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W. F. KIRK ET AL
ANCHORABLE REFRIGERATOR

2,128,708

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Fig. 1.

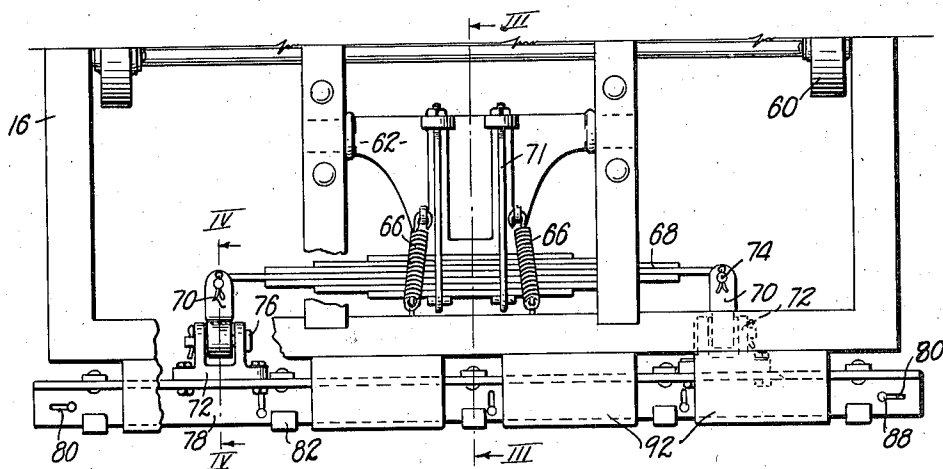


Fig. 2.

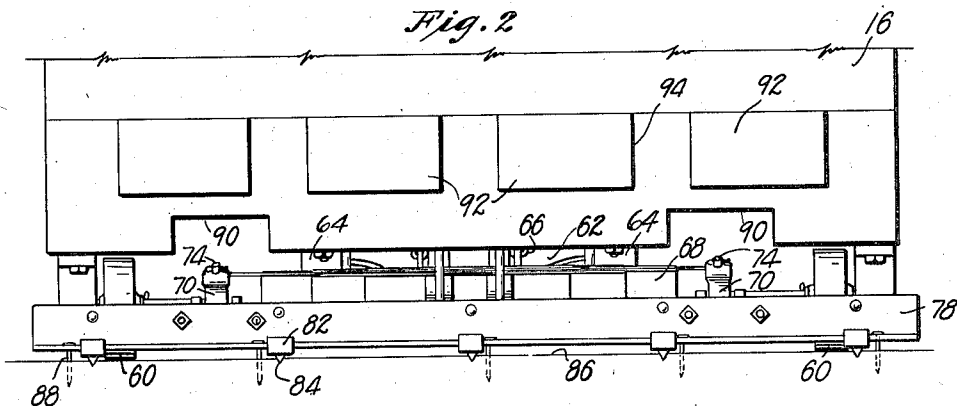


Fig. 3.

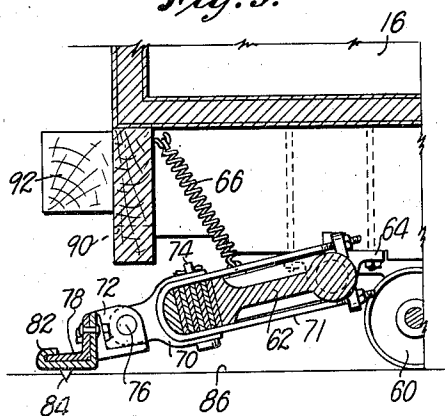
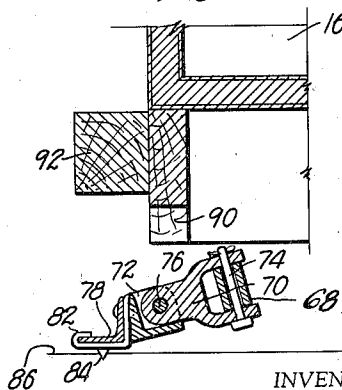


Fig. 4.



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ANCHORABLE REFRIGERATOR

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8 Claims. (Cl. 248—119)

This invention relates to transportable refrigerator structures and particularly that type of portable container for perishables shown and described in the following United States Letters Patent Nos. 2,094,522, 2,103,231 and 2,099,793.

