Oct. 6, 1931. E. A. HOBART 1,825,694

REFRIGERATOR

Filed March 25, 1926 2 Sheets-Sheet 1

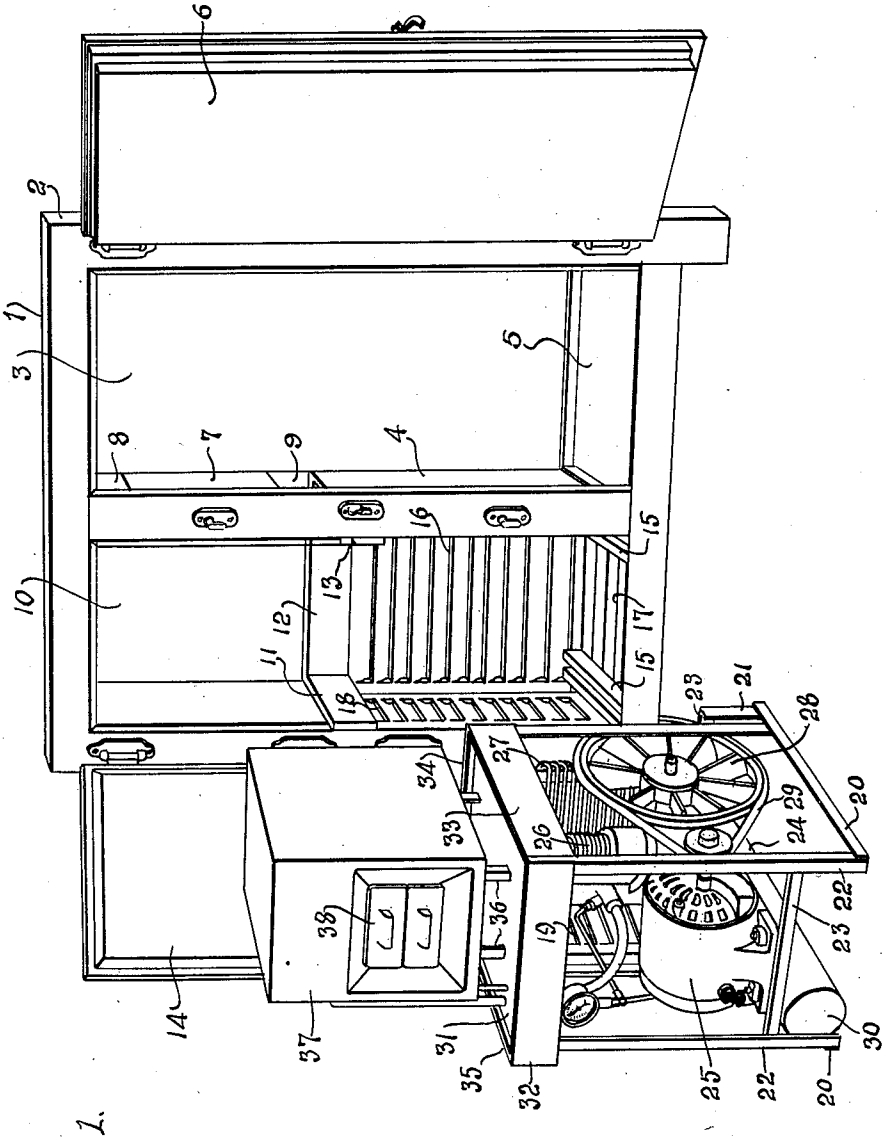


Fig. 1.

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Fig. 2.

