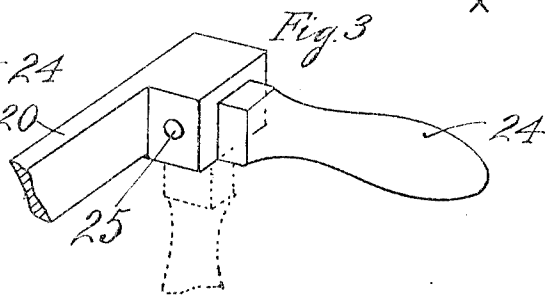
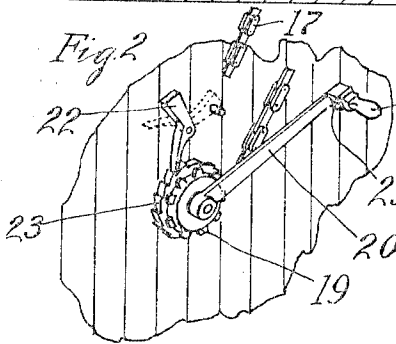
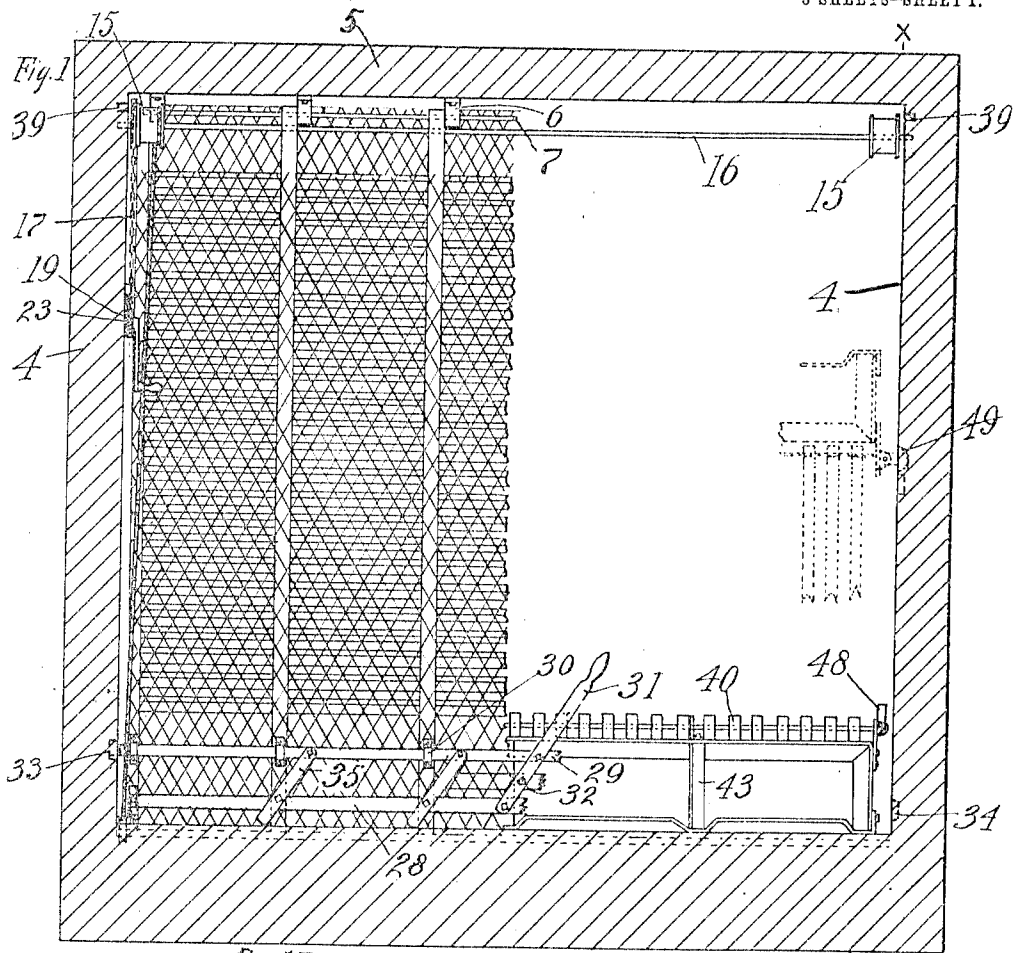


G. C. BOHN.
 REFRIGERATOR CAR.
 APPLICATION FILED SEPT. 18, 1908.

1,001,341.

Patented Aug. 22, 1911.

