Oct. 31, 1933. J. HEYDTHAUSEN ET AL 1,932,696

PORTABLE REFRIGERATOR

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Fig. 1.

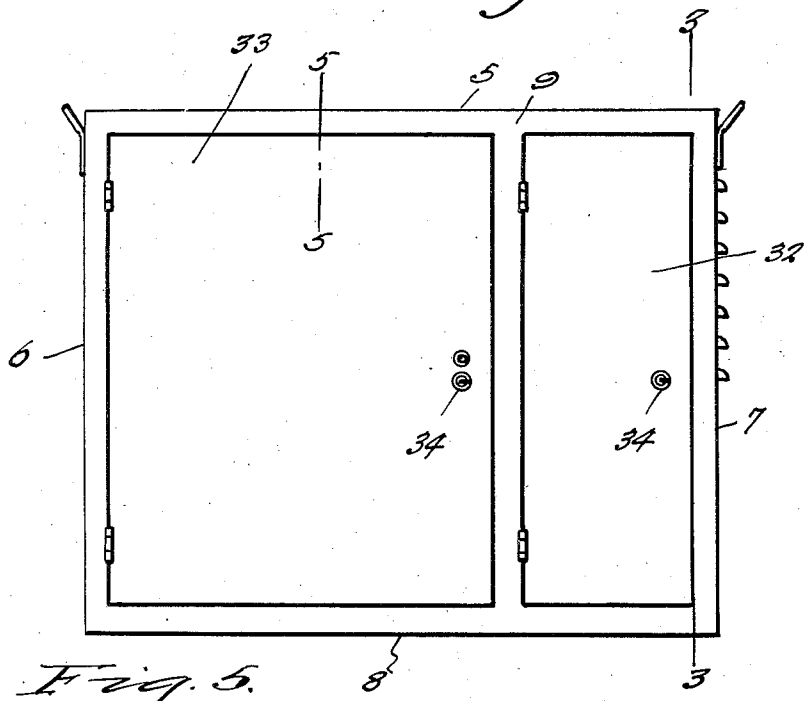


Fig. 5.

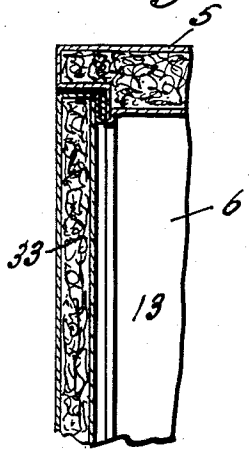


Fig. 11.

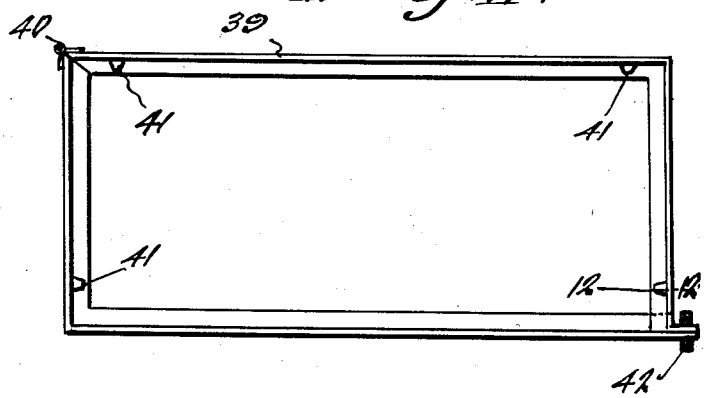
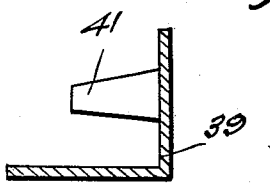


Fig. 12.



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Fig. 2.

