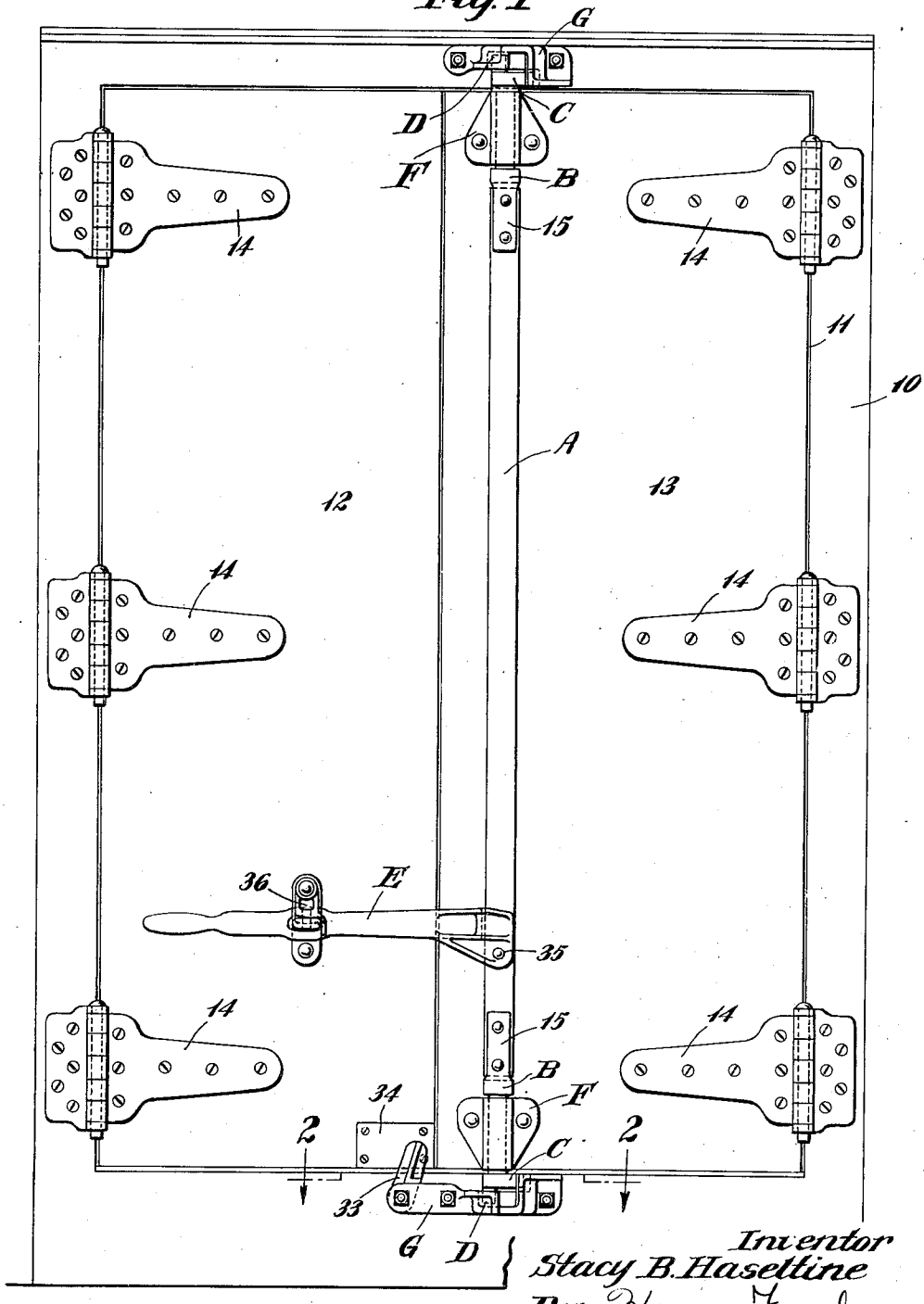
Oct. 28, 1941. S. B. HASELTINE 2,260,519

DOOR FASTENER

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Fig. 1



Inventor
Stacy B. Haseltine
By Henry Fuchs
Atty.

