Jan. 2, 1934. F. E. HORN 1,942,290

REFRIGERATOR LIGHTING STRUCTURE

Filed Jan. 9, 1933

Fig. 1.

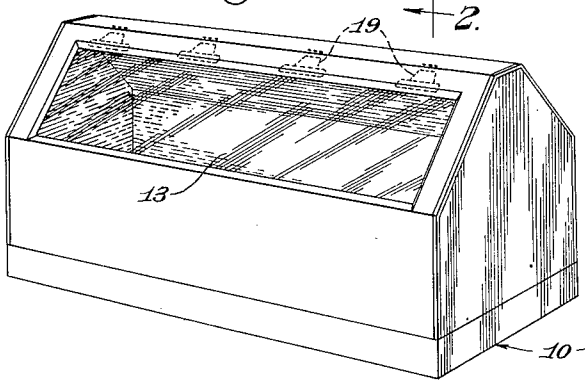


Fig. 2.

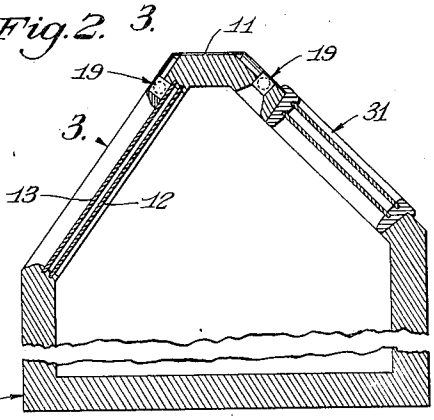


Fig. 3.

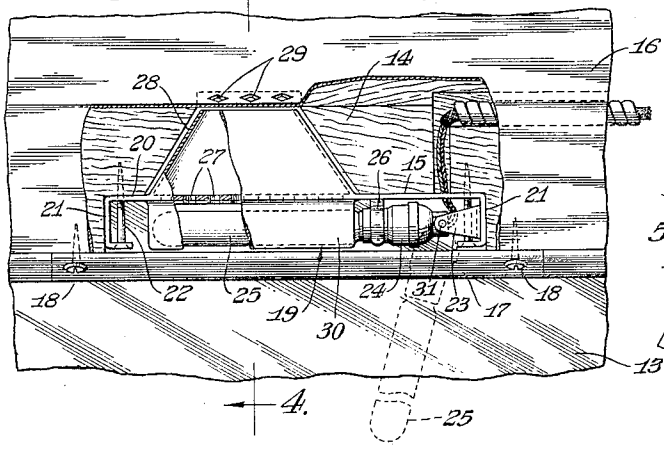


Fig. 4.

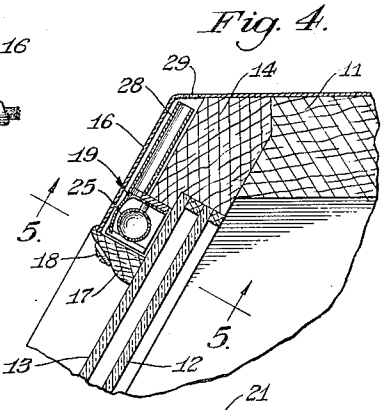


Fig. 5.

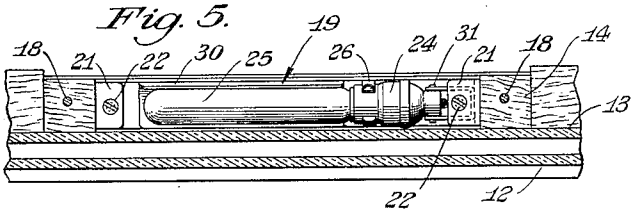


Fig. 6.

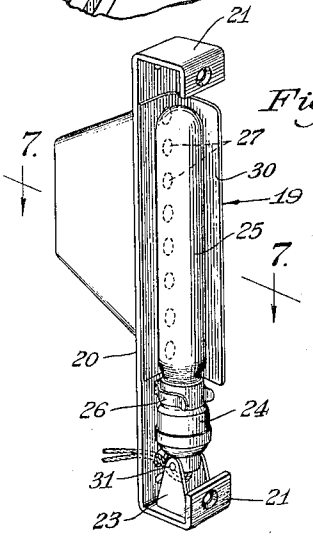
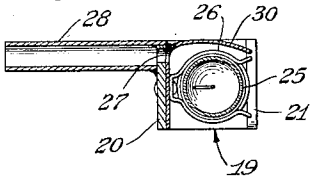


Fig. 7.



Fred E. Horn
INVENTOR

BY Victor J. Evans & Co.

HIS ATTORNEYS

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REFRIGERATOR LIGHTING STRUCTURE

Fred E. Horn, Marshall, Mich.

Application January 9, 1933. Serial No. 650,925

3 Claims. (Cl. 240—6)

This invention relates to certain novel improvements in refrigerator lighting structures, and has for its principal object the provision of an improved construction of this character which will be highly efficient in use and economical in manufacture.

This invention relates to illuminating means for display refrigerators and has for an object thereof to provide a new and concealed illuminating structure, by means of which the refrigerator may be adequately illuminated, but which illuminating structure is at the same time invisible to the observer of the refrigerator.

