

Sept. 22, 1959

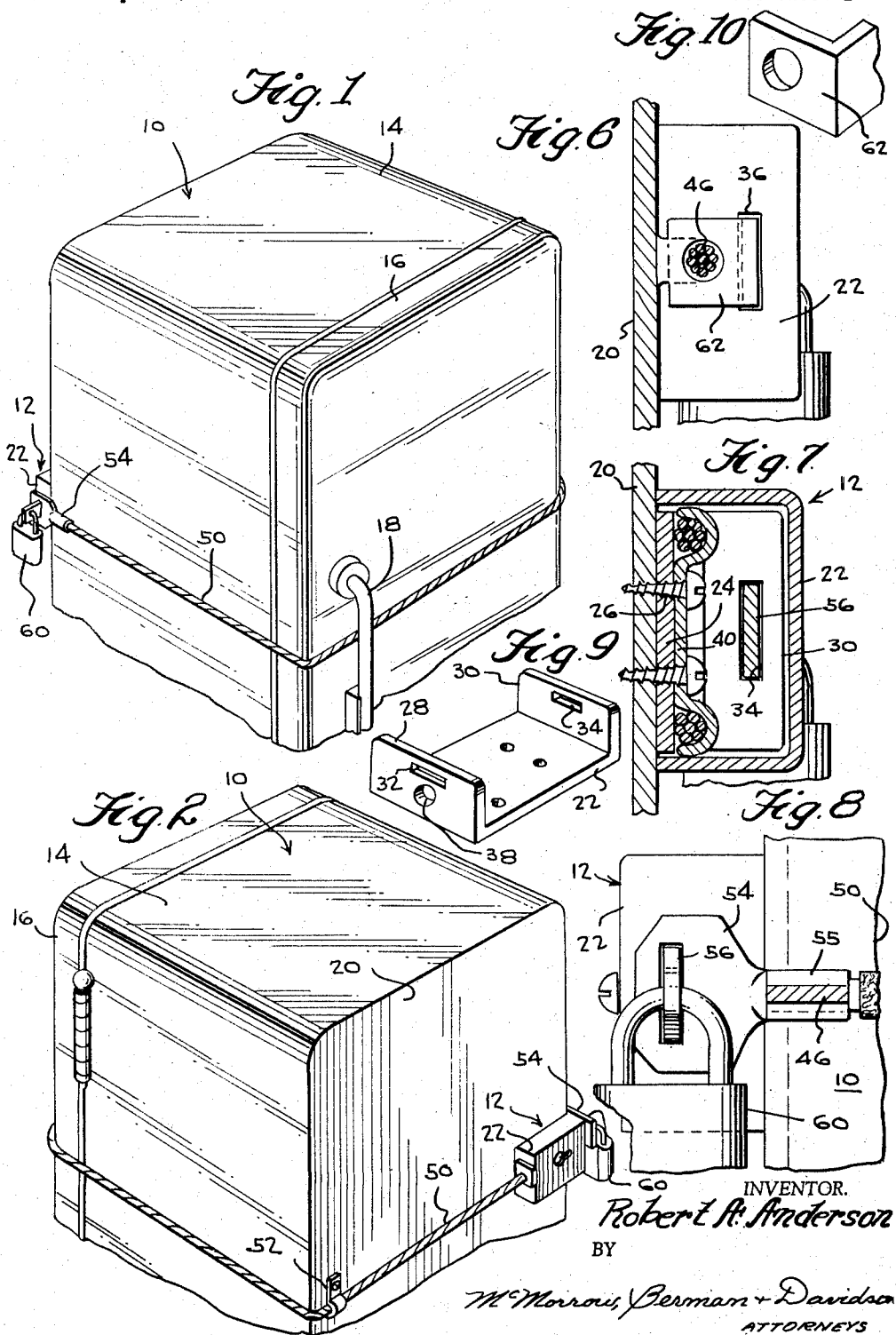
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SAFETY LOCK FOR REFRIGERATORS AND THE LIKE