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DOOR FASTENER

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Fig. 2

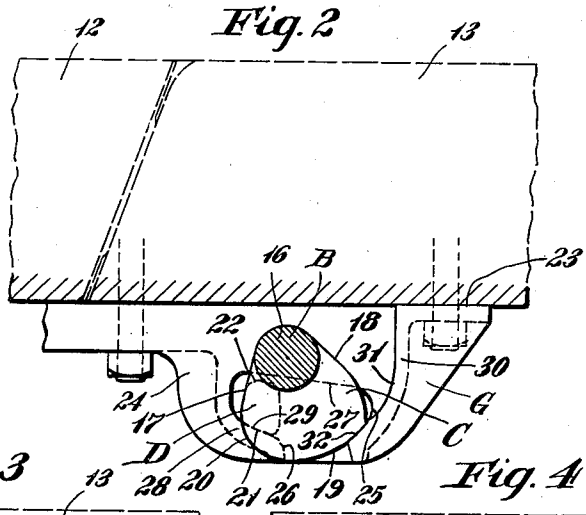


Fig. 3

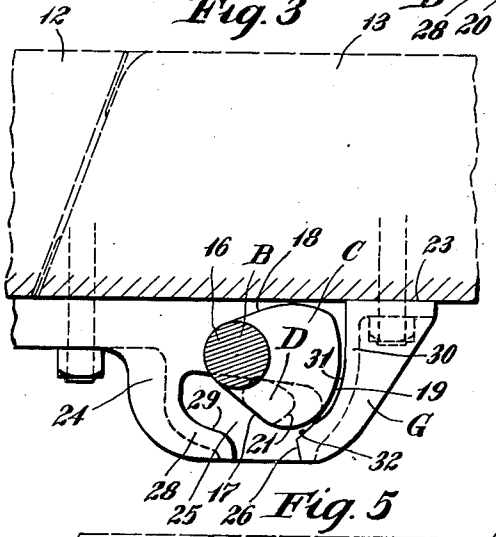


Fig. 4

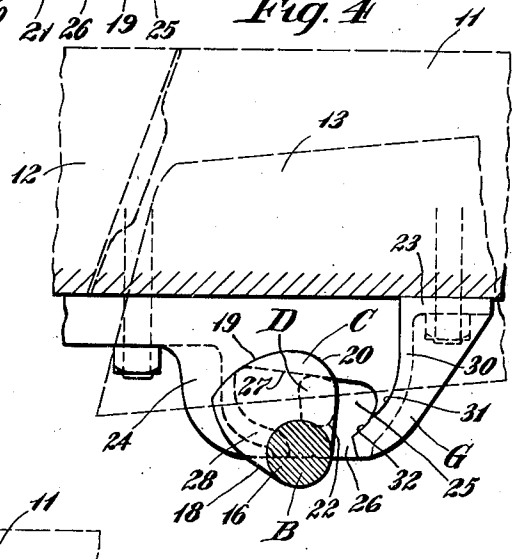
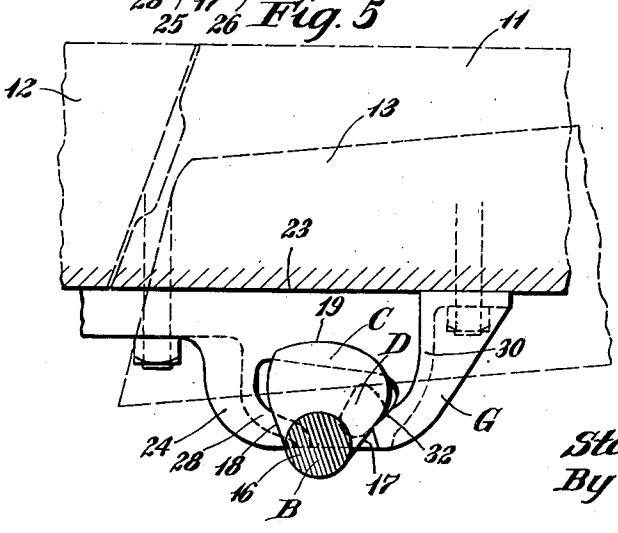


Fig. 5



Inventor
Stacy B. Haseltine
By Henry Fuchs
Atty.

