

June 23, 1931.

A. QUARNSTROM

1,811,279

REFRIGERATING APPARATUS

Filed May 27, 1929

2 Sheets-Sheet 1

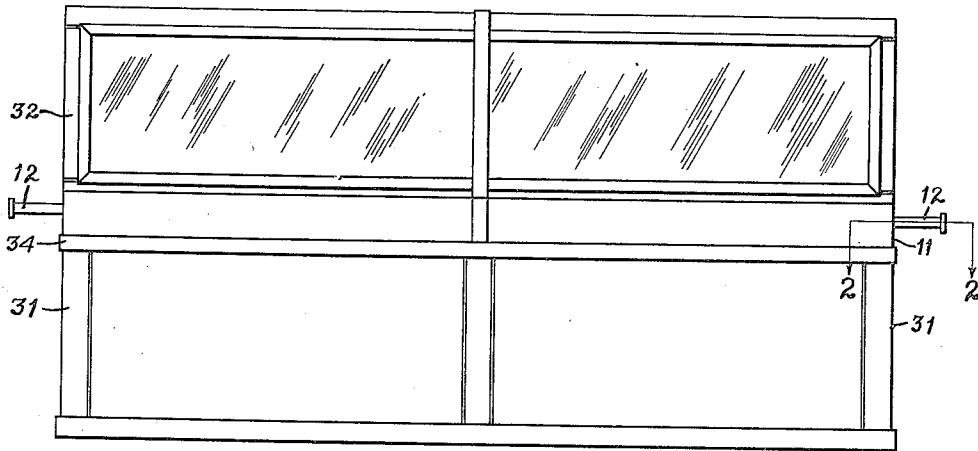


Fig. 1

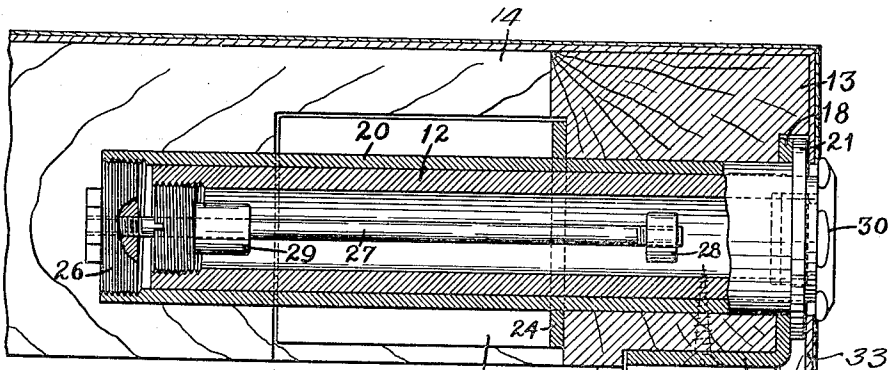
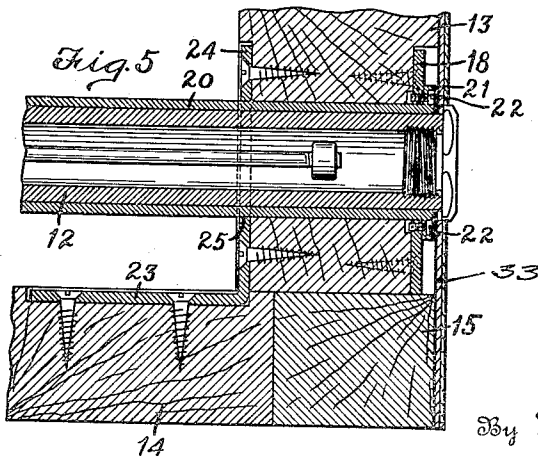


