Feb. 4, 1941. L. L. POPKY 2,230,905

BEVERAGE COOLING APPARATUS

Filed May 15, 1940 2 Sheets-Sheet 1

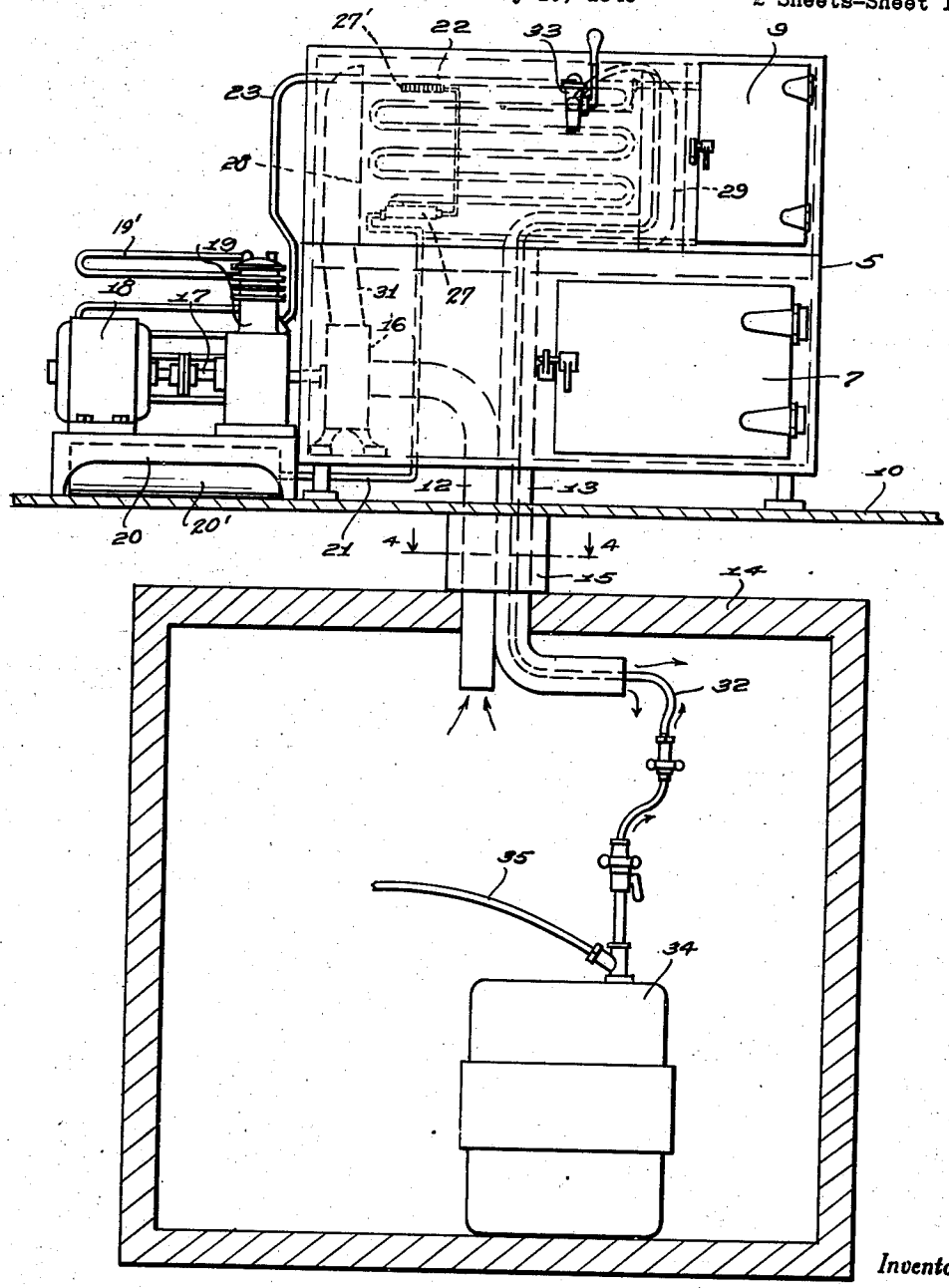


Fig. 1

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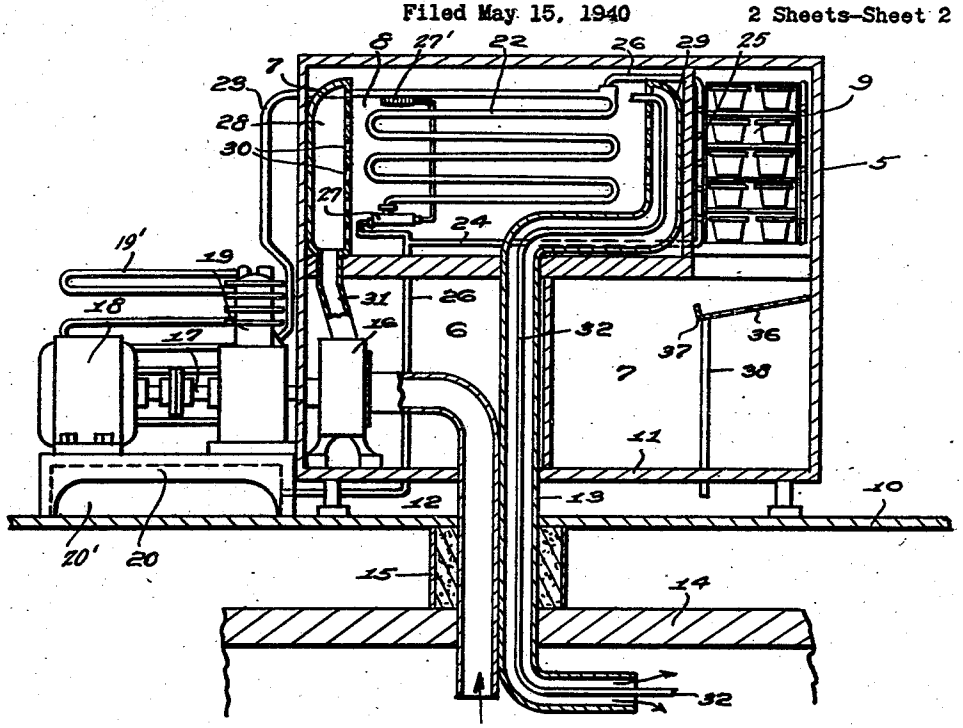


Fig. 2.

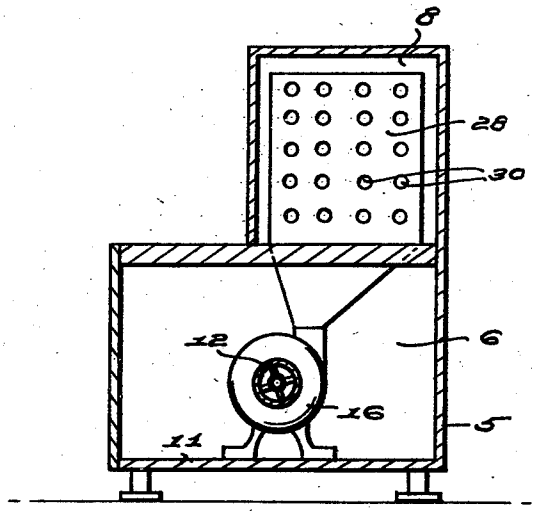


Fig. 3.

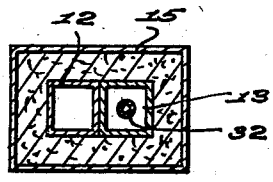


Fig. 4.

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UNITED STATES PATENT OFFICE

2,230,905

BEVERAGE COOLING APPARATUS

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Application May 15, 1940, Serial No. 335,401

3 Claims. (Cl. 62—141)

The present invention relates to new and useful improvements in apparatus for cooling and dispensing beer and similar beverages, and has for its primary object to provide a dispensing cabinet of a portable nature in which the dispensing faucet is mounted, the faucet being connected to the keg positioned in a room remotely disposed with respect to the cabinet and providing a mechanical cooling unit for circulating air over a set of cooling coils through the cabinet as well as through the room in which the keg is positioned.

A further important object is to provide air ducts leading from the storage room for the beer keg into the cabinet where the same is subjected to the cooling influence of the refrigerant coil and also providing an air duct leading from the cabinet to the storage room for delivering the cooled air to the latter and mounting a beer pipe from the keg in the storage room to the faucet in said cold air duct to further lower the temperature of the beer before the same reaches the faucet.

A still further object is to provide an apparatus of this character of simple and practical construction, which is efficient and reliable in performance, relatively inexpensive to manufacture and maintain in operation and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which—

Figure 1 is an elevational view of the apparatus with the storage room shown in section,

Figure 2 is a vertical sectional view through the dispensing cabinet.

Figure 3 is a vertical transverse sectional view through the cabinet, and

Figure 4 is a sectional view through the ducts connecting the storage room with the cabinet, taken substantially on a line 4—4 of Figure 1.

Referring now to the drawings in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numeral 5 designates the cooling and dispensing cabinet generally which includes a pair of lower compartments 6 and 7, an upper coil compartment 8 and an ice-tray compartment 9. The cabinet 5 is of portable construction suitable for supporting on the floor 10 of a room and extending through the bottom 11 of the cabinet is an air feed duct 12 and an air return duct 13, in the present form of the invention these ducts extending downwardly through the floor 10 into a storage room 14 which may be positioned beneath the floor, or located in any other desired position relative to the cabinet. The portion of the ducts 12 and 13 extending between the floor 10 and the room 14 are enclosed in an insulation jacket 15 of suitable construction.

