W. M. RAMSEY & M. J. CHRISTIANSEN.

REFRIGERATOR CAR DOOR FASTENER.

APPLICATION FILED AUG. 30, 1915

1,186,038. Patented June 6, 1916.

Fig. 1.

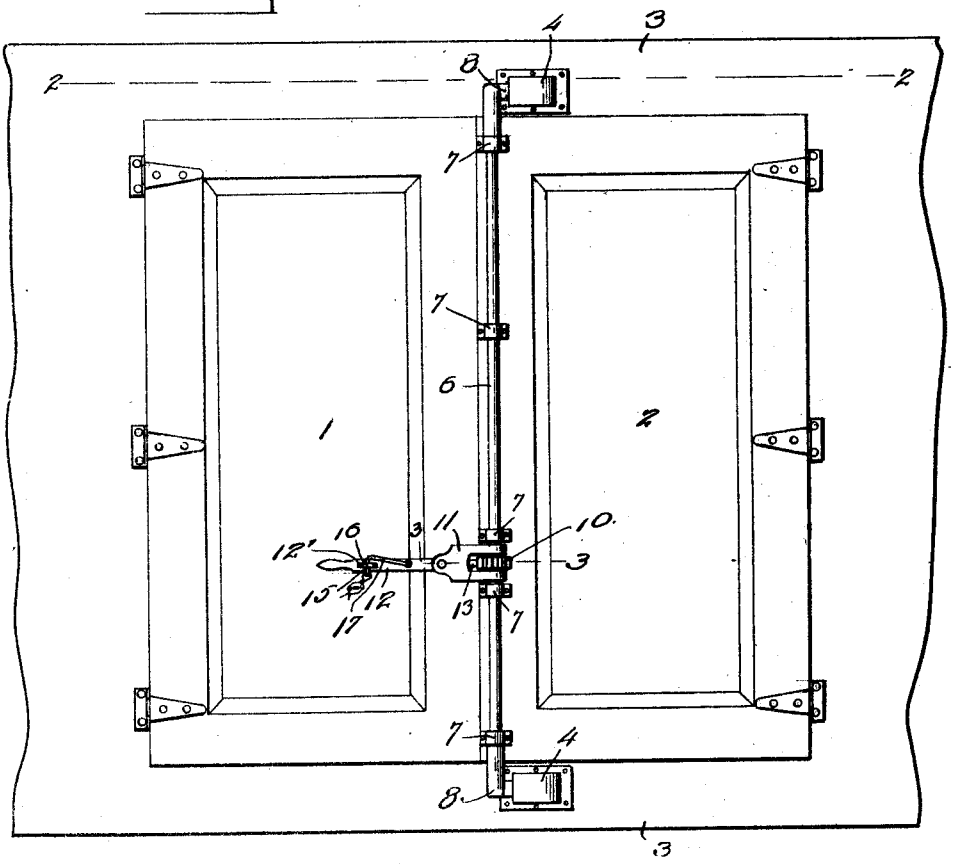


Fig. 2.

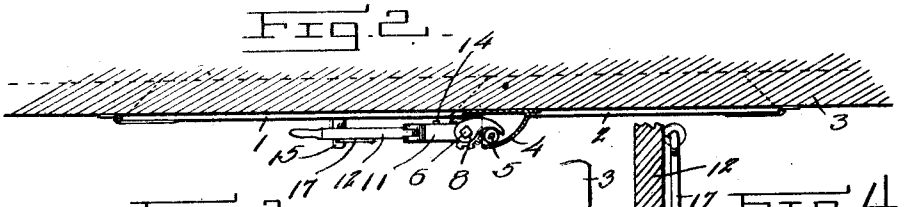


Fig. 3.

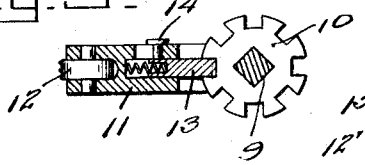
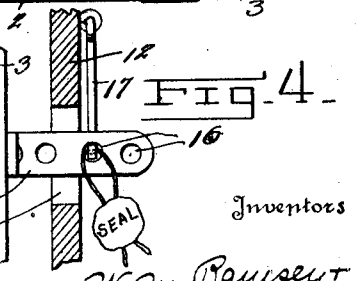


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

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REFRIGERATOR-CAR-DOOR FASTENER.

1,186,038. Specification of Letters Patent. Patented June 6, 1916.

Application filed August 30, 1915. Serial No. 48,080.

To all whom it may concern:

Be it known that we, WILLIAM M. RAMSEY and MORTEN J. CHRISTIANSEN, citizens of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented new and useful Improvements in Refrigerator-Car-Door Fasteners, of which the following is a specification.

Our present invention pertains to fasteners for refrigerator car doors.

Because of the packing with which they are equipped refrigerator car doors are difficult to tightly close especially in damp weather, and it is highly important that such doors be completely closed and safely fastened inasmuch as accidental opening of the doors would not only permit the entry of warm atmospheric air into the car, but would be attended by the liability of serious accident to persons standing close to a passing train.

One of the objects of our present invention is to provide a fastener through the medium of which refrigerator doors may be expeditiously and easily forced to and securely fastened in completely closed position without liability of the doors being casually released and permitted to fly open.

