May 6, 1952 P. MANISCALCO 2,596,037

PORTABLE REFRIGERATOR

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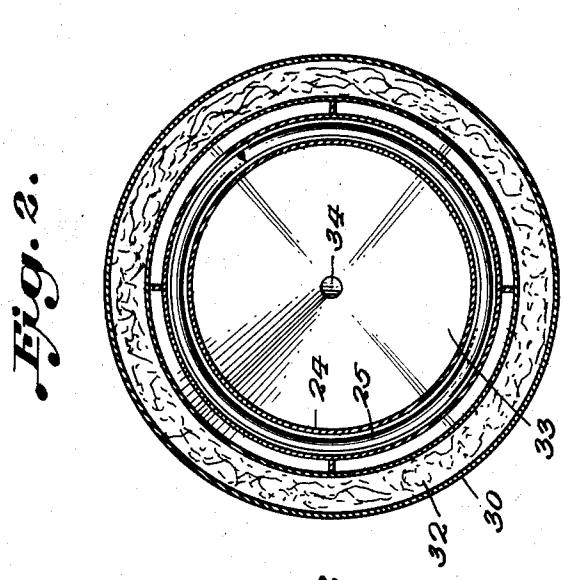


Fig. 2.

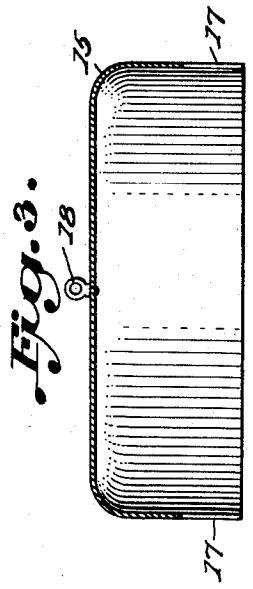


Fig. 3.

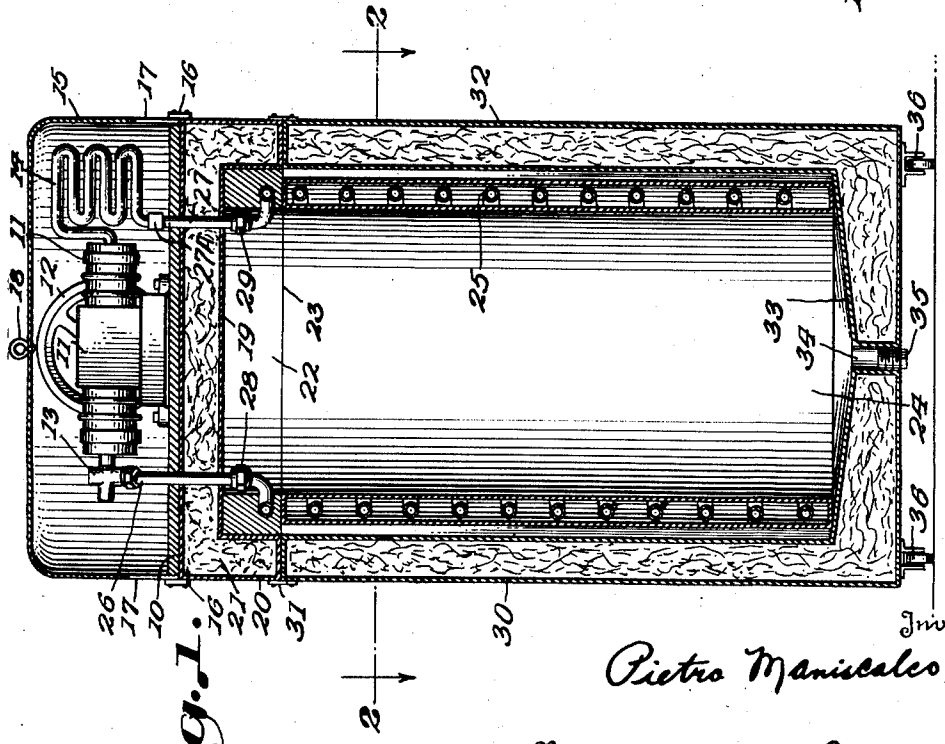


Fig. 1.

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PORTABLE REFRIGERATOR

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4 Claims. (Cl. 62—117.2)

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The present invention relates to portable refrigerators and it consists in the combinations, constructions and arrangements of parts herein described and claimed.

Generally, there is provided a portable refrigerator unit which may be moved singly or in multiple units from place to place by means of an overhead crane or the like and which may be inserted into especially constructed storage barrels to freeze the contents therein after which the unit may be extracted and moved elsewhere. The barrel unit is provided with a cover which may be placed thereon and locked in position after the removal of the refrigerator unit whereupon the barrels may be shipped to great distances and the contents preserved without the necessity for further refrigeration from outside sources.

It is accordingly an object of the invention to provide a simple, portable refrigerator unit which is efficient in operation and effective in use.

Another object of the invention is the provision of a novel evaporator forming a part of the aforesaid refrigerator unit.

Another object of the invention is the provision of a novel barrel especially adapted for use with the refrigerator unit.