Mounted in the chamber 6 is an air blower 16 to the intake side of which the duct 12 is connected, the blower being operated by the shaft 17 driven by the electric motor 18. Also operated by the shaft 17 is the compressor 19 of a type generally employed for use in a mechanical refrigerating unit, the motor and compressor being mounted on a suitable base 20. The refrigerating unit includes the condenser 19' and the liquid receiving chamber 20', the latter being mounted in the base 20, and all of the parts of the unit are connected in the system substantially as illustrated. In the present form of the invention the motor and compressor are shown positioned outwardly of the cabinet 5, but it will be understood that this mechanism may also be mounted in the compartment of the cabinet, if desired.

The feed pipe 21 leading from the compressor extends upwardly into the compartment 8 for connection with the refrigerant coil 22, the return pipe leading from the coil to the compressor being designated at 23. A branch pipe 24 leads from the feed pipe 21 to the coil 25 in the ice cube compartment 9, the return line from the ice cube coil being designated at 26. An expansion valve 27 of conventional construction may be mounted in the pipe 21 beyond the branch 24 and a similar valve may also be mounted in said branch. The expansion valve 27 includes the usual thermostat control attached to the coil 22 as indicated at 27'.

Positioned upright in one end of the compartment 8 is a substantially rectangular-shaped head 28 and a similar head 29 is also positioned in the compartment at a relative opposite end thereof. The heads 28 and 29 are positioned at opposite ends of the coil 22 and the opposed vertical walls of the heads are formed with openings 30, the head 28 being connected with the discharge end of the blower by means of a duct 31. The return duct 13 is connected to the head 29 and accordingly, it will be apparent that air is drawn into the duct 12 from the room 14 and blown through the head 28 across the coils 22

and is received into the head 29 where the cool air is returned to the room 14.

Extending longitudinally through the duct 13 as well as through the head 29 is the beer pipe 32 having its upper end connected to the dispensing faucet 33 and having its lower end extending outwardly of the lower end of the duct 13 into the room 14 and suitably attached to the beer keg 34. The compressed air pipe for the keg is designated at 35.

It will be apparent from the foregoing that air will be circulated from the room 14 into the compartment 8 for cooling by the refrigerant coil 22 and the cold air returned to the room as indicated by the arrows. Accordingly, the beer pipe 32 which extends entirely throughout the cold air duct 13 will be cooled by the air passing therethrough so that the temperature of the beer passing through the pipe will be gradually lowered as the same travels upwardly toward the faucet 33.

The compartment 7 has open communication with the ice cube compartment 9, as shown to advantage in Figure 2 of the drawings, and accordingly, the cool air from the ice compartment will be permitted to enter the compartment 7 for cooling bottled beverages or other articles placed therein. In order to prevent the drainage of water from the ice cube compartment into the compartment 7 a drip pan 36 is positioned immediately beneath the ice cube compartment which is inclined downwardly toward one side to form a moisture collecting trough 37 having a drain pipe 38 leading therefrom.

It is believed the details of construction, advantages and manner of use of the device will be readily understood from the foregoing without further detailed explanation.

Having thus described the invention, what I claim is—

1. In a beverage cooling and dispensing apparatus, a storage room having a beverage container positioned therein, a portable dispensing cabinet remotely positioned with respect to said room, a pair of air ducts connecting the room with the cabinet, a cooling coil positioned in the cabinet, a pair of heads positioned in the cabinet at opposite ends of the coil and having perforated opposed faces, said heads having communication with the respective ducts, means for circulating air through the room and the cabinet by way of said ducts, and a beer discharge pipe leading from the container through one of said ducts.

2. In a beverage cooling and dispensing apparatus, a room having a beverage container positioned therein, a portable cooling and dispensing cabinet remotely positioned with respect to said room, a pair of air ducts providing communication between the room and the cabinet, a blower connected to one of said ducts adapted for drawing air from the room into the cabinet and for forcing the air from the cabinet to the room through the other of said ducts, a cooling coil positioned in the cabinet, a pair of heads positioned at opposite ends of the coil and connected to the respective ducts, said heads having apertures in their opposed faces, the head connected to said last named duct being adapted to receive cool air from the cabinet after passing over said coil and a beer pipe leading from the container upwardly through said last named duct and through the head attached thereto.

3. A beverage cooling and dispensing cabinet including a plurality of compartments, air circulation means in one compartment, a refrigerant coil in another compartment, said last named compartment having air ducts communicating therewith for circulating air therethrough and conveying the same from the cabinet, said coil being disposed in the path of air passing through the said last named compartment, an ice cube compartment having a refrigerant coil connected to said first named coil, a fourth compartment immediately beneath the ice cube compartment and having direct communication therewith for receiving cool air from the coil in said ice cube compartment, a baffle between said last two named compartments and a moisture drainage pipe connected to said baffle.

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