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Fig. 6

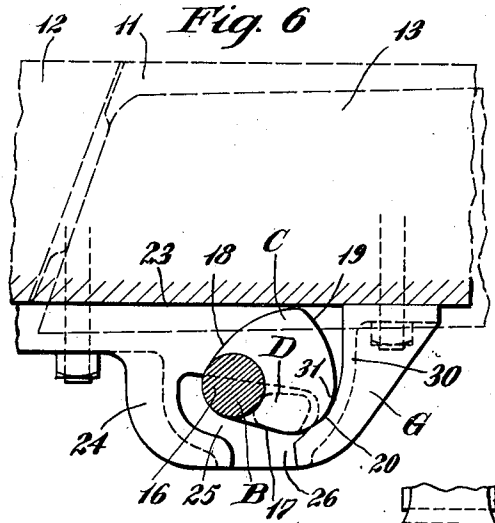


Fig. 7

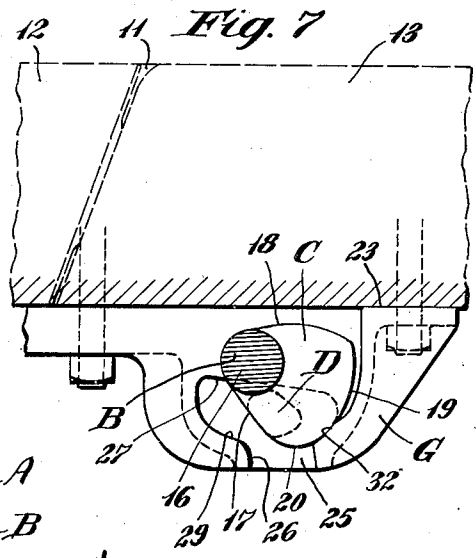


Fig. 8

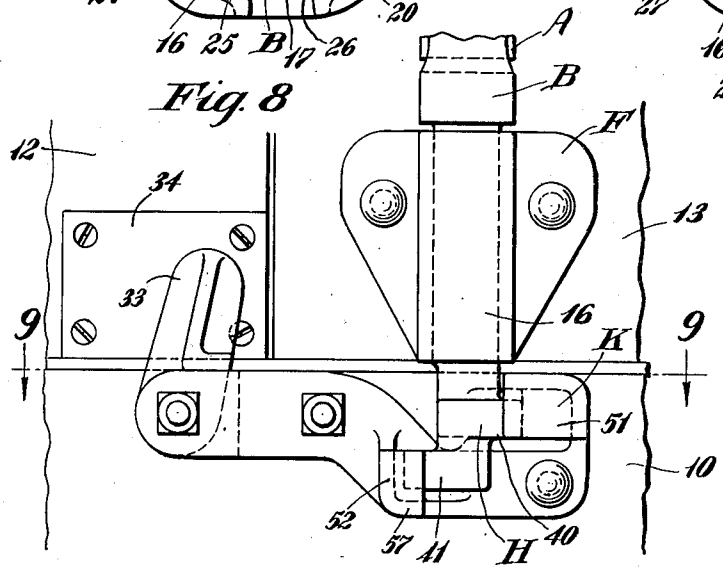
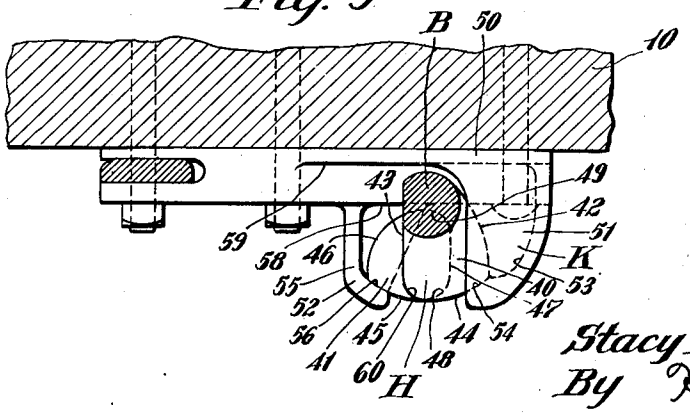


Fig. 9



Inventor
Stacy B. Haseltine
By Henry Fuchs.
Atty.

Patented Oct. 28, 1941 2,260,519

UNITED STATES PATENT OFFICE

2,260,519

DOOR FASTENER

Stacy B. Haseltine, La Grange, Ill., assignor to W. H. Miner, Inc., Chicago, Ill., a corporation of Delaware

Application February 13, 1939, Serial No. 256,024

9 Claims. (Cl. 292—241)

This invention relates to improvements in door fasteners, especially designed for hinged refrigerator car doors.

One object of the invention is to provide in a rotary door operator or fastener for double hinged doors of refrigerator cars, cooperating keeper engaging means and keepers on the rotary door fastener and car respectively, comprising cooperating cam members having engagement with each other along extended surface portions, when the door is tightly closed, to effectively resist any tendency of the rotary operating means to be accidentally rotated through forces reacting between the keeper engaging means and keepers, due to outward thrust exerted on the door through the compressed condition of the insulating packing material with which the latter are universally provided.

Another object of the invention is to provide a fastener mechanism adapted for use in connection with hinged doors including a manually actuated rotary operating bar mounted on one of the doors and having keeper engaging means at opposite ends thereof cooperating with keepers fixed to the door frame above and below the door opening, wherein the keeper engaging means at each end of the bar includes separately acting cam members rigid therewith, designed to cooperate with the corresponding keeper to respectively force the door tightly into the door opening and pry the same open when closed, these cam members at each end of the bar being designed and arranged so that the keeper engaging locking portions of the same which are in cooperative engagement with the keepers when the door is closed, are located respectively at opposite sides of the line of outward thrust, extending through the axis of rotation of the bar, to prevent accidental rotation and release of said bar through outwardly directed forces exerted by the compressed insulation of the door.