Filed Sept. 5, 1958

2 Sheets-Sheet 1



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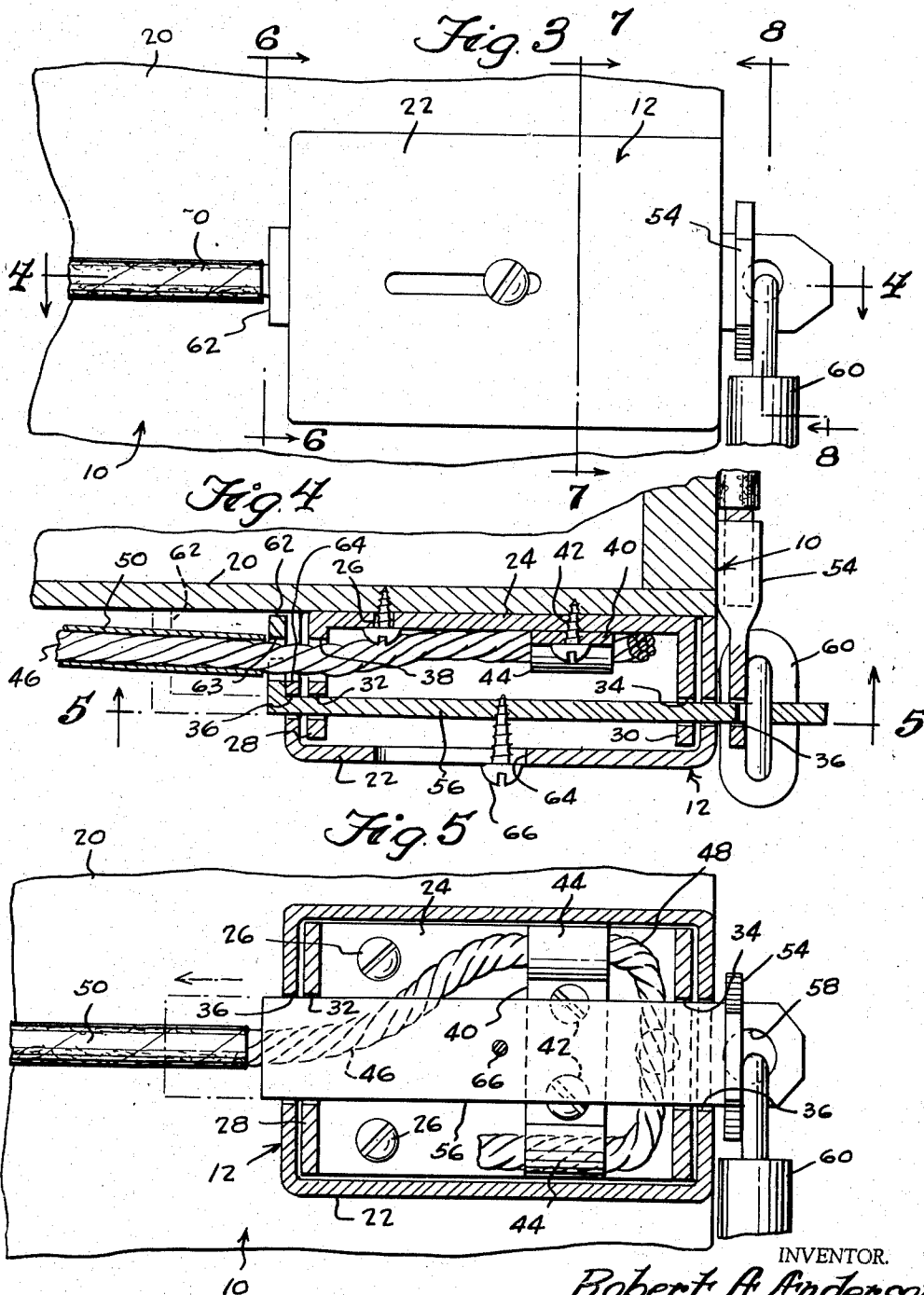
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SAFETY LOCK FOR REFRIGERATORS AND THE LIKE

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Application September 5, 1958, Serial No. 759,187

9 Claims. (Cl. 70—78)

This invention relates to a locking device adapted for application to a conventional refrigerator, food locker, freezer chest, or similar container. More specifically, the invention has reference to a safety lock of the character described that will be designed to be swiftly and easily positioned in locking relation to a container of the type described, to prevent opening of the refrigerator or other container.

