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L. W. HARRINGTON & B. LEONARD.

APPARATUS FOR DRAWING LIQUIDS.

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Fig: 1

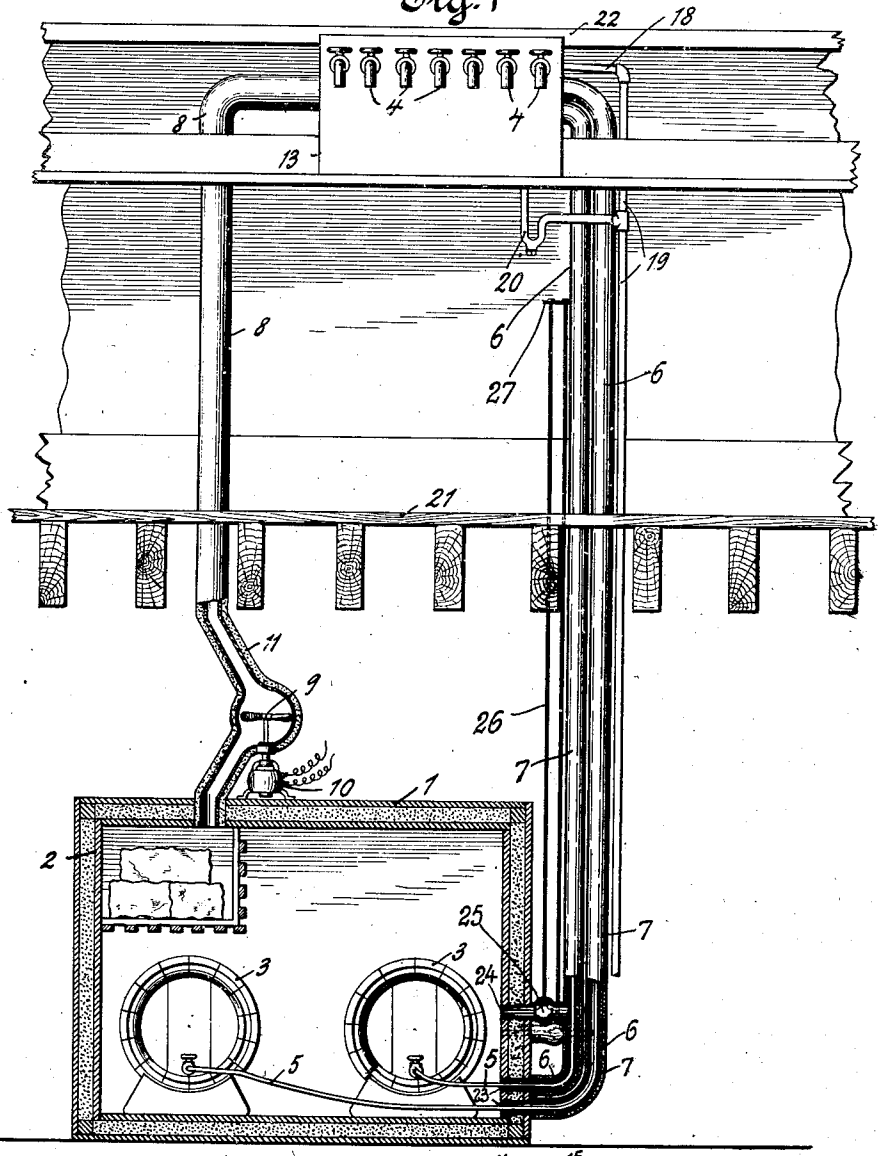
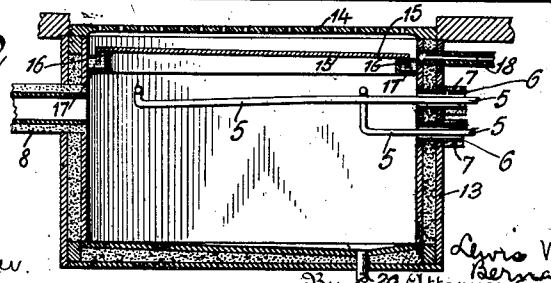


Fig: 2



Witnesses
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APPARATUS FOR DRAWING LIQUIDS.

No. 888,493. Specification of Letters Patent. Patented May 26, 1908.

Application filed August 12, 1904. Serial No. 220,513.

To all whom it may concern:

Be it known that we, LEWIS W. HARRINGTON, a citizen of the United States, and a resident of Short Hills, county of Essex, and State of New Jersey, and BERNARD LEONARD, a citizen of the United States, and a resident of the city and county and State of New York, have invented a new and useful Improvement in Apparatus for Drawing Liquids, of which the following is a specification.

Our invention relates to apparatus for drawing liquids.