Other objects of the invention will more clearly appear from the description and claims hereinafter following.

In the drawings forming a part of this specification, Figure 1 is a front elevational view of a pair of vertically disposed hinged doors of a refrigerator car, illustrating my improved fastener mechanism in connection therewith. Figure 2 is a horizontal sectional view, on an enlarged scale, corresponding substantially to the line 2—2 of Figure 1. Figures 3 and 4 are views similar to Figure 2, but showing the parts in different positions assumed during successive stages of the door opening operation. Figures 5, 6, and 7 are views similar to Figure 2, but showing the parts in different positions assumed during stages of the door closing operation. Figure 8 is an elevational view, broken away, of the fastener mechanism at the lower end of the door, illustrating another embodiment of the invention, the mechanism being shown on a larger scale than the corresponding structure in Figure 1. Figure 9 is a horizontal sectional view, corresponding substantially to the line 9—9 of Figure 8.

In said drawings 10 designates the side wall member of a refrigerator car having a door opening 11 therein, which is closed by a pair of hinged doors 12 and 13. Each of the doors is provided with the usual sets of hinges 14—14 along the vertical outer edges thereof, by which the same are swingingly supported. The door 12, which is first closed, and the door 13 have meeting edges which are beveled and so inclined that the door 13 will maintain the door 12 in closed position and wedge the same shut when the door fastening mechanism is operated. The edges of the two doors and the cooperating edges of the door frame structure are also provided with the usual insulating packing material, not shown.

Referring first to the embodiment of the invention illustrated in Figures 1 to 7 inclusive, my improved door fastener mechanism proper comprises broadly a locking bar A; a pair of end castings B—B; a pair of cam plates C—C, one on each end casting; a pair of cam lugs D—D, one on each cam plate C; an operating handle lever E; a pair of bearing brackets F—F; and a pair of keepers G—G with which the cam plates C—C and the cam lugs D—D cooperate.

The operating bar A is of substantially rectangular cross section and has the end castings B—B riveted thereto. Each end casting has a forked portion 15 of well-known form, which embraces the flat bar A on opposite sides and has rivet members extending therethrough. Outwardly of the forked portion, each member B has a cylindrical bearing section or shaft portion 16 which is rotatably supported in the corresponding bearing bracket F. As shown in Figure 1, the bar or shaft A is vertically disposed and two bearing brackets F—F are employed, the same being arranged respectively adjacent the top and bottom edge portions of the door 13 and secured thereto in any suitable manner.

The cam plates C—C are located at the top and bottom ends of the bar A, each plate being at the outer end of the cylindrical section 16 of the corresponding end member B and formed in-

tegral therewith. Each cam plate C is horizontally disposed and projects a considerable distance laterally from the corresponding cylindrical section 16.

The cam plate C has inwardly converging side edges 17 and 18 and a rounded outer edge face 19. The face 19 is concentric with the axis of rotation of the bar A. A rounded cam face 20 is provided on the plate C, which face merges with the rounded outer edge face 19 and the side edge 17, which side edge is preferably straight, said cam face 20 being continuous with said outer edge face and side edge. The side edge face 18, which is also substantially straight, has the outer end portion thereof, where it meets the rounded face, cut away, as shown, to clear the outer face or surface of the door when the cam plate is rotated, said cut away portion being preferably rounded off.

The lugs D—D project from the cam plates C—C and are formed integral therewith, the lug of the lower cam plate depending therefrom and that of the upper cam plate upstanding, so as to properly cooperate with the upper and lower keepers G—G respectively. Each cam lug D is located adjacent the edge 17 of the corresponding cam plate C and inset with respect to the outer end edge of said plate. As shown clearly in Figures 2 to 7 inclusive, the lug D is eccentric to the axis of rotation of the bar A and of somewhat irregular shape in horizontal section, being elongated in the direction of the length of the plate C. The outer end face of this lug, which is indicated by 21, is curved, as shown, the curvature of the same being concentric to the axis of rotation of the bar A. The inner end face of the lug D, which face is indicated by 22, is rounded off, as shown, and forms a cam face which cooperates with the corresponding keeper G in forcing the door open.

