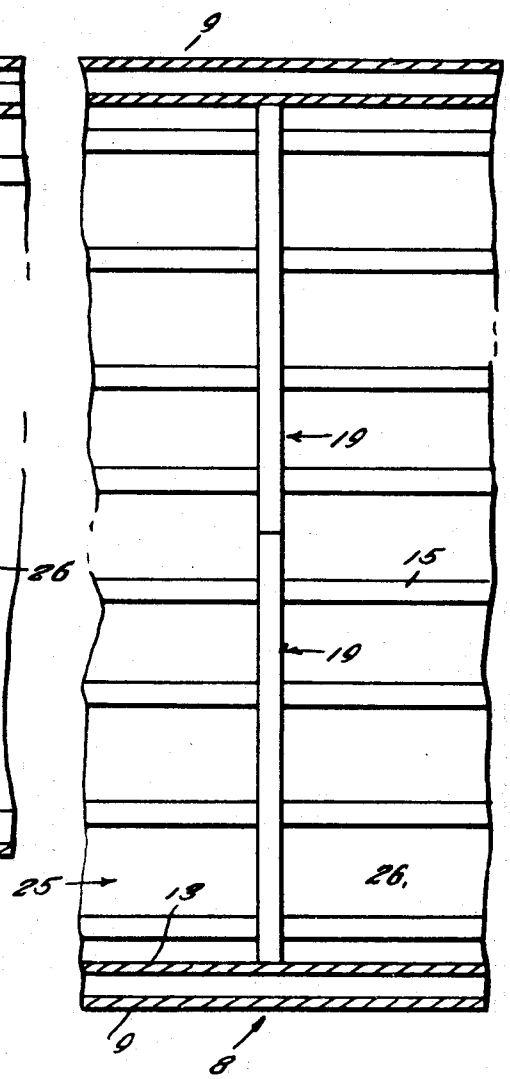
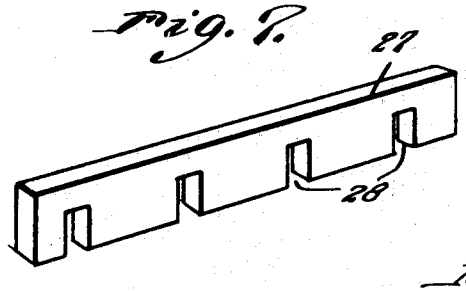


Fig. 5.



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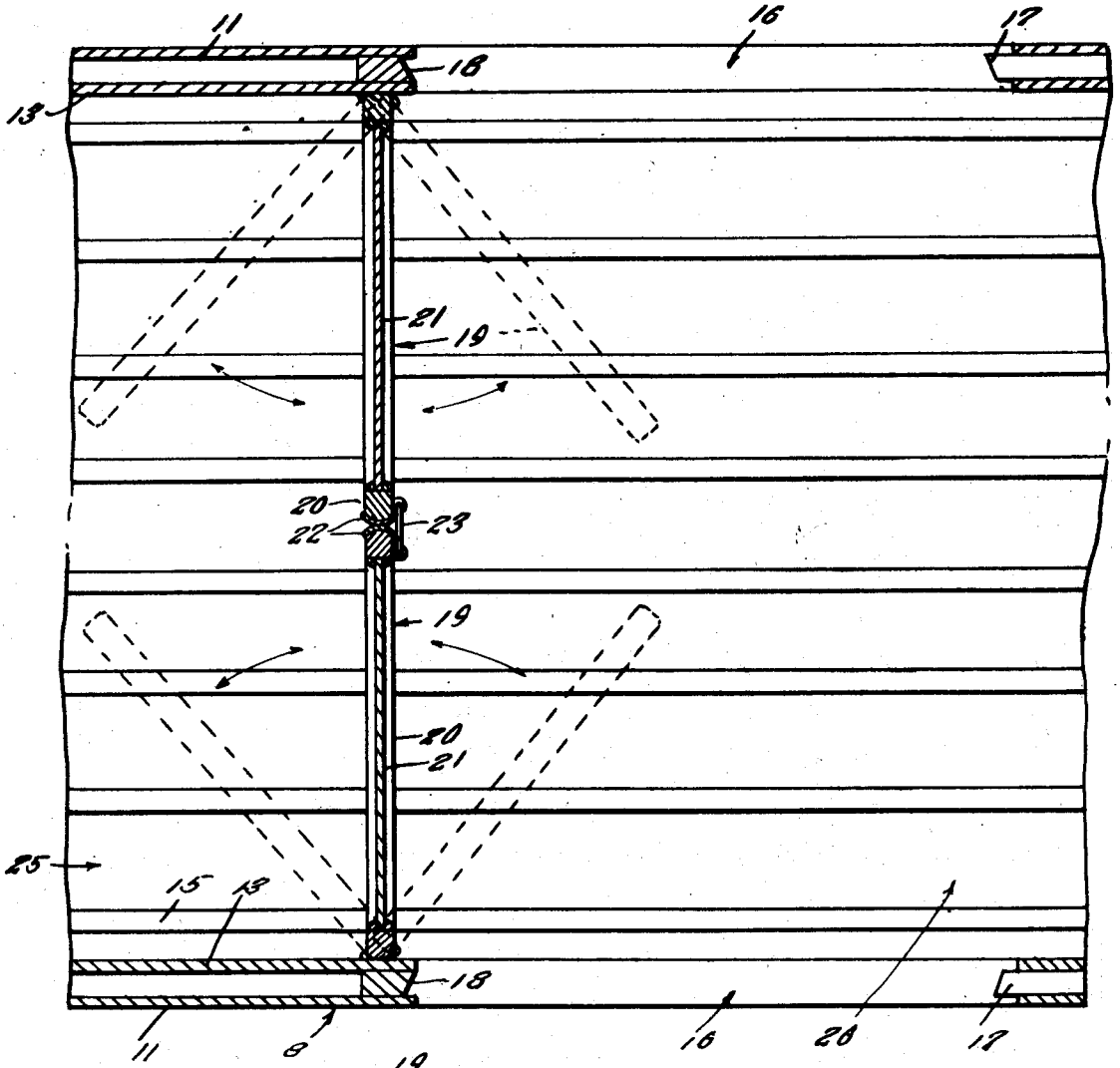
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REFRIGERATOR CAR DIVIDER

