April 15, 1941. H. E. TROTTER 2,238,543

REFRIGERATOR, DISPLAY CASE, OR MEAT COOLER

Filed May 22, 1939

FIG. 1.

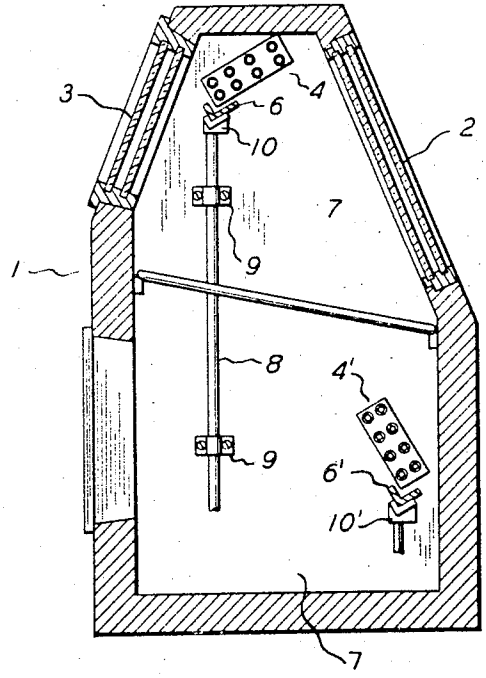


FIG. 2.

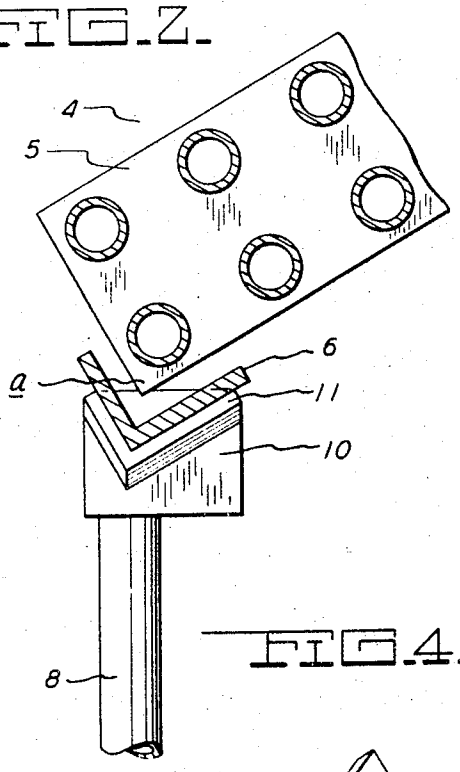


FIG. 4.

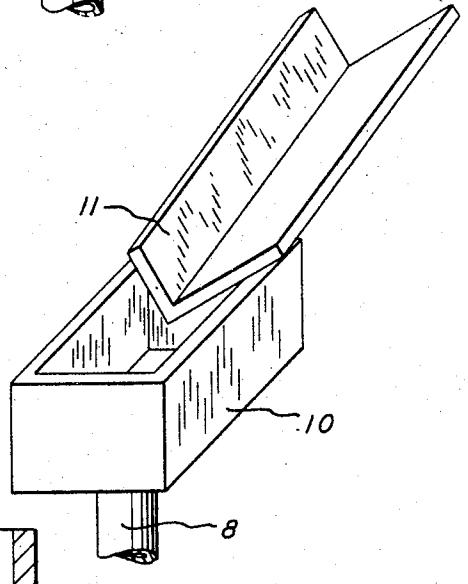
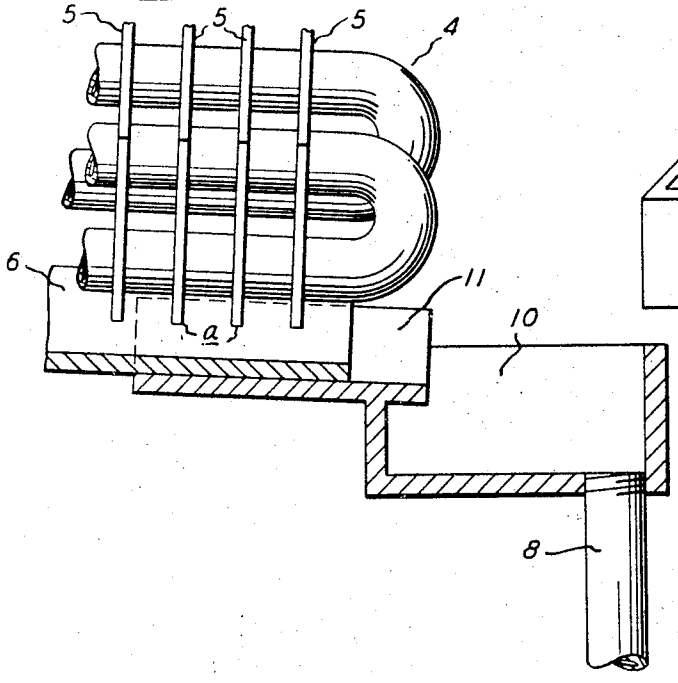


FIG. 3.



HENRY E. TROTTER
INVENTOR.

BY Cecil L. Wood
ATTORNEYS.