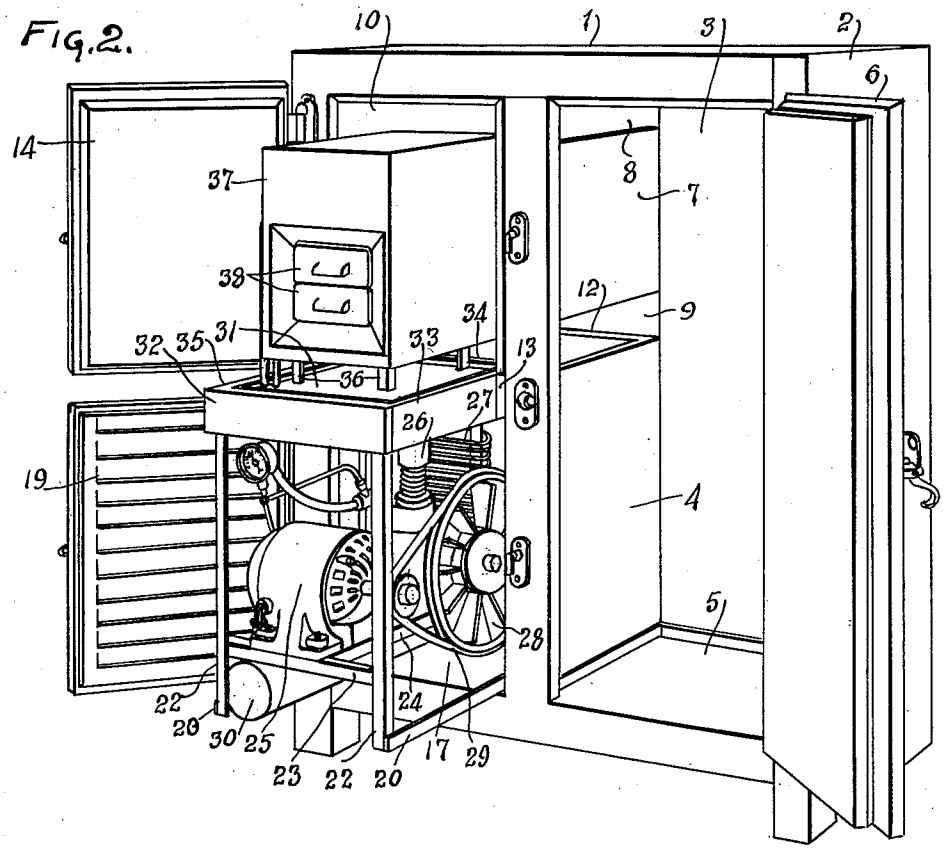
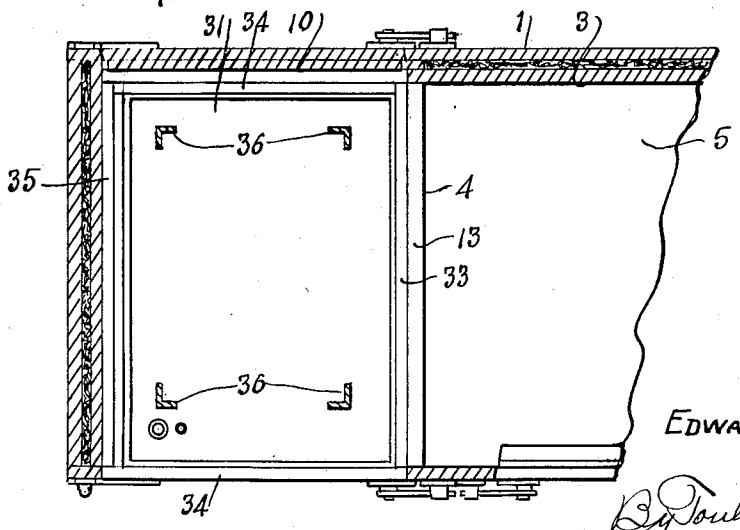


Fig. 3.



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UNITED STATES PATENT OFFICE

EDWARD A. HOBART, OF TROY, OHIO, ASSIGNOR TO FRIGIDAIRE CORPORATION, OF DAYTON, OHIO, A CORPORATION OF DELAWARE

REFRIGERATOR

Application filed March 25, 1926. Serial No. 97,430.

My invention relates to refrigerators and refrigerating mechanism.

It is the object of my invention to provide a complete refrigerating unit adapted to be fully detached from a refrigerator cabinet, the refrigerating unit being divided into a refrigerating portion and an operating mechanism portion by a partition which becomes one wall of the cabinet.

It is my object to provide this detachable unit so that in case of repairs or adjustments the unit can be taken out completely from the refrigerator and repaired, or a new unit substituted, permitting the repairs to be made at a shop rather than on the premises of the owner of the refrigerator, as is now the custom.

It is a further object to provide a refrigerator so constructed that when the unit is inserted the power or operating mechanism portion of the refrigeration mechanism will be suitably enclosed but fully ventilated, while the remainder of the refrigerator will be so arranged that there will be a free circulation of air throughout the cooling compartment and cooled compartment.

Referring to the drawings:

Figure 1 is a perspective of the refrigerating unit out of the cabinet with the refrigerator cabinet open.

Figure 2 is a perspective of the open refrigerator with the refrigerating unit just being inserted.

Figure 3 is a section on the line 3—3 of Figure 2, looking downwardly with the refrigerating unit in place and doors closed, showing how the partition in the detachable unit fits within the refrigerator to form the bottom of the cooling compartment.

Referring to the drawings in detail:

1 is the top of the cabinet having side walls 2. 3 designates the back of the cooled compartment. 4 designates the lower inner wall of the cooled compartment and 5 the bottom thereof. This compartment is closed by the door 6. The upper part of the cooled compartment has an inner upper wall 7 spaced from the top of the cabinet and the top of the lower inner wall, such spaces being designated respectively 8 and 9. The cooling compartment has a rear wall 10, but no permanent bottom. A ledge is formed by the boards 11, 12 and 13, which form the lower margin of this cabinet. These boards are known as sealing boards. The cooling compartment is provided with a door 14. Below this cooling compartment and communicating with it when the refrigerating unit is not in position is a refrigerating apparatus compartment, provided with supporting rails 15 at the bottom, a back 16 having louvres, a bottom having louvres designated 17 and an outside end wall having louvres designated 18. It is also provided with a door having louvres designated 19.