Filed March 30, 1932 3 Sheets-Sheet 3

Fig. 4.



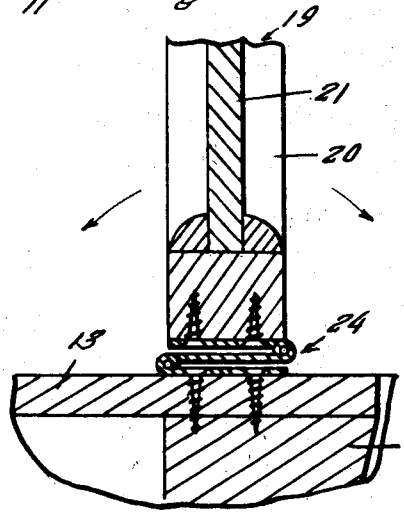


Fig. 5.

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UNITED STATES PATENT OFFICE

MURDOCH A. MacMILLAN, OF CHICAGO, ILLINOIS

REFRIGERATOR CAR DIVIDER

Application filed March 30, 1932. Serial No. 602,075.

This invention relates to that class of inventions having to do with the construction of refrigerator and freight car partitioning means, and has more specific reference to a novel transverse divider provided for separating the interior of the car into distinguishable compartments.

The purpose of the invention is to provide a partitioning structure comprising a pair of companion doors applicable to the car without requiring structural alterations in the existing stock parts, whereby to provide a simple, economical and efficient arrangement capable of fulfilling the requirements of an invention of this class in a highly satisfactory and practical manner.

It is a matter of common knowledge to those familiar with the transportation and refrigeration car industry that considerable expense is attached to the efficient handling of commodities, particularly perishable foods. Ineffective refrigeration in warm weather subjects perishable foods to rapid deterioration while in cold weather the lack of proper protection on the interior of the car promotes spoilage when the foods become frostbitten or frozen.

My idea is to provide a simple and effective double door partitioning device located at a point near the customary side door so as to permit the perishable food to be isolated in the special compartment thus provided for sake of protection.

It is also well known that considerable time is consumed and required in loading the cars and to expedite loading and unloading it is customary for the attendant to leave the side doors completely open. Obviously then in warm weather this results in damage to the goods because of the lack of sufficient refrigeration, while in cold weather this practice promotes undue and premature damage to the goods by unnecessary exposure to the elements.

To give requisite refrigeration to the readily perishable goods, it has long been the practice of carriers to ice one end of the car into which the highly perishable commodities are placed, using heavy loads of salt, and to use no salt and only a medium quantity of ice, or none at all, in the other end of the car where the less highly perishable freight is loaded. Manifestly however, it has been found in practical experience that the air in both ends of the car is so conditioned and loaded to practically equalize itself so that fresh meats and the like do not receive the requisite degree of refrigeration and protection and the fresh vegetables are likely to become frozen if by the same token in winter weather when one end of the car is iced to assist in an even temperature, freezing damage to certain commodities results.