3 SHEETS-SHEET 1.



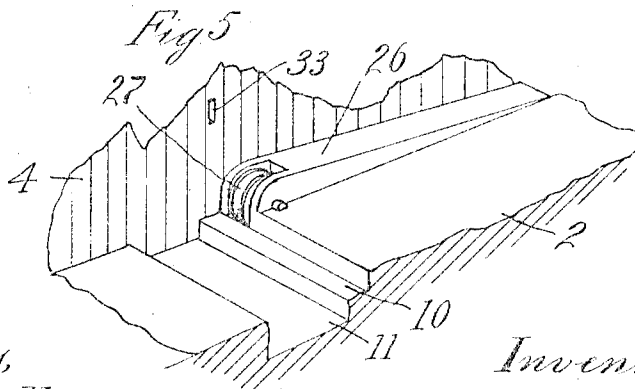
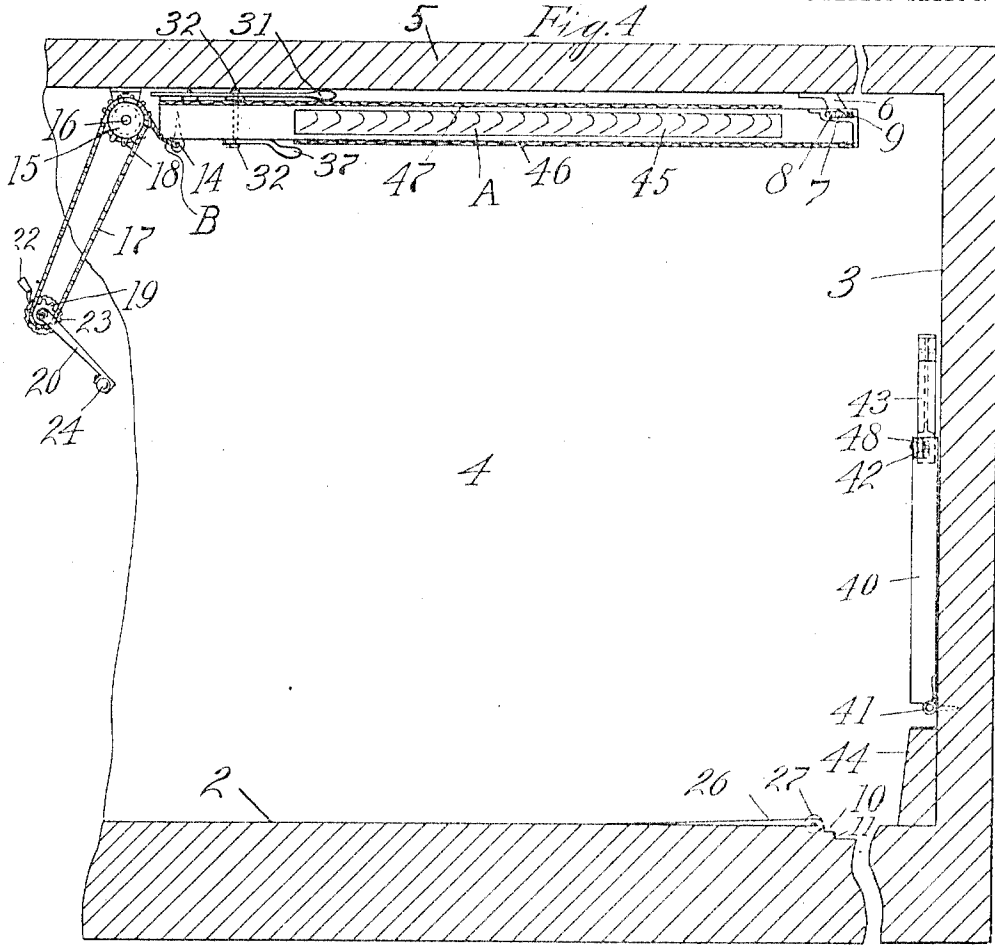
Witnesses,
 George Voelker
 Harry Smith.

Inventor,
 Gerhard C. Bohn
 by Lotthrop Johnson
 his Attorneys.

1,001,341.

Patented Aug. 22, 1911.