Another object of the invention is to provide a new and efficient mounting for the bulb or light emitting element by which the bulb may be conveniently removed and replaced when and if desired.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawing, showing the preferred form of construction, and in which:

Fig. 1 is a perspective view of a display refrigerator having the invention associated therewith;

Fig. 2 is a sectional view on line 2—2 in Fig. 1;

Fig. 3 is a fragmentary detail view on line 3—3 in Fig. 2 with a part of the front panel of the casing which encloses the bulb broken away to reveal the bulb and its mounting;

Fig. 4 is a sectional view on line 4—4 in Fig. 3;

Fig. 5 is a sectional view on line 5—5 in Fig. 4;

Fig. 6 is a perspective view of the bulb and its mounting; and

Fig. 7 is a transverse sectional view on line 7—7 in Fig. 6.

In the drawing the display refrigerator with which the invention is associated is generally indicated at 10 and includes a top wall 11, a transparent inclined front wall consisting of two parallel panes of glass 12 and 13, and a rail 14 extending parallel to the front wall along the upper edge thereof.

The new lighting structure is mounted on the outer pane 13 of the front wall of the refrigerator and to this end there are formed in the rail 14 at intervals therealong recesses 15 which open at their lower sides downwardly along the front wall pane 13. These recesses are closed at the front and top by a metal sheet 16 which also extends over the top of the refrigerator. The recesses 16 are closed at their lower sides by closure strips 17 that are removably secured to the rail 14 by screws 18.

Each of the recesses 15 opens at its rear side against the pane 13 and in each of these recesses 15 one of the new lighting structures, generally indicated at 19, Fig. 6, is arranged. Each of the new lighting structure units 19 comprises a U-shaped bracket 20 having end portions 21 which are secured to the rail 14 by screws 22.

Attached to one end of each of the bracket end portions 21 is a mounting 23 in which is pivotally mounted, as at 31, a bulb socket 24. Each bulb socket carries a bulb or light emitting element 25 and each of the bulbs 25 is normally retained in position with its long axis parallel to the front wall of the display refrigerator or case by a spring clip 26 attached to the corresponding bracket 20. The bulbs 25 and sockets 24 are thus mounted for movement in a plane parallel to the front wall of the refrigerator and into and out of the recesses 15 through the open lower sides thereof.

Formed in each of the brackets 20 is a series of ventilating apertures 27 which open rearwardly into a funnel-shaped vent element 28, one of which is integrally attached to each of the brackets 20. These funnel-shaped vent elements 28 open at their upper ends out through the cover sheet 16 on the top wall of the refrigerator, as at 29, so as to conduct air heated by the bulbs 25 out of the recesses 15, thus preventing the heated air from affecting the temperature of the refrigerator.

A light reflector 30 is integrally fastened to each of the brackets 20 to direct the light from the bulbs 25 through the transparent panes 13 and 12 into the interior of the refrigerator or case 10.

In case it becomes desirable or necessary to remove a bulb 25 from its socket 24 it is merely necessary to remove the corresponding screws 18 and closure strip 17 and then pivot the socket 24 and bulb 25 downwardly along the front wall into dotted line position of Fig. 3; the socket 24 swinging on its pivotal connection 31 to the mounting 23. The bulb may then be replaced and the socket and bulb pivoted upwardly into full line or upraised position of Fig. 3, in which position the bulb and socket are held by the corresponding spring clip 26; whereupon the corresponding closure strip 17 and screws 18 may be replaced, thus concealing the bulb from the view of the observers while adequately illuminating the interior of the display case or refrigerator.

The invention has been shown and described in detail applied to the front wall of the refrigerator

10 but the same may be also applied to the rear wall 31 of the refrigerator, if desired, or to both the front wall and the rear wall of the refrigerator.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having thus described my invention what I claim as new and desire to protect by Letters Patent is:

1. In a lighting structure for a refrigerator display case having a transparent front wall, a rail extending parallel to the front wall along the upper edge thereof having a recess formed therein opening at its rear side against the transparent front wall of the refrigerator and at its lower side downwardly along said front wall at the outer side thereof, a socket, and means for pivotally mounting the same in the recess for movement through the open lower side thereof in a plane parallel to said front wall, a light-emitting element in the socket, and a closure member removably attached to said rail for closing the open lower side of said recess.

2. In a lighting structure for a refrigerator display case having a transparent front wall, a rail extending parallel to the front wall along the upper edge thereof having a recess formed therein opening at its rear side against the transparent front wall of the refrigerator and at its lower side downwardly along said front wall at the outer side thereof, a socket, and means for pivotally mounting the same in the recess for movement through the open lower side thereof in a plane parallel to said front wall, a light-emitting element in the socket, a closure member removably attached to said rail for closing the open lower side of said recess, and a clip in said recess yieldably retaining said socket and light-emitting element in upraised position.

3. In a lighting structure for a refrigerator display case having a transparent front wall, a rail extending parallel to the front wall along the upper edge thereof having a series of recesses formed therein opening at their rear sides against the front wall of the refrigerator and at their lower sides downwardly along the said front wall at the outer side thereof, a socket in each of said recesses, means for pivotally mounting each of said sockets in said recesses for movement through the open lower sides thereof in a plane parallel to said front wall, a light-emitting element in each of said sockets, closure members removably attached to said rail for closing the lower sides of said recesses, and a clip in each of said recesses yieldably retaining said sockets and light emitting elements in upraised position.

FRED E. HORN.