One of the important aims of the present invention is the provision of especially designed anchoring structure for portable, transportable refrigerators, which anchoring structure will be effective in securing the case of the refrigerator against movement while the same is being carried from place to place in a motor truck or freight car.

Another, and more specific object of the present invention is to provide anchoring structure for refrigerators of the aforementioned character that is easy to operate, quickly movable to the operative position, and is equipped with specially made floor-engaging members and elements that will in no wise retard rapid movement of the case upon its rollers after the anchoring structure is disposed in an inoperative position.

A large number of minor objects of the invention will appear during the course of the following specification referring to the accompanying drawing, wherein

Figure 1 is a fragmentary, plan view of a refrigerator having anchoring structure made in accordance with the present invention.

Fig. 2 is a front, end elevation of the lower portion of a refrigerator having the anchoring structure shown in Figure 1 disposed in the operative position.

Fig. 3 is an enlarged, fragmentary, detailed sectional view through a portion of the refrigerator taken on line III—III of Fig. 1, and

Fig. 4 is a similar view taken along line IV—IV of Fig. 1.

Case 16 of the refrigerator has rollers 60 on the bottom thereof so that the same may be moved to and from a loaded position. While rollers 60 must be effective in permitting movement of case 16, their tendency to permit the case to move while the refrigerator is being transported in a box car or motor truck must be overcome by positively acting anchoring structure.

Referring specifically to the form of anchoring structure illustrated in Figs. 1 to 4 inclusive, the numeral 62 designates a block that is swingably journaled in the bearings 64 secured to the bottom of case 16. Block 62 should be on the center line of case 16 and be free to move with the exception of the yielding force exerted thereon through the medium of springs 66 which constantly have a tendency to move the entire anchoring struc-

ture upwardly to an inoperative position. Block 62 has a leaf spring 68 attached thereto through the use of conventional U-bolts or the like 71 and spring 68 extends outwardly on each side of block 62 toward the sides of case 16. This spring 68 is built up of flat spring members as illustrated in Figure 1 so that flexing in either direction will create the same action so far as absorption of shock is concerned. The outer ends of spring 68 each carry a clevis 70 and these clevises are joined to the floor-engaging elements through the use of brackets 72. The mechanism just mentioned is the same at each end of spring 68 and at each end the clevis 70 is pivotally connected to spring 68 by a pin 74, the axis whereof is at right angles to the axis of pin 76 which interconnects clevis 70 and brackets 72. The floor-engaging elements and parts in this instance are made up of an angle bar 78 provided with holes 80 and a number of clips 82 each having a spur 84 thereon. Any number of clips 82 may be employed along the length of bar 78 and when this bar is dropped down against the supporting surface 86 of a floor or the like, spurs 84 grip said surface and nails 88 may be passed through holes 80 to further insure a rigid hold. It is obvious that brackets 72 are secured directly to bar 78 and that after the floor-engaging elements and parts are in the operative position, any tendency on the part of case 16 to move longitudinally in a path perpendicular to the axis of spring 68 will be overcome by said spring in a manner which will absorb force and shock and thereby eliminate destructive effects upon the floor-engaging elements and parts. Case 16 is thereby maintained in position with a yielding force that not only is conducive to the protection of perishables within case 16 but is helpful in prolonging the life of the anchoring structure.

Springs 66 will draw the entire anchoring structure up off of floor 86 when spurs 84 and nails 88 are withdrawn. Notches 90 provide clearance for the anchoring structure in cases of the character illustrated and the bumper 92 which normally constitutes a part of case 16 should be sectional as illustrated in Figs. 1 and 2 to present a series of openings 94 through which a hammer or other tool may pass when driving nails 88 into floor 86.

Clips 82 provide spacers for bar 78 so that when and if nails 88 are employed, the lower surface of bar 78 will not be forced so tightly against surface 86 that a pinch bar or other tool could not be employed in releasing the bar from the operable position. The relation between clips and

spurs 82 and 84 respectively and nails 88, if used, is therefore, apparent and since most railroad companies require a definite blocking of such freight as case 16, only nails 88 need be supplied by the company when using anchoring structure made in accordance with this invention. Nails 88 and spurs 84 serve to preclude both longitudinal and lateral movement of case 16 and as has been heretofore set down, the inner positioning of spring 68 between the floor-engaging elements and parts and the swingable members carried by case 16 absorbs some of the shock which would normally be transmitted to the floor-engaging elements.