Refrigerating unit

The detachable refrigerating unit is provided with a frame having side rails 20 adapted to slide on the supporting rails 15. The rear ends of these side rails 20 have short vertical positioning posts 21. The side rails are also provided with uprights 22 preferably of angle iron. Near the lower ends of these uprights 22 are transverse members 23 at the front and rear of the unit, such transverse members supporting a platform 24, on which is mounted the electric motor 25, the compressor 26, the cooling coil 27, and associated mechanism. To the compressor is attached a fan wheel 28 which is also the compressor fly wheel. This fly wheel is driven by a belt 29 from the electric motor 25. Any desirable mechanism of this sort may be employed. My invention does not relate to the details of the refrigerating mechanism. 30 designates a precipitation tank suspended on the frame. The tops of the uprights 22 support a platform 31 surrounded by marginal sealing boards 32, 33, 34 and 35. This platform 31 forms the bottom of the cooling cabinet or partition between the food compartment and the machinery compartment. Upon it, mounted on standards 36, is the refrigerating box 37, provided with the usual trays 38.

The operation of the fan in the refrigerating apparatus compartment serves to circulate the air there-through for the usual purposes. The sealing boards on the refriger-

ating unit fit against the sealing boards in the refrigerator.

When the refrigerating unit is in place and the doors are closed, the hotter air in the cooled compartment rises to the top, passes over the partition 7 through the opening 8 into the cooling compartment and being cooled descends to the bottom of the cooling compartment and makes its exit through the space 9 to the bottom of the cooled cabinet or compartment.

It will be understood that I desire to comprehend within my invention such modifications as may be necessary to adapt it to varying conditions and uses.

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

1. A refrigerator comprising a cabinet including walls having insulated and non-insulated portions, and a unitary structure comprising an insulating wall cooperating with said insulating portions adjacent the edge thereof for dividing said cabinet walls into a compartment, all of the walls of which are insulated, and a compartment in which all of the outside walls are non-insulated, said unitary structure also including a heat absorbing element disposed on one side of said insulating wall and within the insulated compartment and including a heat dissipating element disposed on the other side of said insulating wall and within the other of said compartments, a part of the insulating wall portion of the cabinet being movable and said other compartment having an opening, said unitary structure being movable from or into the cabinet in planes substantially parallel with said insulating wall when said part is moved.

2. A refrigerator comprising a cabinet including walls having insulating and non-insulating portions; and a unitary structure comprising a horizontally extending insulating wall cooperating with said insulating portions adjacent the edge thereof for dividing said cabinet walls into a compartment, all of the walls of which are insulated, and a compartment, all the outside walls of which are non-insulated, said unitary structure also including a heat absorbing element disposed on one side of said insulating wall and within the insulated compartment and including a heat dissipating element disposed on the other side of said insulating wall and within the other of said compartments, a side wall of the insulated compartment being movable and said other compartment having an opening, said unitary structure being movable sidewise from or into the cabinet when said side part is moved.

3. A refrigerator comprising a cabinet including walls having insulating and non-insulating portions; and a unitary structure comprising a horizontally extending insulating wall cooperating with said insulating portions adjacent the edge thereof for dividing said cabinet walls into a compartment, all the walls of which are insulated, and a compartment, all the outside walls of which are non-insulated, said unitary structure also including a heat absorbing element disposed on one side of said insulating wall and within the insulated compartment and including a heat dissipating element disposed on the other side of said insulating wall and within the other of said compartments, said insulating compartment having a door opening in the front and a door therefor and said other compartment having an opening in the front, said unitary structure being movable sidewise from or into the cabinet when said door is open.

4. A refrigerator comprising a cabinet including walls having insulating and non-insulating portions; and a unitary structure comprising a horizontally extending insulating wall cooperating with said insulating portions adjacent the edge thereof for dividing said cabinet walls into an upper compartment, all the walls of which are insulated, and a lower compartment, all the outside walls of which are non-insulated, said unitary structure also including a heat absorbing element disposed on one side of said insulating wall and within the insulated compartment and including a heat dissipating element disposed on the other side of said insulating wall and within the other of said compartments, a side wall of the insulated compartment being movable and said other compartment having an opening, said unitary structure being movable sidewise from or into the cabinet when said side part is moved.

5. A refrigerator comprising a cabinet including outer walls having insulated and non-insulated portions, and a unitary structure comprising an insulating wall cooperating with said insulating portions adjacent the edge thereof for dividing said cabinet walls into a compartment, all of the walls of which are insulated, and a compartment in which all of the outside walls are non-insulated, said unitary structure also including a heat absorbing element disposed on one side of said insulating wall and within the insulated compartment and including a heat dissipating element disposed on the other side of said insulating wall and within the other of said compartments, said cabinet having movable wall means for the removal of said unitary structure as such.

In testimony whereof I affix my signature.

EDWARD A. HOBART.