3 SHEETS-SHEET 2.

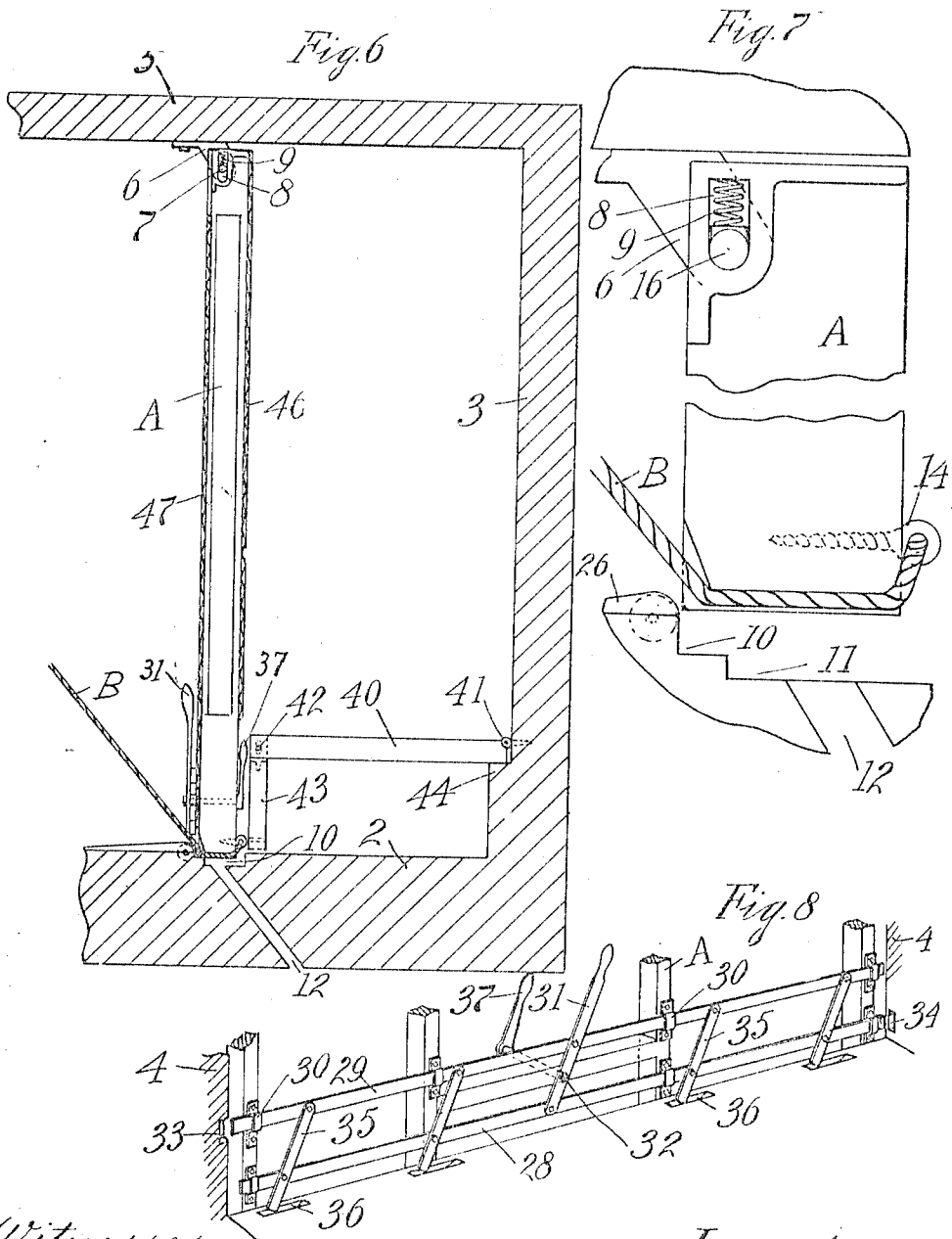


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1,001,341.

Patented Aug. 22, 1911.
 3 SHEETS-SHEET 3.



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UNITED STATES PATENT OFFICE.

GEBHARD C. BOHN, OF ST. PAUL, MINNESOTA.

REFRIGERATOR-CAR.

1,001,341.

Specification of Letters Patent. Patented Aug. 22, 1911.

Application filed September 13, 1902. Serial No. 453,363.

To all whom it may concern:

Be it known that I, GEBHARD C. BOHN, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Refrigerator-Cars, of which the following is a specification.

My invention relates to improvements in refrigerator cars of that type in which the ice chambers are in the ends of the car, its object being to provide improved construction of removable ice chamber walls which can be displaced to make the entire length of the car available for carrying freight.

In the accompanying drawings forming part of this application Figure 1 is a cross section of a freight car looking toward the end thereof embodying my features of invention partly broken away, Fig. 2 is a detail of part of the means for carrying the ice chamber wall against the roof of the car, Fig. 3 is a detail of a handle forming part of the mechanism shown in Fig. 2, Fig. 4 is a section on line $x-x$ of Fig. 1 with the ice chamber wall in displaced position, Fig. 5 is a perspective view of part of the floor, Fig. 6 is a view taken on the same plane as Fig. 4 with the ice chamber in normal position, Fig. 7 is an enlarged detail of a portion of Fig. 6 partly broken away, and Fig. 8 is a perspective view of locking mechanism for the bottom of the ice chamber wall.