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REFRIGERATOR, DISPLAY CASE, OR MEAT COOLER

Henry E. Trotter, Fort Worth, Tex.

Application May 22, 1939, Serial No. 275,013

3 Claims. (Cl. 62—89.6)

This invention relates to refrigerator display cases and has particular reference to the cooling unit of a device of this character.

The primary object of the invention resides in the provision of a coil installation which will have an increased efficiency by reason of its construction and position within the case.

Another object of the invention is in the provision of a novel drain receptacle positioned at the upper end of a vertically adjustable drain pipe whereby the coil installation may be adjusted at different angles and yet the water will be carried off without dripping into the case.

A further object of the invention resides in the provision of a trough for cooperation with the present coil installation which will not obstruct the circulation of air through the fins and coils and thereby will reduce the required flow through the coils and, consequently, will reduce the cost of operation.

Broadly, the invention seeks to comprehend a more efficient refrigerator display case by reason of improved construction of elements associated with the coil installation and the drain therefor.

Other objects of the invention will become apparent as the description proceeds when taken in connection with the accompanying drawing, wherein:

Figure 1 is an end sectional view of a refrigerator display case showing the present invention installed therein.

Figure 2 illustrates a fragmentary elevational view of the lower end of an angularly positioned fin of the coil installation and showing the associated trough and drain receptacle positioned therebeneath.

Figure 3 is a vertical sectional view of the drain receptacle and the troughs, and illustrates the relative position of a fragmentary portion of the coil installation with respect to these parts, and

Figure 4 is a perspective view of the drain receptacle and showing the supporting trough attached thereto.

The numeral 1 designates a conventional refrigerator display case which has an inclined display window 2 in the front thereof and an inclined door 3 in the back, as shown in Figure 1. Within the upper portion of the case 1 and suspended to the top thereof by a conventional hanger (not shown) there is angularly positioned a coil installation 4, the fins 5 of which are rectangular in shape. Thus, the lower corners *a* of the said fins define a straight line and beneath which there is positioned a relatively narrow trough 6, as particularly shown in Figures 2 and 3. By this construction, accumulations of moisture, such as occur during defrosting, will form along the lower edges of the fins 5 and follow the lower edges of the same to the lowermost points *a* where they will fall into the trough 6.

Since the trough 6 is narrow, a greater circulation of air is permitted through the coil installation 4. This is particularly true when the door 3 is opened and warm air is permitted to enter the case since there are no baffles, as in conventional constructions, to prevent the unobstructed entry and circulation of air.

The length of the installation 4 and the trough 6 are downwardly inclined toward the end of the case 1, as indicated in Figure 3.

To the inner side of the wall 7 of the case 1 there is attached a vertically adjustable drain pipe 8, the said adjustment being made possible by brackets 9 which enclose and frictionally engage the said pipe against the said wall by screws or similar means.

Threadedly attached to the upper end of the drain pipe 8 there is positioned a receptacle 10 which opens into the said drain. To provide drainage from the trough 6, there is an integral, or otherwise rigidly attached, short trough 11 on the receptacle 10. The short trough 11 supports the first referred to trough 6 and at the same time provides a flexible connection between the adjacent parts. Such a connection is desirable when changing the longitudinal angle of the longer trough 6 which operation, accordingly, necessitates the raising and lowering of the drain 8 and receptacle 10.

Obviously, the trough 6 may be higher at the center and thereby cause each end of the said trough to be a discharge end. In such modification drain pipes 8 and corresponding receptacles 10 may be provided at each end of the case 1 in the manner as previously described.

Another coil installation 4' may be provided within the lower front portion of the case 1, as shown in the lower right hand portion of Figure 1. The longitudinal trough 6' and its corresponding receptacle 10' are similar to the corresponding elements heretofore referred to.

Manifestly, the structure herein shown and described is capable of considerable changes and modifications from time to time by those skilled in the art, and such changes and modifications as may be resorted to and which may be considered as coming within the spirit and intent of the in-

vention may also be considered as falling within the scope of the appended claims.

What is claimed is:

1. In a refrigerator display case having a coil installation including a series of rectangular fins arranged obliquely with respect to the transverse plane of the said case and a trough therebeneath, a vertically adjustable drain attached to the wall of the said case, a receptacle attached to and opening into the upper end of the said drain and a support forming a relatively short trough attached to the said receptacle for receiving and supporting the first named trough.

2. In combination, a refrigerator display case, a coil installation having a series of rectangular fins suspended at an angle in the upper space of the said case, a trough longitudinally positioned beneath the lowermost corners of the said fins, a vertically adjustable drain attached to the wall of the said case, a receptacle attached to the upper end of and opening into the said drain and a trough attached to the upper edge of the said receptacle and longitudinally adjustably supporting the said first named trough.

3. In a refrigerating case having a refrigerating coil longitudinally disposed therein, the said coil including a series of rectangular fins angularly disposed with respect to the transverse axes of the said case, an adjustable drain trough arranged beneath the lowermost corners of the said fins, a drain tube adjustably supported in one end of the said case, a drain receptacle secured to the uppermost end of the said drain tube having an auxiliary trough connected thereto adapted to adjustably support the said drain trough.

HENRY E. TROTTER.