It is evident therefore that there is a dire need for the provision of means to overcome these faulty conditions. Hence it is the object of this invention to provide a pair of complemental doors mounted on double acting spring-closed hinges, permitting the doors to swing closed and remain closed.

Secondly, it is the object of the invention to provide a partitioning door arrangement of the aforesaid character wherein the doors may be attached to the existing doorposts for the usual side doors of the car, making it unnecessary to damage the insulation walls on the interior of the car, thus simplifying the arrangement and insuring proper protection even when the side doors are allowed to remain open all day long, as they frequently are under present loading practices.

Other features and advantages of the invention will become more readily apparent from the following description and drawings.

In the drawings:

Figure 1 is a transverse vertical sectional view through a conventional refrigerator car showing the partitioning door assembly installed.

Figure 2 is a view at right angles, the section being taken approximately on the plane of the line 2—2 of Figure 1.

Figure 3 is a fragmentary plan view with the upper ceiling portion of the car removed.

Figure 4 is a central horizontal sectional view through Figure 1.

Figure 5 is a horizontal detail section on the line 5—5 of Figure 1.

Figures 6 and 7 are perspective views of certain details.

Referring now to the drawings by distinguishing detail reference characters it will be observed that the numeral 8 designates a conventional refrigerator car including the customary roof 9, bottom 10, and side walls 11. On the interior of the car is the usual ceiling 12 and inner wall 13, these being of customary insulation material.

The usual horizontal spaced parallel top rails are denoted by the numerals 14 while the floor runners or rails are indicated at 15. Then too, as seen in Figure 4, the side car door openings are represented at 16, the doors at 17, said doors being mounted in customary frame structures and each frame structure including a vertical post 18 which posts are used for supporting the supplementary partitioning doors 19.

Each door comprises a suitable marginal frame 20 having a panel of insulation material. The abutting members of the door frames are provided with canvas buffers 22 and at this point I provide a suitable latch or fastener 23. Referring to Figure 5 it will be seen that the numerals 24 designate double acting spring equipped hinges which are utilized for attaching the outer ends of the doors to the existing posts 18, and as before stated, this obviates the necessity of altering the car on the interior and makes it totally unnecessary to puncture or damage the insulation walls on the interior of the car.

The double acting spring hinge arrangement allows the doors to swing in either direction as shown in dotted lines in Figure 4. Moreover, it maintains the doors normally closed so that they automatically close as the attendant passes from the special storage compartment 25 into the unprotected storage compartment 26 and vice versa. By positioning the doors 19 at the point illustrated in Figure 4, the goods in the compartment 25 are isolated from the compartment 26 and protected whether the side doors 17 are open or closed.

The numerals 27 designate floor cleats having notches 28 to fit over the floor rails 15 to provide sills for the doors and to effect the desired closure at this point. A similar header strip or cleat is denoted at 29 this having notches 30 to fit over the top rails 14 as seen in Figure 1 whereby to close the space between the upper edges of the doors and the ceiling of the car. Consequently when the partitioning doors are closed, an effective closure for the compartment 25 is insured.

I also wish to emphasize the fact that the hinged ends of the doors bear an intimate contact with the interior insulation walls of the car. Taking into consideration the many disadvantages resulting from the objections pointed out in introductory portions of the description and comparing the ordinary partitionless refrigerator car with one equipped with the improved partitioning door arrangement it will be evident that the latter arrangement is both feasible and practical and susceptible for fulfilling the requirements of the invention in a dependable and gratifying manner.

It is thought that the description taken in connection with the drawings will enable a clear understanding of the invention to be had. Therefore, a more lengthy description is thought unnecessary.

While the preferred embodiment of the invention has been shown and described, it is to be understood that minor changes coming within the field of invention claimed may be resorted to if desired.

I claim:

A freight car having a body portion with side door openings, upright posts at one side of said openings, and side doors for said openings, and also having dividing means located in the body in transverse alignment with said upright posts and consisting essentially of horizontally swingable doors the outer vertical edges of which rest close to opposite sides of the body, double acting spring hinges interposed between said edges and the sides and enabling the doors to swing horizontally in opposite directions, and means on the confronting vertical edges of the doors for preventing the passage of air therebetween when the doors are closed.

In testimony whereof I affix my signature.

MURDOCH A. MacMILLAN.