In the drawings 2 represents the floor, 3 the end wall, 4 the side walls, and 5 the roof of an ordinary refrigerator car. Extending across the end of the car and having hinge support on downwardly extending brackets 6 is my improved ice chamber bulkhead or partition A. The pivotal connection between the bulkhead A and bracket 6 consists of a rod 7 carried by the brackets and extending through a vertically slotted opening 8 in the upper end of the bulkhead A, a spring 9 being interposed between the top of the slot and the rod or pivot 7 for the purpose set forth. The free end of the bulkhead A normally rests in a groove 10 in the floor on the lower side of the trough 11. A suitable drainage conduit 12 leads from the trough 11 through the bottom of the car.

For the purpose of raising and lowering the bulkhead A against the roof I provide cables B each passing at one end underneath the bulkhead and secured by a screw 14 to

the rear side thereof, the other ends of the cables being wound around drums 15 on a shaft 16 journaled in the side walls of the car underneath the roof. The shaft 16 is turned to wind the drums by means of the sprocket 18 carried by the shaft 16 and connected by a chain 17 with a sprocket 19 journaled upon the adjacent side wall of the car. The sprocket 19 is adapted to be actuated by a handle arm 20 held in adjusted positions by pawl and ratchet 22 and 23. The handle arm carries at its free end an outwardly extending handle 24 having pivotal support 25 allowing it to be turned downward against the side of the car.

In order to assist the bulkhead in sliding into lowered position I provide the inclined rails 26 with inset anti-friction rollers 27 adjacent to the trough 10. For the purpose of locking the free end of the bulkhead A in lowered position I provide the horizontal bars 28 and 29 slidable in brackets 30 on the front of the bulkhead, the bars being connected by a lever arm 31 having fulcrum support 32 intermediate of the bars. The bars are staggered so that turning the lever to upright position will outwardly slide the bars to cause them to extend into the notches 33 and 34 in the sides of the car. Cross bars 35 are pivotally connected to the bars 28 and 29 and extend below the bars 29 so as to be turned into the notches 36 in the floor of the car when the bars are turned into locking position. A handle 37 is carried by the fulcrum 32 upon the opposite side of the bulkhead so as to be accessible when the wall is in raised position, as shown in Fig. 4, to carry the bars 28 and 29 into notches 38 and 39 in the sides of the car. The grating 40 forming the bottom of the ice chamber has hinge connection 41 to the end wall of the car and has pivotal connection 42 to an extension 43 adapted to turn downwardly against the floor of the car, as shown in Fig. 6, forming a support for the front end of the grating. In this position the rear end of the grating rests upon a ledge 44 carried by the end of the car. The bulkhead of the ice chamber is of any desirable construction, being shown in the drawings with curved ports 45 and protecting screening 46 and 47.

In use, when the car is used as a refrigerator car, the bulkhead A is lowered as shown in Fig. 5, and the bars 28 and 29 turned into the notches 33 and 36, the grating being

dropped into lower position as shown. When it is desired to displace the ice chamber walls tension is applied to the cable 13 which will first lift the bulkhead A out of the groove 10 by reason of the slot and pin support 7 and 8, a further pull upon the cable 13 by the winding of the drum 18 carrying the bulkhead A up underneath the roof of the car as shown in Fig. 4. The bulkhead A may be held in this supported position both by the pawl and ratchet 22 and 23 and by turning the bars 28 and 29 into locking engagement with the sides of the car. Likewise the grating 40 may be turned up against the end of the car and secured in such position by means of the lug 43 carried by the ends of the grating being turned into the notches 49 in the sides of the car. The extension 43 will be held in upright position above the grating on account of the overlapping ends of the extension and grating being held flat against the end of the car.

I claim as my invention:

1. A refrigerator car having an ice chamber and a freight compartment, a vertical bulkhead normally separating said chamber and compartment, a slidable hinge support for the top of said bulkhead, a movable floor for said ice chamber independent of said bulkhead, a depressed bed in the floor of the car along the outer edge of said ice chamber floor, the lower end of said bulkhead normally resting in said bed, and means for vertically lifting the bulk-

head out of the bed and swinging it outwardly upon its hinge support.

2. A refrigerator car having a transverse bulkhead having hinged support at its top, means for swinging the bulkhead upwardly upon said support, locking devices supported by the lower end of said bulkhead and means for carrying said locking devices into locking engagement with the car body below and at opposite sides of said bulkhead.

3. A refrigerator car having a transverse bulkhead, a hinge support for the upper end of said bulkhead, means for swinging the bulkhead up against the roof of the car, horizontally slidable securing devices arranged in connection with the free end of the bulkhead and securing devices operatively connected with said slidable devices for interlocking with the car floor.

4. A refrigerator car having a transverse bulkhead, a hinge support for the upper end of the bulkhead, means for swinging the bulkhead up against the roof of the car and interconnected locking means arranged in connection with the sides and bottom of the bulkhead for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEBHARD C. BOHN.

Witnesses:

ARTHUR P. LOTHROP,
HATTIE SMITH.