Refrigerators, ice boxes, and the like are most generally provided with a handle, but not with a lock. This is not true, of course, in every instance. Nevertheless, a great number of refrigerators, particularly almost all refrigerators and freezers in general use in the home, are not equipped with locks.

Many fatal accidents have occurred when children have hidden in refrigerators or ice boxes, and have closed the doors thereof upon themselves. The present invention, accordingly, as one important object thereof, aims to preclude such accidents, through the provision of a locking device that will be tamper-proof, and will completely prevent opening of the door of the refrigerator.

Another object is to provide a locking device of the character stated which will not require any modification or redesign of the refrigerator or other container to which it is applied.

Another object is to provide a locking device as stated that will be applicable to a refrigerator with a minimum amount of difficulty.

Another object is to provide a safety lock of the character stated which will be readily unlocked by one possessing the key to the locking device, to permit normal use of the refrigerator.

Another object is to provide a safety locking device which will have utility not only in preventing accidents to children, but also, will permit the locking of refrigerators that are in exposed locations, where the contents thereof can be readily stolen. This is true, for example, in many instances in which refrigerators are kept on porches, in apartment house basements, storage rooms, etc.

Another object of importance is to provide a device of the type described which will represent a minimum projection outwardly from the wall of the refrigerator or other container.

Still another object is to provide a locking device for refrigerators and similar containers, that will be swiftly formed to fit the perimeter of the particular device to which it is applied, despite wide variations in the sizes of such devices.

Still another object is to provide a locking device of the character stated that will be tamper-proof, in the sense that it cannot be removed by an unauthorized individual, without such extensive difficulty so far as said individual is concerned as to offer a strong deterrent to its being removed by anyone except an authorized person.

Other objects will appear from the following description, the claims appended thereto, and from the annexed

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drawing in which like reference characters designate like parts throughout the several views and wherein:

Figure 1 is a fragmentary perspective view showing a refrigerator from the front, to which has been applied a locking device according to the present invention;

Figure 2 is a fragmentary rear perspective view of the refrigerator with the device applied thereto;

Figure 3 is an enlarged, fragmentary rear elevational view of the refrigerator with the device applied thereto;

Figure 4 is a longitudinal sectional view through the device, substantially on line 4—4 of Figure 3;

Figure 5 is a sectional view through the device on line 5—5 of Figure 4;

Figure 6 is a transverse sectional view on line 6—6 of Figure 3;

Figure 7 is a transverse sectional view on line 7—7 of Figure 3;

Figure 8 is a view of the device as seen from the line 8—8 of Figure 3;

Figure 9 is a perspective view of the back plate of the device; and

Figure 10 is a fragmentary perspective view of a sliding locking plate of the device.

Referring to the drawing in detail, generally designated 10 is a conventional refrigerator, comprising the usual body portion 14 to which is connected a hinged front door 16 adapted to be opened by operation of the handle 18.

Applied to the back wall 20 of the refrigerator is the housing of the locking device 12 constituting the present invention. As a result, the housing is in an out-of-the-way location, and in fact, when the locking device is not in use, said housing will not be visible to the casual viewer so as not to detract from the appearance of the refrigerator.

The invention includes a backing or base plate 24, which is secured to the back wall 20, at one corner of the refrigerator, by means of screws 26 spaced transversely of the backing plate adjacent one end thereof. As will presently appear, other screws are employed in spaced relation to the screws 26, to connect the backing plate to the back wall 20, but these serve an additional purpose, and accordingly will be described in greater detail hereinafter.

In any event, the backing plate 24 is formed at opposite ends thereof with outwardly projecting end walls 28, 30 respectively, having transverse slots 32, 34 registered in a direction longitudinally of the backing plate for the purpose of receiving a straight locking bar that is to be described in full detail hereinafter.

A cover plate 22 of the device is provided, which completely covers the backing plate when the device is in use, as will be readily noted from Figure 4 and from Figure 5. The cover plate 22, as will be noted, is of rectangular configuration, having a continuous peripheral wall extending into contact with the back wall 20 of the refrigerator.