Fig. 3



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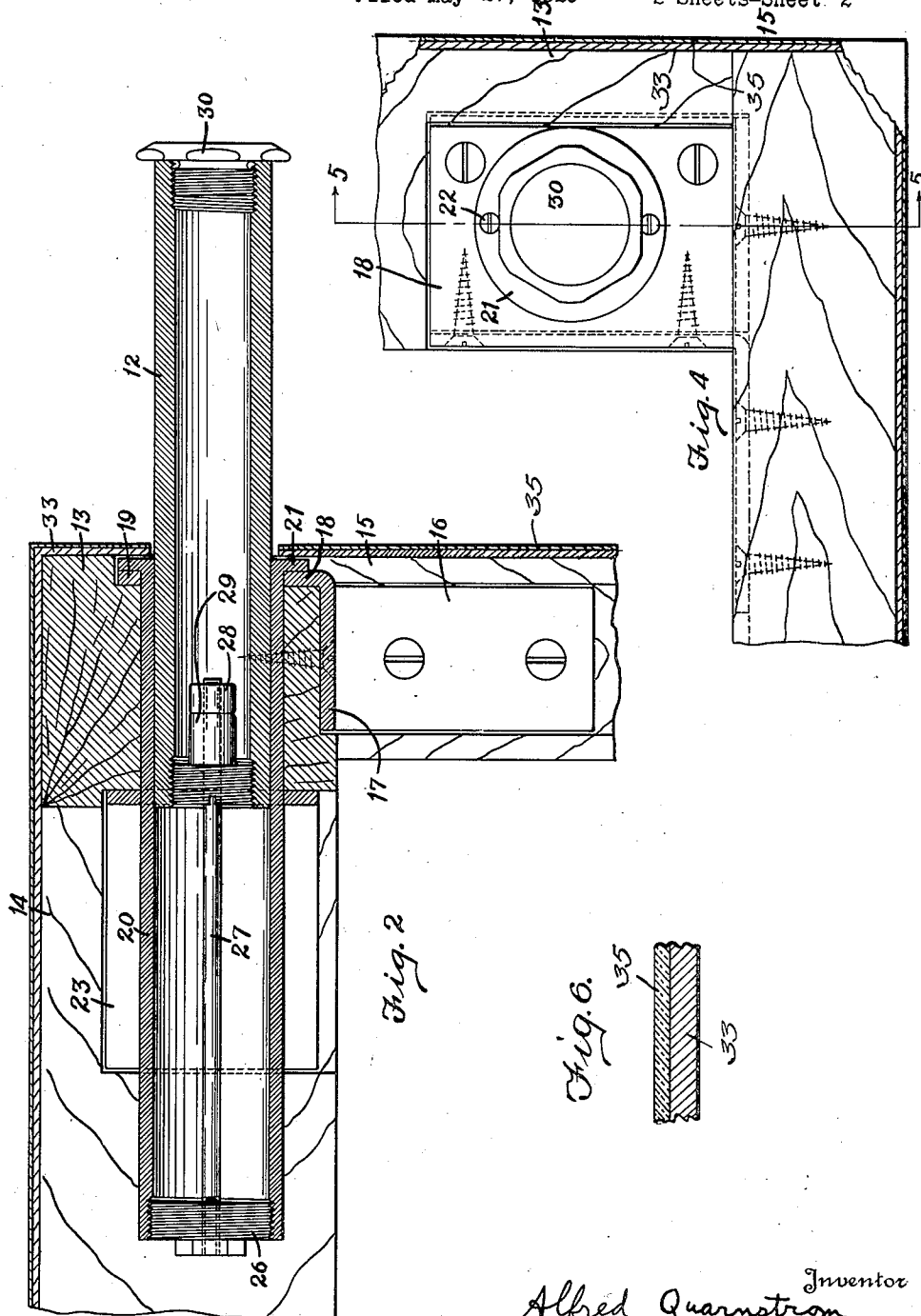
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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REFRIGERATING APPARATUS

Application filed May 27, 1929. Serial No. 366,112.

This invention relates to refrigerating apparatus and especially to the provision of handling means for heavy refrigerator cabinets.

5 More specifically an object of the invention is to provide a concealed lift bar for refrigerator cabinets.

Further objects and advantages of the present invention will be apparent from the following description, reference being had to the accompanying drawings, wherein a preferred form of the present invention is clearly shown.

In the drawings:

15 Fig. 1 is a front view of the refrigerator cabinet in which the invention has been installed.

Fig. 2 is a cross-section on line 2—2 of Fig. 1 disclosing the lift bar extended from its place of concealment;

Fig. 3 is a cross-section of the lift bar and its supporting mechanism in Fig. 2 with the lift bar in a concealed position;

Fig. 4 is an end view of Fig. 3;

25 Fig. 5 is a cross-section on line 5—5 of Fig. 4; and

Figure 6 is an enlarged fragmentary sectional view of a cabinet casing and coating therefor.

30 It is highly desirable in heavy refrigerator cabinets, especially of the display type for commercial use, that they have no projections upon sides of the cabinet in order that the display cabinet may closely abut other display cabinets. Even if such a cabinet is apart from the other counters or cabinets in a store it is also desirable that there be no projections upon its sides to interfere with the passage of customers about it, and it is especially desirable that there be no projections to catch on the clothing or bundles of such customers. Such a construction of smooth ends presents difficulty in moving the refrigerator about the store when it is desirable to change its location. Accordingly the invention contemplates the provision of a concealed bar that can be pulled out for use when desired.

Referring to the drawings, in Fig. 1 is disclosed a display refrigerator cabinet of the

type to which the invention is applicable.