The top and bottom keepers G—G, which are in the form of castings, secured to the side wall of the car, are of similar design, except as hereinafter pointed out. Each keeper casting G includes a base portion 23 suitably fixed to the car wall. Extending from said base portion is a horizontally disposed section 24 having a cam slot or opening 25 therein. The bottom keeper, as shown in Figures 1 to 7 inclusive, opens upwardly to properly cooperate with the keeper engaging cam lug D at the lower end of the bar A, and is closed at the bottom by a horizontal wall. The top keeper G is reversely arranged with respect to the lower keeper, that is, inverted, so that the cam opening thereof faces downwardly to cooperate with the upstanding cam lug D at the upper end of the bar A. The outer wall of the cam opening is cut away, as shown, to provide a mouth 26 through which the lug D may pass freely. The rear wall of the opening 25, which is indicated by 27, is substantially flat, lies in a vertical plane, and extends at an angle to the length of the car wall, as clearly shown in the drawings. As shown in Figures 2 to 7 inclusive, the mouth 26 of the cam opening 25 is located nearest the right hand end portion of said opening, thereby providing an outer wall portion 28 of substantial length at the left hand end portion of said opening. The inner face of said wall 28 is curved, as shown, thereby providing a seating surface 29 on the inner side thereof for the curved outer edge of the lug D. The curvature of the surface 29 corresponds to that of the outer end face 21 of the lug D and said surface 29 is so disposed that the curved face 21 of the lug will seat therein and snugly fit the same when the door has been moved to tightly closed position.

At the right hand end, as seen in Figures 1 to 7 inclusive, each casting G is provided with a vertical wall 30. The wall 30 of the bottom keeper upstands from the section 24 thereof and the wall of the top keeper depends from the same. This wall 30 extends substantially from the side wall of the car to the outer side of the section 24 of the keeper casting G and has its outer end section curved, thereby presenting a concavely curved cam face 31 on its inner side. The cam face 31 terminates short of the outer end of the wall 30, said wall being provided on the inner side thereof with a concave seat 32 adjacent the extremity of said outer end and beyond the cam face 31. The concave seat 32 presents a face of the same curvature as the edge face 19 of the cam plate C, so disposed that the curved face 19 will interfit therewith when the door is held in closed position by the locking bar A.

As shown in Figure 1, the keeper casting G at the bottom of the door opening has an extended portion on which a pivoted latch finger 33 is supported, which is adapted to engage the lower right hand corner of the door 12 to hold the same in closed position, a wear plate 34 being preferably employed at the lower corner of this door, with which the latch finger 33 cooperates.

The operating handle lever E is forked at the inner end thereof, as is common, and is pivotally connected to the operating bar A at said forked end, the forked portion embracing the operating bar and being connected thereto by a pivot 35. At the outer free end, the operating lever E is provided with the usual hand grip by which the same may be manipulated. The operating handle E is adapted to be locked, as shown in Figure 1, by any suitable locking device, as indicated by 36, and sealed in the manner customary in connection with railroad cars.

In the closed and locked position of the door, as shown in Figures 1 and 2, the curved face 19 of the cam plate C is seated in the concavely curved face of the seat 32 of the wall 30 of the keeper G, and the curved face 21 at the outer end of the lug D is seated in the concave face 29 of the outer wall 28 of the cam opening of the keeper. By this arrangement of engaging faces on the keeper G and the end member B of the operating bar A, accidental rotation of the bar, which would effect release of the door from locked condition, is precluded, the respective engaging positions of said faces being located at opposite sides of the axis of rotation of the bar A outwardly of the latter. All tendency of the bar to be rotated through outward thrust exerted on or through the door is thus eliminated.

The operation of the improved fastener mechanism, as shown in Figures 1 to 7 inclusive, is as follows: To open the door 13, the handle lever E is first freed by unlocking the same from the latch 36. This lever is then pulled or swung outwardly away from the door, thus rotating the bar in contraclockwise direction, as seen in Figure 2. During initial rotation of the bar, the curved face 19 of the cam plate C and the curved face 21 of the lug D will be moved out of engagement with respect to the cooperating faces 32 and 29 of the keeper, and the cam lug D will be rotated toward the inclined rear wall 27 of the opening 25 of the keeper. As rotation of the bar A is continued, the rear portion of the lug D

comes into engagement with the wall 27, as shown in Figure 3, and cams the door outwardly. This operation is continued until the door 13 has been pried free of the door opening, as shown in Figure 4. In thus completing this opening operation, the bar is rotated through approximately 180°, the handle lever being swung to a position to the right of the bar A and against the door. With the parts in this last named position, the door is free to be swung fully open, the lug D being in such a position as to pass freely through the mouth 26 of the opening 25. After the door 13 has been opened and swung clear of the door 12, the latter, after release of the latch finger 33, may be manually swung to fully open position also.