It is especially adapted for use in cases where liquids are drawn off at a point distant from the vessel containing the supply of said liquid. Its object is to provide means for keeping such liquids cool on their passage from the supply vessel to the point where the liquid is drawn off for consumption; also to provide a new and improved supplementary chamber at the drawing off point, that can also serve as a drain board without permitting the waste to enter the chamber, and yet be easily accessible from the top.

It consists of the novel device and combinations herein shown and described.

Our invention may be used with any kind of liquid, but it is especially useful in connection with a charged liquid such as beer or ale. It is often the practice in drawing such liquids to locate the supply vessel or vessels in a refrigerator, placed for example, in the cellar, and to draw off the liquid through spigots located at some distance therefrom, for example, located on the counter of a saloon, pipes running from the supply vessels in the refrigerator to the spigots on the counter. While the beer, for example, is kept cool in the supply vessels in the refrigerator, it is apt to become warmed to an objectionable degree on its passage through the pipes. In many cases such liquid is spoiled on such passage and in most all cases it is more or less injured. By means of our improved device we are enabled to effectually prevent any such warming of the beer or other liquids, and we are enabled to keep it cool until it is discharged from the spigot. We are also enabled to regulate the degree of temperature of the beer or other liquids by means of our improved device so that some beers or liquids can be served very cold and others not quite so cool.

Our improved device affords more economy in many directions, for instance, the saving of ice bills, the saving of plumbing and the saving of labor. Heretofore it has been the practice to have an ice tank just back of the drawing off spigots having a long coil of pipe in which the liquid is carried in said tank so that cracked ice may be packed in and around the pipe to cool the liquid. This is all done away with in our improved device and is unnecessary.

While our improvement may be used with any liquid, we have shown in the drawings and will now proceed to describe the apparatus containing our improvement in its preferred form and shown as adapted for the drawing of beer.

Referring to such drawing Figure 1 represents an elevation of the preferred form of our improvement as thus applied, parts being shown in section, for the purpose of clearness; Fig. 2 represents a vertical, longitudinal section through our improved supplementary chamber.

Referring to the specific form of our invention shown in the drawings, 1 represents a refrigerator of any suitable construction located, for example, in the basement, 2 being the icebox of the usual construction; 3, 3 represents vessels for holding the supply of liquid here shown as beer barrels. The number of these vessels contained in the refrigerator may of course, be varied from one upward as desired.

4 represents a series of spigots at the drawing off point, two of these spigots are connected with the two vessels 3, 3, by pipes 5, 5.

6, 6 are conduits leading from the refrigerator to the drawing off point. They are arranged to receive the pipes 5, 5 which run from the vessels to the spigots. These conduits are preferably covered with a non-conducting covering 7. Conduits 6, 6 are made of sufficient size to easily hold one of the pipes 5, 5 and preferably are made large enough, so that a sufficient air space will exist in and around the pipes 5, 5 in the conduits. At the point where the pipes from the vessels 3, 3 enter the conduits we seal the conduit so that no air can enter at that point from the refrigerator. To permit air to enter the conduits from the refrigerator we provide separate conduits 24, 24 for each of the main conduits 5, 5. In each of these supplementary conduits 24 we place a valve 25 so as to control the amount of cold air which enters

the conduits 5, 5. The opening and closing or the partial opening or partial closing of this valve may be controlled in any manner desired. In the drawing we have shown a long rod 26 running up to a point near where the spigots are situated which rod has a small wheel 27 situated on top of it for the bartender or person in charge to open or close the valve as desired. By means of these supplementary conduits having valves therein, cold air can be closed off entirely from any of the conduits or can be let in in a small or large quantity as desired.

In order to insure a circulation of cold air through the conduits from the refrigerator, we preferably provide a return air pipe 8 leading from the end of the conduit back to the refrigerator, whereby cold air passes through the conduit and return pipe, back to the refrigerator. If found desirable, any suitable device may be employed for positively producing or stimulating such circulation. For this purpose we have shown an ordinary electric fan 9, driven by a motor 10. The details of these form no part of the invention and are not shown. We prefer to arrange the fan in an elbow, such as shown at 11 in Fig. 1. By means of the fan 9, the air can be circulated very rapidly through the refrigerator 1, the conduits 6, 6, the supplementary chamber 13, pipe 8 back to the refrigerator, or can be circulated slowly by reducing the speed of the fan or stopping it altogether and allowing the cool air to circulate of its own accord. There is ample room for the cold air to pass between the blades of the fan when the fan is stationary.

The spigots 4 may be connected directly to the conduits but we prefer in practice to interpose a supplementary chamber or refrigerator 13 at or near the drawing off point. Such chamber may, if desired, be packed with ice but this is not necessary in our improved device. In Fig. 2 of the drawings we have shown this supplementary chamber or refrigerator containing the pipes 5, 5 through which the liquid is conveyed to the spigots.

14 is a perforated drain plate of the usual construction, which as shown is arranged over or on top of the supplementary chamber.