Another object of the invention is the provision of means whereby the fastening may be effectually sealed so that surreptitious opening of the car will be made patent to those in authority.

Other advantageous features of the invention will be fully understood from the following description and claim when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is an elevation illustrating the doors of a refrigerator car as fastened in closed position through the medium of our improvement. Fig. 2 is a horizontal section taken in a plane above the doors as indicated by the line 2—2 of Fig. 1. Fig. 3 is a detail enlarged horizontal section taken in the plane indicated by the line 3—3 of Fig. 1. Fig. 4 is an enlarged detail horizontal section illustrating the sealing means that we prefer to employ.

Similar numerals of reference designate corresponding parts in all the views of the drawings.

The car body 3 is equipped with hinged doors 1 and 2 which are of the conventional type in the respect that the free edge of the door 2 is adapted to lap the corresponding edge of the door 1 after the manner illustrated by the dotted line in Fig. 2.

In furtherance of our invention, vertically-disposed rollers 5 are arranged in housings 4 above and below the door opening and in alinement with the door 2; the said housings 4 being open at one end and being adapted to protect the rollers 5 from the weather and against being struck by objects exterior of the car.

Mounted in suitable bearings on the face of the door 2 is a rock-shaft 6; the said shaft and the bearings 7 being vertically disposed as appears in Figs. 1 and 2. At the upper and lower ends of the rock-shaft 6 are hook-like arms 8. These arms 8 are keyed on or otherwise fixed with respect to the shaft 6, are disposed horizontally in the same horizontal planes as the rollers 5, and are adapted to reach behind the said rollers so that turning of the rock-shaft in the proper direction will result in the door 2 being crowded inwardly, with the door 1 before it, into a completely closed position.

Suitably fixed on the rock shaft 6 at an intermediate point in the height thereof is a horizontally-disposed toothed wheel 10, and straddling the said toothed wheel and mounted to swing horizontally in a loose manner on the shaft is the bifurcated inner section 11 of a lever for turning the shaft 6 about its axis. Carried by the said lever section 11 is a spring pressed detent 13 which is adapted to seat in the interdental spaces of the wheel 10 and is provided with a handle 14, the exposed end of which is disposed at the inner side of the lever section 11, Fig. 3, so that when the lever is secured as shown in Fig. 1, in closed position, access cannot be gained to the handle 14 for the purpose of disengaging the detent from the wheel.

Pivotally connected to and adapted to be swung vertically on the lever section 11 is a lever section 12, which is designed to be grasped by the operator incidental to the turning of the shaft 6, at which time it is intended for said section 12 to be positioned in alinement with the section 11. The section 12 is provided with a slot 12′, and is equipped with a swinging hook 17 in the free portion of which an aperture is provided as shown in Fig. 4. These provisions are made in order to enable the lever section 12 to coöperate with a fixed projection 15,

on the face of the door 1, which projection 15 is provided with a plurality of apertures 16 as clearly appears in Fig. 4. By virtue of the said construction it will be manifest that subsequently to the closing of the doors 1 and 2 by the manipulation of the lever and its detent in combination with the toothed wheel 10, the lever section 12 can be placed over the projection 15, and the hook 17 can be passed through one of the apertures 16 of said projection, whereupon a seal can be secured on the free portion of the hook as clearly appears in Figs. 1 and 4.

In the operation of closing the doors, the door 1 is first swung to a position approaching its fully closed position after which the door 2 is closed against the door 1 and at the same time the arms 8 on the shaft 6 are positioned adjacent to and back of the rollers 5. The detent 6 is then placed in the proper interdental space of the toothed wheel 10, and the lever is pressed or moved inwardly toward the face of the door 1 whereupon by coöperation of the arms 8 with the rollers 5, the door 2 will be strongly crowded inwardly against the door 1 and the two doors will be completely closed. With this done the lever section 12 is engaged with the projection 15 and hooked on said projection in the manner before described, and in this way casual retrograde rotation of the shaft will be prevented and the doors will be securely fastened in the closed position. Then if desired by the operator, the fastener may be sealed in the manner hereinbefore specifically described. To open the doors it is simply necessary to reverse the operation described—*i. e.*, release and disengage the lever section 12 from the projection 15, swing the lever in a direction away from the face of the door 1, and then use the lever as a handle to pull the door 2 open, the arms 8 at that time being clear of the rollers 5 and their housings 4.

We have entered into a detailed description of the specific construction constituting the present and preferred embodiment of our invention in order to impart a full, clear and exact understanding of the said embodiment. We do not desire to be understood as confining ourselves to the said specific construction, inasmuch as in the future practice of the invention such changes or modifications may be made as fairly fall within the scope of our appended claim. When the doors are open, the lever section 12 is free to hang in a pendent position from the lever section 11 so as not to offer a material projection from the door 2.

Having described our invention, what we claim and desire to secure by Letters-Patent, is:

The combination of a support having a door opening, a door hinged to said support, a rock-shaft mounted on said door and having a hook-like arm, means on the support and spaced from the side thereof constructed to coöperate with the said arm of the shaft, a toothed wheel fixed on the shaft, a lever loosely mounted on the shaft, and a detent carried by the lever and constructed and arranged to engage the teeth of the toothed wheel.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

WILLIAM M. RAMSEY.
MORTEN J. CHRISTIANSEN.

Witnesses:
JOHN L. TELICO,
W. M. REKER.