In closing the doors, the door 12 is first swung to approximately closed position. The door 13 is then swung inwardly to substantially the position shown in Figure 4, the lug D entering the opening 25 through the mouth 26 thereof and arresting movement of the door by striking against the rear wall of the keeper opening 25. The handle lever E is then swung outwardly away from the door from right to left, as viewed in Figure 4, thereby rotating the bar A and its keeper engaging means in clockwise direction. The cam plate C is thus swung toward the wall 30 of the keeper and into camming engagement with the surface portion 32 of said wall, as shown in Figure 5, thereby forcing the door inwardly toward the side wall of the car. During this rotation, the cam face portion 20 is active to effect said inward forcing movement, as shown in Figure 6, until the parts approach the position shown in Figure 7, whereupon the cam face 20 leaves the cam face 31 of the wall 30 and the curved outer edge face 19 slides onto said curved face of the seat 32. When the parts reach the position shown in Figure 7, the door has been cammed tightly closed and the face 19 slides over the concentric concave face of the seat 32 during the remaining rotary movement of the operating bar A. During rotary movement of the bar A beyond the position shown in Figure 7, the cam lug D swings toward the outer wall 28 of the opening 25 of the keeper G. During rotation of the bar beyond this last named position, the cam plate C idles over the curved surface of the seat 32 of the keeper wall 30 and the lug D is moved into engagement with the curved inner face 29 of the wall 28 of the keeper, the parts being finally brought to the position shown in Figures 1 and 2 and the door pressed tightly closed.

When the door has been thus completely closed, it is held in locked position by the lug D and the cam plate C being seated in the concavities 29 and 32 of the walls 28 and 30 of the keeper G, as hereinbefore pointed out, and there is no possibility of accidental rotary displacement of the bar A which would permit displacement of the door through outwardly acting forces transmitted thereto. The danger of the effectiveness of the seal between the door and the walls of the door opening and between the pairs of doors being destroyed by outward displacement of the doors is thus entirely eliminated and consequent loss of refrigeration avoided. As will be understood by those skilled in this art, when the door has been forced tightly closed, as shown in Figures 1 and 2, the bar A has been rotated through an arc of approximately 180° and the handle lever E is in the position shown, parallel to the door, and may be locked by the latch 36 and sealed in the usual manner.

Referring next to the embodiment of the invention illustrated in Figures 8 and 9, the improved door fastener comprises broadly a locking bar similar to the bar A hereinbefore described, having end castings at the top and bottom ends, similar to the end castings B—B; cam elements H—H at the top and bottom ends of the bar, each cam element comprising two cam members in different planes; and top and bottom keepers K—K with which the cam elements cooperate.

The rotary operating bar employed in the embodiment of the invention shown in Figures 8 and 9 is of the same design as the bar A hereinbefore described. Only the lower end portion of this bar is disclosed in Figure 8, the same being also indicated by A. The end castings, which are located at the top and bottom ends of the bar, are secured to the bar in the same manner as the end castings B—B hereinbefore described. The lower end casting of the design shown in Figures 8 and 9, which end casting is also indicated by B, has a cylindrical bearing portion mounted in a supporting bracket secured to the door 13, the cylindrical bearing portion and the bracket shown in Figures 8 and 9 being similar to the bearing portion 16 and the bracket F hereinbefore described and also indicated by 16 and F, respectively.

As shown in Figures 8 and 9, the cam element H is at the lower end of the cylindrical bearing portion 16 of the lower end casting or member B and is formed integral therewith. This cam element H comprises cam portions 40 and 41 in different horizontal planes, the cam portion 41 being located below the cam portion 40. The cam portion 40 is in the form of a platelike member projecting laterally from the end member B, having inwardly converging side edges 42 and 43 and a curved outer end edge 44, which outer end edge is concentric to the axis of rotation of the bar A. The side edge 43 is substantially straight for the greater portion of its length and has a rounded outer end section 60, curved on a relatively short radius and forming a cam edge merging with the end face 44. The side edge 42 is curved as shown to clear the rear portion of the keeper casting as the bar is rotated. The lower cam portion 41 is also in the form of a platelike member projecting laterally from the end member B and has a curved outer end edge 45 of the same curvature as the end edge 44 of the cam portion 40. This curved outer edge 45 is also concentric with the axis of rotation of the bar A. The platelike member 41 is cut away at the left hand side, as seen in Figure 9, thereby providing a rounded or curved edge portion 46 which extends from the end of the face 45 to the rear end of said member. At the right hand side, the platelike cam portion 41 is cut away to provide a straight edge face 47 parallel to the edge face 43 of the cam portion 40, said straight edge face 47 being rounded off at opposite ends, as indicated at 48 and 49, said rounded end portions merging with the straight edge face 47 and said curved edge portions 45 and 46, respectively. The rounded portion 48 forms a cam face adapted to cooperate with the keeper in forcing the door open. The sections of the cam portions 40 and 41 adjacent their straight edges 43 and 47 overlap and are integrally joined, the outer edges 44 and 45 thus presenting, in effect, a continuous cylindrical surface, the portions of which merge where the cam portions 40 and 41 are united.