15 is an imperforate cap, preferably removable, adapted to form a cover for the interior of the chamber underneath the drain plate. It may be fitted in any suitable manner, but we prefer to provide it with a depending flange 16, surrounding the cap and dipping down into the surrounding trough 17, formed by the L-shaped walls of the chamber 13 as shown in Fig. 2, and adapted to hold a liquid. By these means a water seal is provided, preventing the escape of air from the interior of chamber 13. As the cap 15 is preferably removable, it can easily be taken off for cleansing purposes or in order to pack the chamber with ice if desired or for any other purpose. As waste beer drips through the drain plate, it falls upon the imperforate cap 15, and flows off into trough 17.

18 is a discharge outlet from the trough, carrying off the waste beer. It connects with a discharge pipe 19 as shown in Fig. 1. By these means the liquid in the trough will never rise too high.

20 is a discharge pipe at the bottom of the chamber 13, for the escape of water, and it is shown as connecting with pipe 19.

While the refrigerator is shown in the drawing as located in the basement, and the spigots as located upon the floor above 21, on counter 22, we do not limit ourselves to such an arrangement. The refrigerator may be placed in any suitable location, either below, on the same level with, or above the spigots.

Many changes in and modifications of the particular form of device shown in the drawings may be made without departing from our invention, the essentials of which are set forth in the claims appended hereto.

By means of our improvement, the liquid can be drawn off at any desired point, without being warmed in its passage from the supply vessel, and the taste and quality of the liquid are preserved. By means of our supplementary chamber, the waste is employed to form a water seal for the chamber, all excess of waste is removed, and access can be easily had to the chamber itself.

What we claim as new and desire to secure by Letters Patent is as follows:

1. In an apparatus for drawing liquid, the combination of a refrigerator adapted to contain a vessel for holding a supply of liquid, a drawing-off device, a conduit having one end connected with the refrigerator near the bottom of the latter and having its other end connected with the refrigerator near the top of the latter and proceeding to the drawing-off device, whereby a continuous passage is afforded for the circulation of air from the refrigerator to the drawing-off device and back to the refrigerator, and a pipe running from the vessel in the refrigerator through a portion of said conduit to the drawing off device, and so arranged that an air space is maintained in such portion of the conduit between the pipe and the conduit.

2. In an apparatus for drawing liquid, the combination of a refrigerator adapted to contain a vessel for holding a supply of liquid, a drawing-off device, a conduit having one end connected with the refrigerator near the bottom of the latter and having its other end connected with the refrigerator near the top of the latter and proceeding to the drawing-off device, whereby a continuous passage is afforded for the circulation of air from the refrigerator to the drawing-off device and back to the refrigerator, and a pipe running

from the vessel in the refrigerator through a portion of said conduit to the drawing-off device, and so arranged that an air space is maintained in such portion of the conduit between the pipe and the conduit, a supplementary conduit connecting the refrigerator with the portion of the first mentioned conduit containing said pipe and a valve in said supplementary conduit for controlling the flow of air through the conduit.

3. In an apparatus for drawing liquid, the combination of a refrigerator adapted to contain vessels for holding a supply of liquid, a supplementary chamber near the drawing-off point, a plurality of conduits leading from the refrigerator and opening into the supplementary chamber adapted to receive pipes running from said vessels to the drawing-off spigots, means whereby the conduits will be supplied with cold air from the refrigerator and the liquid be kept cool on its passage to the spigots, a conduit running from the supplementary chamber back to the refrigerator a perforated plate arranged over the supplementary chamber, an imperforate cap for the chamber having a dependent flange, and a trough extending around the interior of the supplementary chamber into which the flange is adapted to dip to form a seal, whereby liquid passing through the drain-plate will be collected in the trough and the supplementary chamber will be made air-tight.

4. In an apparatus for drawing liquid, the combination of a refrigerator adapted to contain vessels for holding a supply of liquid, conduits leading from the refrigerator to the drawing-off point, adapted to receive pipes running from said vessels to the drawing-off spigots, a supplementary conduit leading from the refrigerator to each conduit, whereby such conduit will be supplied with cold air from the refrigerator, means for regulating the flow of cold air through each conduit and its supplementary conduit whereby the liquid will be kept at any desired temperature on its passage to the spigot and means for positively producing a circulation of air through the conduits.

5. In an apparatus for drawing liquid, the combination of a refrigerator adapted to contain a vessel for holding a supply of liquid, a drawing-off device, a conduit having one end connected with the refrigerator near the bottom of the latter and having its other end connected with the refrigerator near the top of the latter and proceeding to the drawing-off device, whereby a continuous passage is afforded for the circulation of air from the refrigerator to the drawing-off device and back to the refrigerator, and means for positively producing a forced circulation of air through the conduit.

In testimony whereof, we have signed our names to this specification, in the presence of two subscribing witnesses.

LEWIS W. HARRINGTON.
BERNARD LEONARD.

Witnesses:
WALTER D. GRAHAM,
MARY F. MOORE.