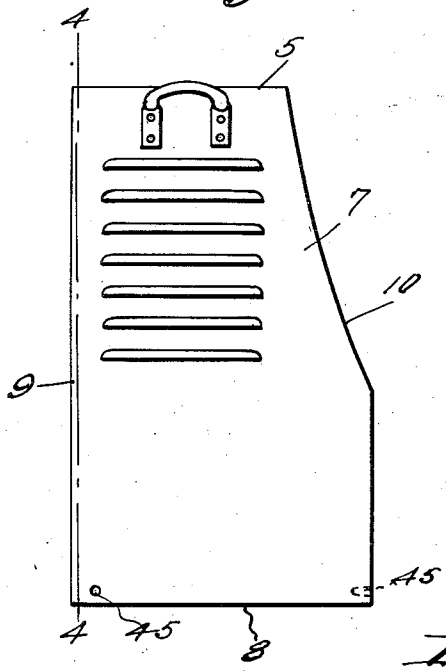


Fig. 3.

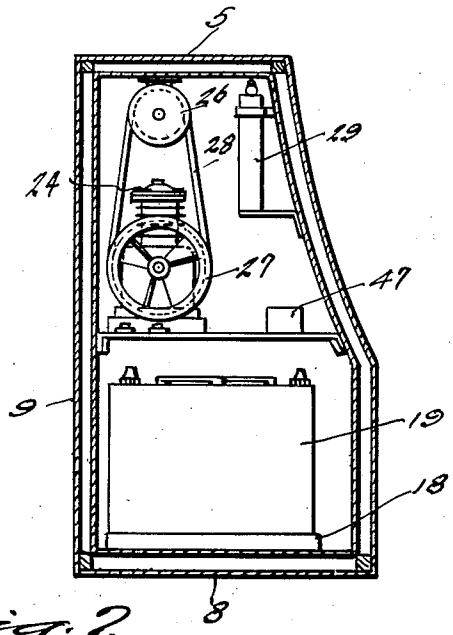
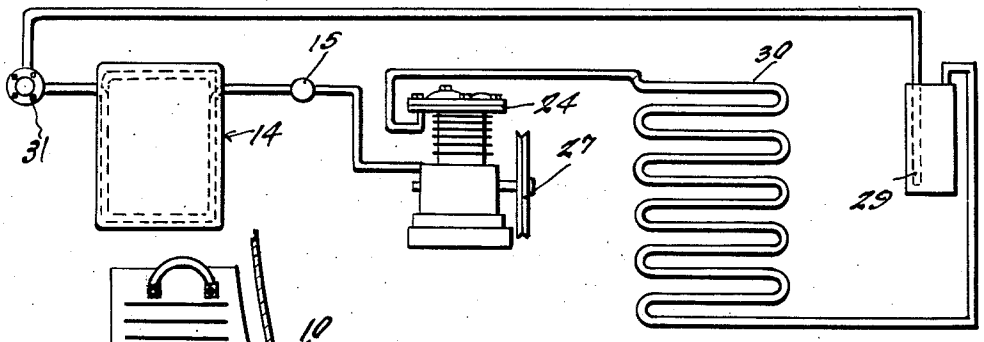


Fig. 7.



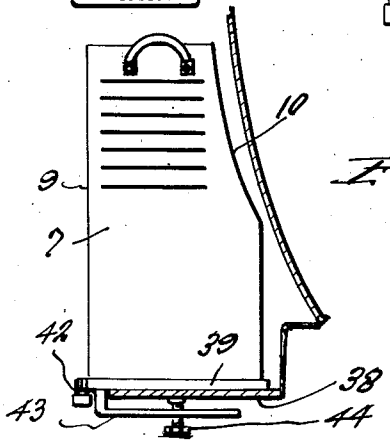


Fig. 10.

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Fig. 4.