As will be understood, the cam member H at the upper end of the bar A of the device shown in

Figures 8 and 9 is of the same design as the bottom cam element H, hereinbefore described, but is inverted, that is, the cam portion thereof corresponding to the portion **41** is disposed above the cam portion corresponding to the cam portion **40** to properly cooperate with the corresponding keeper K.

The keepers K—K, the lower keeper of which only is shown in Figures 8 and 9, are disposed respectively above and below the door opening and are of the same design, it being understood that the upper keeper is reversely arranged with respect to the lower keeper to properly cooperate with the upper cam element H.

The keeper shown in Figures 8 and 9 is in the form of a casting secured to the side wall of the car. This keeper carries a latch on an extended portion similar to the latch **33** hereinbefore described and also indicated by **33**. This latch cooperates with the door **12** in the same manner as the latch **33** described in connection with Figures 1 to 7 inclusive. The construction illustrated in Figures 8 and 9 is similar to that shown in Figures 1 to 7 inclusive in that the latch is omitted in connection with the upper keeper K.

The lower keeper K, as shown, includes a base portion **50** suitably fixed to the car wall. Extending outwardly from said base portion are horizontally disposed, laterally spaced sections **51** and **52**, the section **51** being at a higher level than the section **52**. The section **51** includes a curved vertical wall presenting a concavely curved cam face **53** on its inner side and a curved concave seat **54** adjacent its outer end. The curve of the concave surface of the seat **54** is of the same radius as the outer edge face **44** of the cam portion **40** of the cam element. The vertical wall of the section **51** is preferably reenforced by a horizontal top wall or web, as shown.

The section **52** of the keeper K includes an outstanding vertical wall **55** which is curved laterally toward the section **51** at its outer end, said curved portion presenting on its inner side a seat **56** having a concave face of the same radius as the outer edge face **45** of the cam portion **41** of the cam element H. The curved seats **54** and **56** of the sections **51** and **52** of the keeper K are so disposed that they are concentric with the axis of rotation of the bar A when the door **13** is in the closed position shown. The wall **55** of the keeper is preferably reenforced by a bottom web or wall **57**.

The base portion of the keeper K is further provided with a vertical back wall **58** at the inner end of the wall **55**, parallel to the wall of the car, and at the same level as said wall **55**, presenting a continuous flat abutment surface extending to that end of the keeper which carries the section **51**. This wall **58** forms a bearing surface for the cam plate **41** of the element H during the operation of forcing the door open. The upper part of the casting K is suitably reenforced at its base by an upstanding web **59**.

The operation of the cam element H in forcing the door open from the tightly closed position shown in Figures 8 and 9 is as follows: The cam member is rotated through 180° in a left hand or contraclockwise direction, as seen in Figure 8, in unison with the bar A, thereby first disengaging the curved faces **44** and **45** from the seats **54** and **56** and subsequently bringing the cam faces **47**, **48**, and **45** successively into camming engagement with the abutment wall **58** to cam the door **13** outwardly. As will be evident, when the 180° rotation has been completed, the portions **40** and **41** are disposed respectively above the section **52** and below the section **51** of the keeper, thus clearing the entire cam element H from the cooperating parts of the keeper and permitting the door to be swung fully open.

In closing the door **13**, the same, with the cam member H in the position last described, is swung inwardly toward the side of the car until arrested by engagement of the side of the cam H, carrying the face **45** of the cam portion **41**, with the abutment wall **58** of the keeper. The cam H is then rotated in a clockwise direction through an arc of approximately 180° by rotation in unison with the bar A, thus bringing the cam face **60** of the cam portion **40** into camming engagement with the curved cam face **53** of the section **50** of the keeper K to press the door inwardly and tightly seat the same in the door opening. As rotation of the cam member proceeds, the cam face **60** will pass beyond the cam face **53** and the curved edge face **44** will slide into engagement with the seat **54**. During final sliding movement of the cam face **53** along the face **54** the cam surface **45** will slide onto the seat **56** of the section **52** of the keeper. This action continues until the parts reach the position shown in Figures 8 and 9, whereupon the door is tightly closed and fully seated in the door opening.

As will be evident, the locking surfaces on the cam portions **40** and **41** of the cam H prevent rotation of the bar A through outwardly acting forces or pressure exerted on the door, in the same manner as the locking surfaces of the keeper engaging mechanism and keepers disclosed in connection with Figures 1 to 7 inclusive prevent such rotation.

I have herein shown and described what I now consider the preferred manner of carrying out my invention, but the same is merely illustrative and I contemplate all changes and modifications that come within the scope of the claims appended hereto.

I claim:

1. In a door fastener, the combination with a rotary operating bar mounted on the door; of a fixed keeper having an abutment wall extending lengthwise of the car and a pair of laterally spaced, inwardly facing abutment faces at opposite sides of a plane coincident with the axis of rotation of said bar and normal to the door; a cam projection on said bar engageable with said abutment wall for forcing said door outwardly; additional cam means on said bar engageable with said keeper for forcing the door inwardly; and a pair of circumferentially spaced concentric locking faces on said bar engageable with said laterally spaced abutment faces of the keeper for holding the door closed.