Designated at 40 is a clamping plate, having spaced openings receiving connecting screws 42 that extend into the back wall 20. The connecting plate 40, at opposite ends, has arcuate clamping portions 44 adapted to overlap portions of a cable 46, which can be either a wire rope or a steel cable. The cable 46 constitutes a flexible element looped at one end as at 48, with spaced portions of the loop extending under the portions 44 of the clamping plate.

Designated at 50 is a protective sheath for the cable, which is applied thereto for the purpose of preventing the cable from marring the finish of the container 10. Obviously, the sheath can be any of various materials, and in a preferred embodiment might be of a flexible plastic, cloth, etc.

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Designated at 54 is a locking plate, which at one end is crimped as at 55 about the cable, and thereafter welded at the crimped end so as to be permanently connected to the cable. The other end of the locking plate is widened, and is slotted to receive one end portion of an elongated locking bar 56, having at said end an opening 58 (Figure 5) receiving the hasp of a padlock 60 conveniently accessible either from the back or from the side of the refrigerator. At its other end, locking bar 56 is formed with a rearwardly projecting extension 62, formed with an opening 63 through which the cable extends, the cable being thereafter projected through opening 38 formed in end wall 28 of backing plate 24.

Formed in the wall of cover plate 22, at the end of the cover plate adjacent the angular extension 62 of the locking bar 56, is a slot 64, to permit the cover plate to be applied in position over the flexible element or cable 46.

In use of the device, and assuming that it is being installed upon a refrigerator, as a first step the backing plate 24 is secured to the refrigerator by the screws 26. Then, the cable 46, with the locking bar already connected to one end thereof, is cut to a proper length to permit it to extend snugly about the refrigerator.

The cut end is then inserted through opening 38 of the backing or base plate. The loop 48 is then formed, and the cable is secured to the backing plate by means of a clamping plate 40, which is now connected to the backing plate by means of the screws 42, said screws passing also into the back wall 20 of the refrigerator.

Now, the cover plate 22 is positioned over the base plate. The locking bar 56, of course, was previously applied to cable 46, that is, the cut end of the cable was extended through the opening 63 of angular extension 62 of the locking bar 56, before the cable was extended through opening 38, looped, and secured to the base plate. The locking bar is now extended through the slots 36, 32, 34, 36 in a direction from left to right in Figure 4, so as to project at its right hand end, viewing the same as in this figure of the drawing, beyond the cover plate.

The cover plate has a slot 64, adapted to receive a screw 66. Screw 66 is extended through slot 64 and is engaged in the locking bar 56 though not being turned up tight at this time.

Covering 50, of course, is applied to the exteriorly exposed portions of the cable, to prevent chafing of the finish of the refrigerator. Referring to Figure 2, a clip 52 is applied to the refrigerator, in spaced relation to the housing, to hold the cable against downward movement at the location of said clip 52.

The cable is now pulled about the entire perimeter of the refrigerator, and may extend through the handle 18. The locking plate 54 would previously have been applied to the cable, at the time of manufacture of the device, and is positioned over the projecting end of locking bar 56. Thereafter, the hasp of the padlock is extended through the opening 58.

The device is now firmly secured, and as will be noted, all the parts are effectively interlocking one with another. Base plate 24 holds the locking bar 56, the locking bar being prevented from endwise movement out the slots 32, 34 due to the angular extension 62 on one end of the locking bar, and due to the padlock at the other end thereof. The locking bar in turn holds the cover plate applied in position. The cover plate completely encloses the base plate, to prevent one's tampering with the device and removing the same or loosening the cable. Further, the entire device is in an out-of-the-way location. If, for example, one were to desire to remove the locking means, he need only unlock the padlock, and remove the same after which the entire device is freed for separation of the interengaged component parts thereof.

The purpose of the slot 64 and screw 66 is to permit

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the locking bar to slide back, that is, to the left in Figure 4 to the dotted line position thereof shown in this figure of the drawing, when the locking bar is not in its locked position shown in full lines in this figure of the drawing. In this way, the locking bar will not extend in projecting position at the right hand end thereof viewing the same as in Figures 4 and 5 in these particular circumstances, so that one's clothing will not be snagged thereon. Further, the device would have a neater appearance at this time.