Anchoring structure such as has been illustrated and described should be provided at each end of the refrigerator case 16 and when such structure is provided and the same is in the operative position it is assured that case 16 will be maintained immovable enough to satisfy all requirements of transportation.

Anchoring structure having physical characteristics other than those illustrated and described might be made to embody the broad concepts of this invention and it is, therefore, desired to be limited only by the spirit of the invention and scope of the appended claims.

Having thus described the invention what we claim as new and desire to secure by Letters Patent is:

1. In a refrigerator of the character described and for the purpose specified, having a case and rollers on the case rendering the same mobile along a supporting floor, the combination of anchoring structure comprising members swingably carried by the case therebeneath; floor-engaging elements; and a spring coupling together said swingable members and said floor-engaging elements.

2. In a refrigerator of the character described and for the purpose specified, having a case and rollers on the case rendering the same mobile along a supporting floor, the combination of anchoring structure comprising members swingably carried by the case therebeneath; floor-engaging elements; and a leaf spring coupling together said swingable members and said floor-engaging elements, said spring having connection with the floor-engaging elements at the ends thereof and having connection with the swingable members intermediate its ends whereby to permit limited cushioned movement of the case in two directions when the floor-engaging elements are in the operative position.

3. In a refrigerator of the character described and for the purpose specified, having a case and rollers on the case rendering the same mobile along a supporting floor, the combination of anchoring structure comprising a leaf spring secured intermediate its ends to the case; and floor-engaging elements joined to the spring at the ends thereof.

4. In a refrigerator of the character described and for the purpose specified, having a case and rollers on the case rendering the same mobile along a supporting floor, the combination of anchoring structure comprising a leaf spring se-

cured intermediate its ends to the case; a clevis carried by each end of the spring respectively; and floor-engaging elements on the clevises.

5. In a refrigerator of the character described and for the purpose specified, having a case and rollers on the case rendering the same mobile along a supporting floor, the combination of anchoring structure comprising a block swingably carried by the case therebeneath at the center thereof; a spring secured intermediate its ends to said block and extending to each side of the center of the case therebeneath; a floor-engaging bar substantially parallel to the spring; and a clevis carried by each end of the spring respectively, said clevises having pivotal connection with the said bar.

6. In a refrigerator of the character described and for the purpose specified, having a case and rollers on the case rendering the same mobile along a supporting floor, the combination of anchoring structure comprising a block swingably carried by the case therebeneath at the center thereof; a spring secured intermediate its ends to said block and extending to each side of the center of the case therebeneath; a floor-engaging bar substantially parallel to the spring; and a clevis carried by each end of the spring respectively, said clevises having pivotal connection with the said bar, said bar being provided with spurs adapted to be driven into the floor when the bar is in the operative position.

7. In a refrigerator of the character described and for the purpose specified, having a case and rollers on the case rendering the same mobile along a supporting floor, the combination of anchoring structure comprising a block swingably carried by the case therebeneath at the center thereof; a spring secured intermediate its ends to said block and extending to each side of the center of the case therebeneath; a floor-engaging bar substantially parallel to the spring; and a clevis carried by each end of the spring respectively, said clevises having pivotal connection with the said bar, said bar being provided with a plurality of holes therethrough for the reception of floor-piercing units.

8. In a refrigerator of the character described and for the purpose specified, having a case and rollers on the case rendering the same mobile along a supporting floor, the combination of anchoring structure comprising a block swingably carried by the case therebeneath at the center thereof; a spring secured intermediate its ends to said block and extending to each side of the center of the case therebeneath; a floor-engaging bar substantially parallel to the spring; and a clevis carried by each end of the spring respectively, said clevises having pivotal connection with the said bar, each of said clevises having pivotal connections with the said spring, the axis of the pivot between each clevis and the spring being perpendicular with and offset from the axis of the pivot between that clevis and the bar.

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