At a convenient height on the ends 11 of the display cabinet are located normally concealed lift bars 12. Any number of these may be located at either end or on any side of the cabinet, if desired. By lift bar is meant

an object that will aid in shifting or moving the cabinet from one place to another by providing a gripping surface. In Figs. 3 and 5 the outer metal casing 33 of the cabinet in Fig. 1, which is preferably of steel has a

frangible coating 35 of porcelain or pyroxyline paint. The cabinet is preferably constructed with frame members, and three such frame members 13, 14 and 15 are disclosed at the location of this lift bar in Figs. 2, 3 and 5.

A supporting angle iron 16 is secured to a frame member 15 and its vertical leg 17 secures it to a frame member 13. The vertical leg 17 has a flange 18 around the outer facing of the frame member 13 and located in a depression in said outer facing. An opening 19 extends through both the flange and the frame member 13. This opening is preferably circular in cross-section although other shapes may be adopted with a corresponding change in the other elements associated therewith and hereinafter described. A sleeve 20 extends through the opening 19 to the interior of the cabinet. The sleeve 20 has a flange 21 about the opening 19 and abutting the flange 18 and is secured to said flange by screws 22. Another angle iron 23 is preferably secured to the frame member 14 and has its vertical leg 24 secured to the inner face of the frame member 13. An opening 25 in this angle iron corresponds in shape with the opening 19 and this leg 24 acts as an additional support for the sleeve 20 and lift bar 12 therein. A sleeve plug 26 is attached to the inner end of the sleeve 20 preferably by having a screw-threaded connection therewith. This sleeve plug supports a stop rod 27 extending along the axis of the sleeve towards the opening 19. A stop 28 in the form of a collar is on the other end of the rod 27 which terminates before it reaches the opening 19. A guide plug 29 having a perforated axis for the rod 27 is secured to the inner end of the lift bar preferably by a threaded connection as

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disclosed. A plug 30 is attached to the front of the lift bar. As disclosed in the figures the lift bar is adequately supported in its sleeve by the angle irons 16 and 23 in connection with the frame member 13. As disclosed in Fig. 2 this lift bar 12 may be drawn out until the guide plug 29 abuts the stop 28. It will be noted that this extended position in Fig. 2 has the force exerted on the rod 12 borne by the sleeve frame member 13 and the two angle irons 16 and 23. When the use of such a lift bar is not desired it can be inserted in its sleeve as disclosed in Fig. 3. Accordingly there has been disclosed a concealed lift bar that will not interfere with the clothing of customers or with the placing of the display case against any other case if such a position is desired.

While the invention may be applied to any form of cabinet it is especially applicable to the form disclosed in Fig. 1. In this structure the cabinet is covered with a metallic casing 33 and the casing is preferably coated with the beautiful and easily cleaned but frangible coating, such as porcelain enamel. If a crowbar were placed under the edge of the cabinet the resulting strain on the metal casing directly above it would be apt to crack the porcelain. Furthermore the porcelain due to its smoothness does not provide an easily gripped surface. The concealed lift bar accordingly aids as a means of shifting the cabinet around without placing any strain on the casing and consequently there is no danger of cracking the porcelain. While the cabinet disclosed may have an integral framework, the cabinet may also have stacked vertical sections. The base portion 31 may have its separate framework and telescope into the flange 34 of the upper display section 32. The lift bars in the display section 32 in this construction provide means for lifting the section on or off the base section and carrying it about. There may be frame members in the top wall of the base member normally concealed by the upper portion that might provide a gripping surface that would bring no strain upon the casing. Otherwise concealed lift bars may be placed in the base section. A suitable seal of rubber or rubber composition is placed between the flange 34 and the base 31 and compressed by the weight of the upper section to prevent heat leakage between the sections.

While the form of embodiment of the invention as herein disclosed, constitutes a preferred form, it is to be understood that other forms might be adopted, all coming within the scope of the claims which follow.

What is claimed is as follows:

1. In a heavy elongated cabinet including a rigid framework and a casing having a frangible coating covering said framework, the combination of a sleeve rigid with said framework and a lift bar slidable into said

sleeve and slidable substantially entirely within the casing.

2. The combination with a heavy elongated cabinet including a rigid framework and a casing covering said framework and having a frangible coating, of a sleeve rigidly secured to said framework and a lift bar slidable into said sleeve and substantially entirely within the casing when it is not in use.

3. In combination with a heavy elongated cabinet including a rigid framework and a casing covering said framework and having a frangible coating, sleeves rigid with said framework at the ends of said cabinet and a lift bar slidable into each sleeve and substantially entirely within the casing when not in use, said lift bars having substantial bearing engagement with the sleeves.

In testimony whereof I hereto affix my signature.

ALFRED QUARNSTROM.