It is believed apparent that the invention is not necessarily confined to the specific use or uses thereof described above, since it may be utilized for any purpose to which it may be suited. Nor is the invention to be necessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles it being considered that the invention comprehends any minor change in construction that may be permitted within the scope of the appended claims.

What is claimed is:

1. A device to prevent unauthorized opening of a container comprising: a backing plate adapted for fixed connection to said container and having end openings; a flexible element secured at one end to said backing plate and adapted to encircle said container; a locking bar extending through said openings and having an abutment at one end limiting the locking bar against longitudinal movement in one direction; a cover plate overlying the backing plate and having apertures at its end through which the locking bar extends, the other end of the locking bar having an opening; a locking plate on the other end of the flexible element apertured to receive said other end of the locking bar; and a lock extending through said opening of the locking bar adjacent the locking plate so as to limit the locking bar against movement in an opposite direction out of engagement with the locking plate.

2. A device to prevent unauthorized opening of a container, comprising a backing plate adapted for fixed connection to said container and formed at its ends with end walls having openings; a flexible element secured at one end to said backing plate and adapted to encircle said container; a locking bar extending through said openings and having an abutment at one end limiting the locking bar against longitudinal movement in one direction; a cover plate overlying the backing plate and having apertures at its end through which the locking bar extends, the other end of the locking bar having an opening; a locking plate on the other end of the flexible element apertured to receive said other end of the locking bar; and a lock extending through said opening of the locking bar adjacent the locking plate so as to limit the locking bar against movement in an opposite direction out of engagement with the locking plate.

3. A device to prevent unauthorized opening of a container, comprising: a backing plate adapted for fixed connection to said container and formed at its ends with end walls having openings; a flexible element secured at one end to said backing plate at a location between the end walls, and adapted to encircle said container; a locking bar extendable through said openings and having an abutment at one end limiting the locking bar against longitudinal movement in one direction relative to the backing plate; a cover plate overlying the backing plate and having apertures at its ends through which the locking bar extends, the cover plate completely enclosing the backing plate, the other end of the locking bar having an opening, said other end of the locking bar projecting exteriorly of the cover plate; a locking plate on the other end of the flexible element apertured to receive said other end of the locking bar; and a lock having a hasp extendable through said opening of the bar adjacent the locking plate, to limit the bar against longitudinal movement in the opposite direction out of engagement with the locking plate.

7. A device to prevent unauthorized opening of a container, comprising: a backing plate adapted for fixed connection to said container and formed at its ends with end walls having openings; a flexible element secured at one end to said backing plate at a location between the end walls, and adapted to encircle said container; a locking

9. A device to prevent unauthorized opening of a container, comprising: a backing plate adapted for fixed connection to said container and formed at its ends with end walls having openings; a flexible element secured at one end to said backing plate at a location between the end walls, and adapted to encircle said container; a locking bar extendable through said openings and having an abutment at one end limiting the locking bar against longitudinal movement in one direction relative to the backing plate; a cover plate overlying the backing plate and having apertures at its ends through which the locking bar extends, the cover plate completely enclosing the backing plate, the other end of the locking bar having an opening, said other end of the locking bar projecting exteriorly of the cover plate; a locking plate on the other end of the flexible element apertured to receive said other end of the locking bar; a lock having a hasp extendable through said opening of the bar adjacent the locking plate, to limit the bar against longitudinal movement in the opposite direction out of engagement with the locking plate, said abutment of the locking bar being in the form of an angular extension of the locking bar, said extension of the locking bar projecting exteriorly of the cover plate at the end thereof remote from the locking plate, said extension of the locking bar

having an opening through which the flexible element projects, the cover plate being in the form of a flat member having a peripheral wall, said openings of the cover plate being formed in said peripheral wall thereof, the peripheral wall extending fully about the backing plate; and a retaining element projecting from the locking bar intermediate said end walls of the backing plate, the cover plate having a slot receiving said element to limit longitudinal movement of the locking bar in the opposite

direction when the hasp is removed from the first named opening of the locking bar.

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