Other and further objects of the invention will become apparent from a reading of the following specification taken in conjunction with the drawing, in which:

Figure 1 is a vertical sectional view of an embodiment of the invention,

Figure 2 is a sectional view taken along line 2—2 of Figure 1, and

Figure 3 is a vertical sectional view of a cover forming a part of the invention.

Referring more particularly to the drawing, there is shown therein a refrigerator unit consisting of a platform 10 of circular shape atop which is provided a compressor unit 11 preferably of the type disclosed in my former Patent No. 2,323,068, and in an application Serial No. 73,750, now pending for the same in the patent office and which compressor is provided with a fly wheel 12, an inlet valve structure 13 and a suitable condenser 14.

A cover 15 is removably secured to the platform 10 by means of clamps 16 and suitable openings 17 are provided in the side of the cover for the purpose of ventilating the interior thereof. The top of the cover 15 is centrally provided with a handle 18 preferably in the form of an eye.

Secured to the bottom of the platform 10 is a double walled temporary cover 19 having a de-

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pendant annular flange portion 20 and provided with suitable insulation material 21 between its walls.

An annular block 22 is affixed to the inner wall of the dependant flange 20 by any suitable means and to the lower end of the same is secured by welding preferably, as indicated at 23, a cylindrically shaped, double walled evaporator 24 which contains between its walls a continuous spirally shaped evaporator coil 25 the upper ends of which extend into the block 22 and are connected to vertically extending intake pipes 26 and a like outlet pipe 27, respectively, by means of couplings 28 and 29, respectively. It will be noted that an expansion valve 27A is provided for the pipe 27 between the condenser 14 and the coupling 29.

The pipes 26 and 27 extend downwardly through the face 10 and cover 19 from the intake valve assembly 13 and condenser 14, respectively, of the compressor unit 11 to the couplings 28 and 29, respectively, as aforesaid.

The flange portion 20 may be temporarily connected to a double walled barrel 30 by means of latch members 31. The barrel 30 is provided with suitable insulating materials 32 between its walls and the inner wall of the barrel 30 is depressed toward its center, as indicated at 33, and a vertically drain pipe 34 extends through both inner and outer walls of the barrel centrally in the lower end thereof and is provided with a removable plug 35. The barrel is also provided with suitable casters 36 whereby the same may be moved from place to place.

In operation, it will be apparent that the refrigerator unit may be moved from place to place by suitable mechanisms such as, for example, a traveling crane, the handle 18 being used for this purpose. Material to be refrigerated is then placed in the barrel 30 and the refrigerator unit is lowered into the barrel whereupon the material to be refrigerated will be held within the confines of the inner walls of the evaporator 24. The compressor unit is then supplied with suitable power until the contents of the barrel are frozen after which the refrigerator unit including the evaporator 24 is removed as an entirety from the barrel and a simple insulated cover similar to the temporary cover 19 in construction may be latched into position by means of the latch members 31 and the barrel may then be shipped for great distances without the necessity of further refrigeration of its contents.

While but one form of the invention has been

shown and described herein, it will be readily apparent to those skilled in the art that many minor modifications may be made without departing from the spirit of the invention or the scope of the appended claims.

What is claimed is:

1. A device of the character described comprising, in combination, a portable refrigerating unit having a circular base, a compressor upon the base, a cover for said compressor removably attached to the base, an insulated temporary cover dependant from the base, an open-bottomed cylindrical evaporator dependant from the temporary cover and connected to said compressor, an insulated barrel adapted to removably receive the evaporator therein and latch means for holding the temporary cover in connection with the upper end of said barrel.

2. A device of the character described comprising, in combination, a portable refrigerating unit having a circular base, a compressor carried by the base, a cover for said compressor removably attached to the base, an insulated temporary cover dependant from the base, an open-bottomed cylindrical evaporator dependant from the temporary cover and an insulated barrel adapted to removably receive the evaporator therein, said evaporator being a double-walled construction and having an evaporator coil mounted between said walls and connected in conventional manner with the compressor.

3. A portable refrigerating unit comprising in combination, a hollow insulated container for holding articles to be frozen, a temporary cover for said container, a circular base member attached to the upper face of said cover, a compressor carried by said base, an open bottomed cylindrical evaporator dependent from said temporary cover and removably positioned within said container, means for connecting said compressor with said evaporator whereby said container and its articles may be subjected to freezing temperatures after which said base, temporary cover, compressor and evaporator are removed as a unit from said insulated container.

4. A portable refrigerator unit comprising in combination, a hollow insulated container for holding articles to be frozen, a temporary cover for said container, a circular base member attached to the upper face of said cover, a compressor carried by said base, said cover having a dependant annular flange portion, an annular block secured to said flange portion, a cylindrical shaped, double walled evaporator secured to said block and removably positioned within said container, means for connecting said compressor with said evaporator whereby said container and its articles may be subjected to freezing temperatures, after which said base, temporary cover, compressor and evaporator are removable as a unit from said insulated container.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
Re. 20,150	Stickney	Oct. 27, 1936
2,433,655	Zoppola	Dec. 30, 1947
2,449,127	Kleist	Sept. 14, 1948
2,483,100	Morrison	Sept. 27, 1949