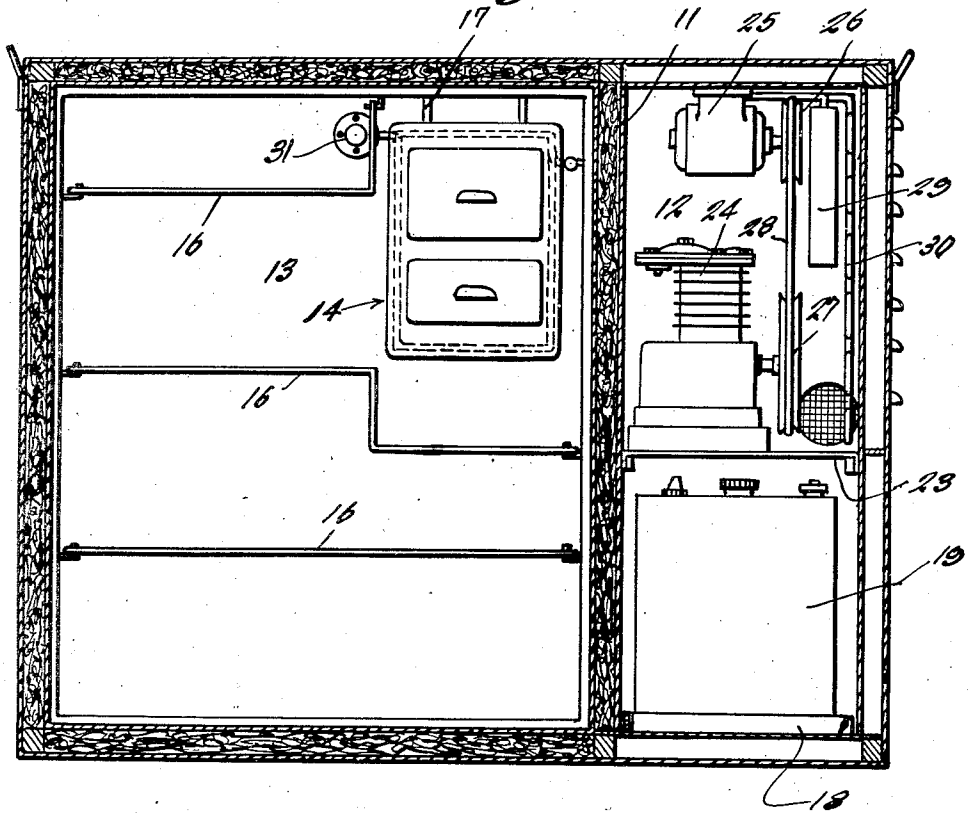


Fig. 8.

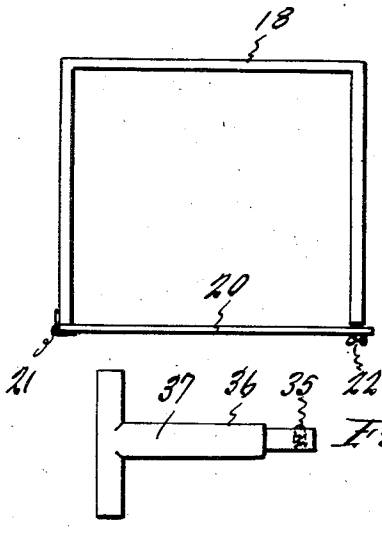
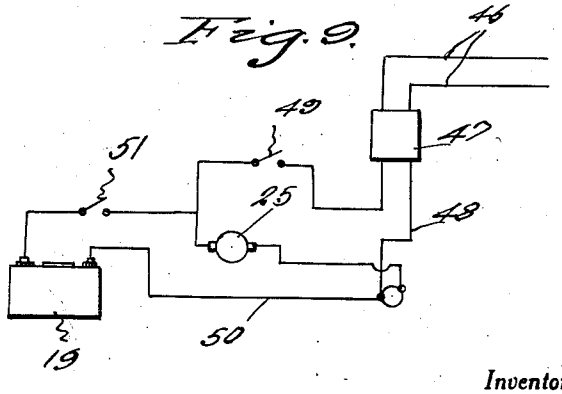


Fig. 6.

Fig. 9.



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UNITED STATES PATENT OFFICE

1,932,696

PORTABLE REFRIGERATOR

John Heydthausen and Lester E. Stipe, Portland, Oreg.

Application August 17, 1932. Serial No. 629,207

1 Claim. (Cl. 62—116)

This invention appertains to new and useful improvements in the art of refrigeration, and more particularly to a novel refrigerator of the electrical type, which has as its principal object, the provision of means whereby the same can be handled in a portable manner.

Another important object of the invention is to provide a portable refrigerator, wherein means is involved whereby the refrigerator can be positively secured to the running board of an automobile.

Other important objects and advantages of the invention will become apparent to the reader of the following specification.

In the drawings:—

Figure 1 represents a front elevational view of the novel device.

Fig. 2 represents an end elevational view of the refrigerator.