2. In a door fastener, the combination with a rotary operating bar mounted on the door; of a fixed keeper having an abutment wall extending lengthwise of the car; a pair of spaced seats on said keeper facing said abutment wall; a cam means on said bar having a cam face engageable with said abutment wall for forcing said door outwardly, an additional cam face on said cam means engageable with said keeper for forcing the door shut; and a pair of concentric cam faces also located on said bar engageable respectively with said seats for locking the door in closed position.

3. In a fastener for doors, the combination with a rotary operating bar mounted on the door; of a fixed keeper; means on said bar rotatable therewith and having camming engagement with

the keeper for forcing the door shut; and circumferentially spaced concentric locking faces on said first named means having shouldered engagement respectively with said keeper at spaced zones to opposite sides of said bar and outwardly thereof for locking said door against outward displacement.

4. In a fastener for doors, the combination with a rotary operating bar mounted on the door; of a fixed keeper having an inwardly curved cam face facing the car wall, and a pair of concave seats also facing said car wall, said seats being spaced apart lengthwise of said wall; and means on said bar rotatable therewith for forcing said door closed and holding the same in said closed condition including an eccentric cam element having a rounded cam face engageable with said cam face of the keeper for forcing said door inwardly, said cam element having concentric curved outer edge faces slidable onto said seats and engageable respectively therewith for maintaining the door in closed position.

5. In a fastener for doors, the combination with a rotary operating bar on the door; of a fixed keeper having inwardly facing spaced abutment faces thereon; and means on said bar rotatable therewith and engageable with said keeper for camming the door shut, said means including an eccentric cam plate and an eccentric lug, said plate and lug having respectively concentric, curved locking faces engageable with the spaced abutment faces of the keeper for holding the door against outward displacement.

6. In a fastener for doors, the combination with a rotary operating bar mounted on the door; of a fixed keeper; and means on said bar rotatable therewith and engageable with said keeper for camming the door open and shut, said means including an eccentric cam member comprising plate sections lying in planes offset with respect to each other in a direction lengthwise of the bar, said plate sections having rounded locking faces which are concentric and of the same curvature, said locking faces being engageable with the keeper at respectively spaced zones for holding said door against outward displacement.

7. In a fastener for doors, the combination with a rotary operating bar mounted on the door; of a fixed keeper; and means on said bar rotatable therewith and engageable with said keeper for forcing the door outwardly when said bar is rotated in one direction and forcing said door inwardly when the bar is rotated in a reverse direction, said means including an eccentric cam member and a cam lug, said cam member and cam lug having respectively curved, concentric locking faces engageable with the keeper at spaced zones for holding the door against outward displacement, the curved face of said lug being offset inwardly with respect to the curved face of said cam member.

8. In a fastener for hinged doors of railway cars, the combination with a rotary operating bar mounted on the door; of a fixed keeper on the car, said keeper having a pair of inwardly facing concave seats spaced lengthwise of the car, said keeper having an outwardly facing wall spaced inwardly of said seats, and a curved side wall extending inwardly from one of said seats; and means on said bar rotatable therewith for forcibly camming the door outwardly and inwardly through rotation of said bar respectively in reverse directions incldiuing a cam lug engageable with said outwardly facing wall of the keeper for forcing said door outwardly, an eccentric cam plate engageable with said curved side wall of the keeper for forcing said door inwardly, said lug and plate having curved, concentric faces thereon respectively engageable with said seats for holding the door against outward displacement.

9. In a fastener for hinged doors of railway cars, the combination with a rotary operating bar mounted on the door; of a fixed keeper on the car, said keeper having an outwardly facing back wall providing an abutment surface, inwardly facing seats at opposite ends of the keeper, spaced outwardly from said back wall, and a side wall extending from one of said seats to said back wall, said side wall having the end thereof nearest the adjacent seat curved to provide a cam face; and means on said bar rotatable therewith for forcibly camming the door outwardly and inwardly through rotation of said bar respectively in reverse directions including an eccentric cam plate comprising two sections, one of said sections having a straight side edge terminating in a rounded outer end portion engageable with said back wall of the keeper for forcing said door outwardly, the other section having a straight side edge provided with a rounded cam portion at the outer end thereof engageable with said curved cam face of the side wall of the keeper for forcing said car door inwardly, said sections of the cam plate each also having a curved outer end edge, said curved outer end edges of said two sections being concentric and of the same radius and engageable with said inwardly facing seats of the keeper to lock the door in closed position.

STACY B. HASELTINE.