Fig. 3 represents a vertical sectional view taken substantially on line 3—3 of Fig. 1.

Fig. 4 represents a sectional view taken substantially on line 4—4 of Fig. 2.

Fig. 5 represents a fragmentary enlarged detailed sectional view taken substantially on line 5—5 of Fig. 1.

Fig. 6 represents an elevational view of the handle for the food compartment door.

Fig. 7 represents a diagrammatic view of the refrigerator system.

Fig. 8 represents a top plan view of the battery holder.

Fig. 9 represents a diagrammatic view of the electrical circuit.

Fig. 10 represents an end elevational view of the refrigerator shown secured to the running board of an automobile.

Fig. 11 represents a top plan view of the holding attachment for running boards.

Fig. 12 represents a sectional view taken substantially on line 12—12 of Fig. 11.

Referring to the drawings wherein like numerals designate like parts, it can be seen that the refrigerator consists of a casing, having a top wall 5, end walls 6—7, a bottom 8, a front wall 9 and a rear wall 10. The interior of this casing is divided by the partition 11 into the mechanism chamber 12 and the food compartment 13.

Numeral 14 generally refers to the freezing element of the refrigerator, located within the food compartment 13. In this compartment 13 is located the thermostat 15 as well as a plurality of vertically spaced shelves 16.

Numeral 17 represents suitable means for supporting or suspending the freezing elements 14 within the chamber 13. Referring to Fig. 4, taken with Fig. 8, it can be seen that within the bottom of the mechanism chamber 12 is placed the U-shaped frame 18 for receiving the storage battery 19, one end of the frame 18 having the bar 20 hingedly secured thereto as at 21. This bar 20 is swingable and secured at its free end to the remaining end of the frame 18 as at 22, to retain a battery 19 in the manner shown in Fig. 4, below the platform 23 in the chamber 12.

Upon the platform 23 is mounted the usual compressor 24 which is driven by the electric motor 25 by way of the pulleys 26—27, and belt 28. The fluid tank 29 is also located within this chamber 12 as is the condenser 30.

Within the chamber 13 at a suitable point is located the expansion valve 13. The front wall 9 of the cabinet or casing has a door 32 for the mechanism compartment 12 and a door 33 for the food compartment 13.

The doors 32 and 33 are provided with sockets 34 the interior wall of which is provided with a groove for receiving the spring pressed pawls 35 on the reduced extension 36 of a handle or knob 37, whereby the usual latch of the door can be manipulated.

For securing the refrigerator in place upon a running board 38 in the manner shown in Fig. 10, a pair of L-shaped members 39 of angle iron are hinged together as at 40 to provide a rectangular-shaped frame, the sections of which are provided with inwardly extending teats 41. The free ends of the sections of this frame are connectible together as at 42. As is clearly shown in Fig. 10, an arm extends downwardly and under the frame and this is denoted by numeral 43. A clamp screw 44 is feedable upwardly through the arm 43 and against the running board 38 to secure the frame firmly to the running board 38 and obviously with the fastening 42 and the refrigerator mounted within the frame, the aforementioned teats 41 are engaging into the recesses 45 on the lower portion of the casing (see Fig. 2).

Fig. 9 shows the electrical diagram whereby the refrigerator can be used and operated on an automobile or in a household where commercial current supply is available. Numeral 46 represents the lead to a plug or the like for connection to the city current supply and this line is connected to the step-down transformer 47 which has its secondary in circuit with the motor 25 of the refrigerator. In this circuit, which will be denoted by numeral 48, is located a manual switch 49.

When the refrigerator is to be used with commercial current supply, the switch 49 is closed.

It will be observed that the motor 25 is also in the circuit 15 with the battery 19 and the switch 51, so that when the refrigerator is in service on an automobile, the switch 51 can be closed for utilizing current from the battery 19.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having thus described our invention, what we claim as new is:—

A refrigerator of the character described comprising a portable casing, said casing having a partition therein, said partition dividing the casing into a food compartment, and a mechanism compartment, a closure for each of the said compartments, a mechanism supporting platform in said mechanism compartment dividing said compartment into upper and lower chambers, and a storage battery in said lower chamber, the remainder of the operating mechanism being located in said upper chamber and supported by said platform.

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