

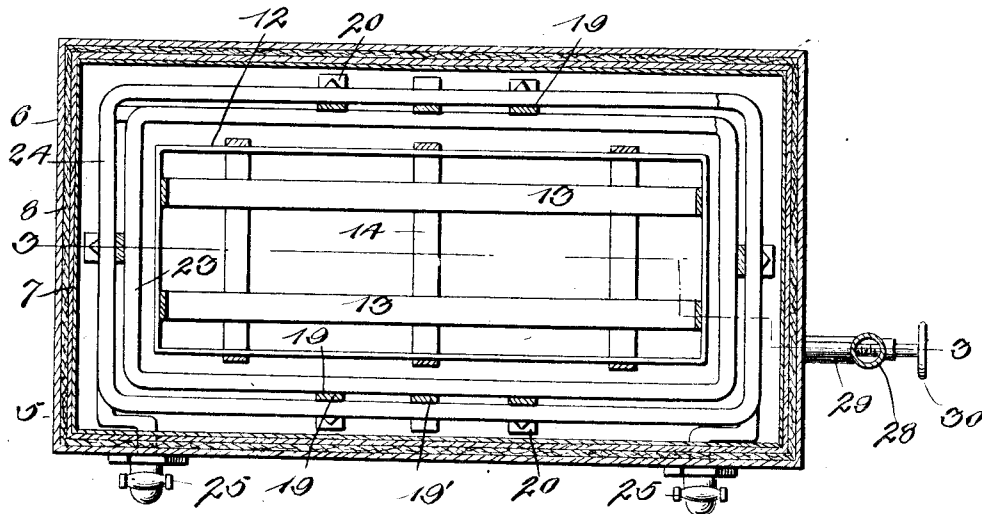
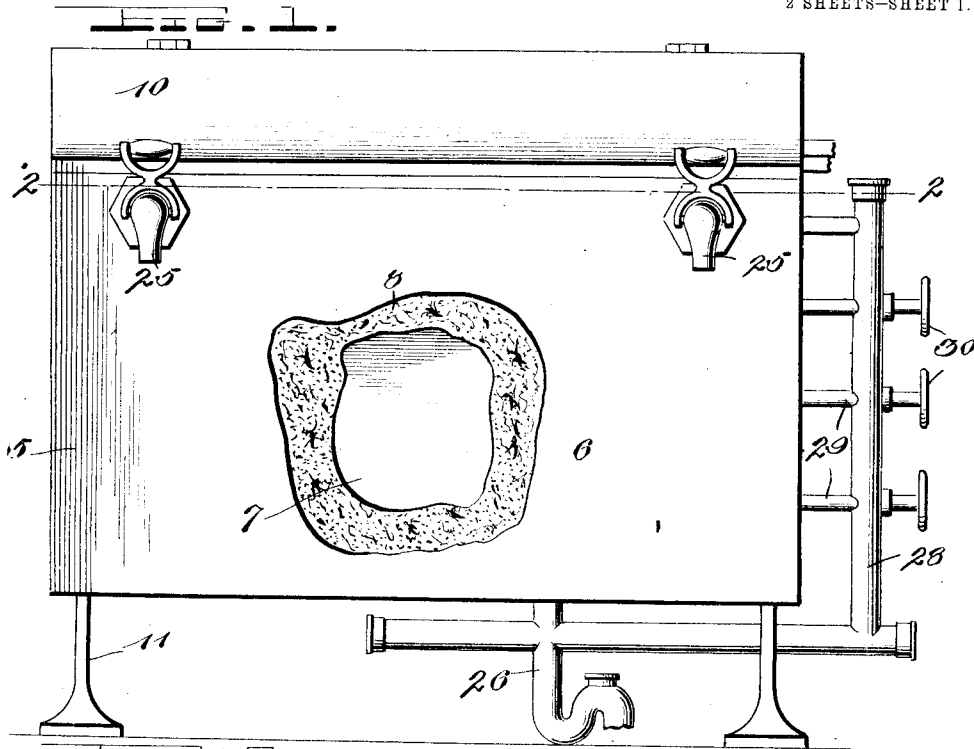
W. & F. FAHRMAN & D. BOLTON.
LIQUID COOLER.

APPLICATION FILED FEB. 24, 1912.

Patented June 18, 1912.

1,029,981.

2 SHEETS—SHEET 1.



Witnesses
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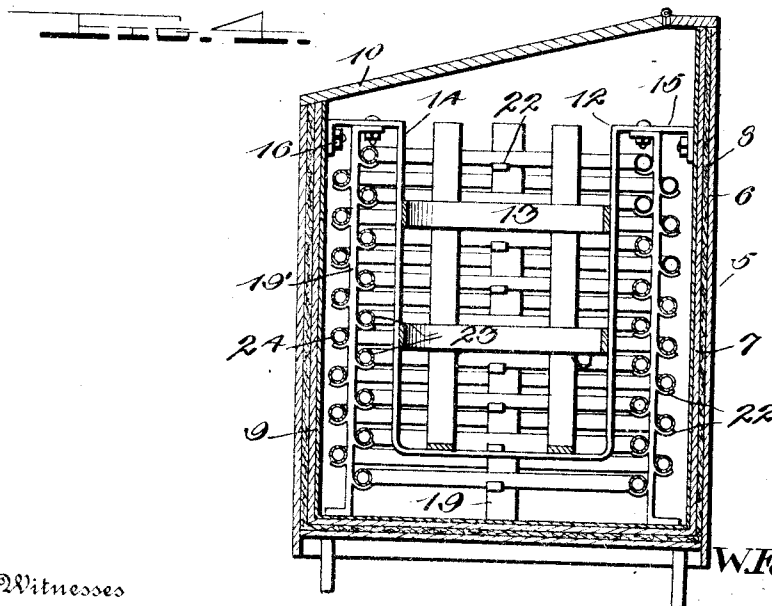
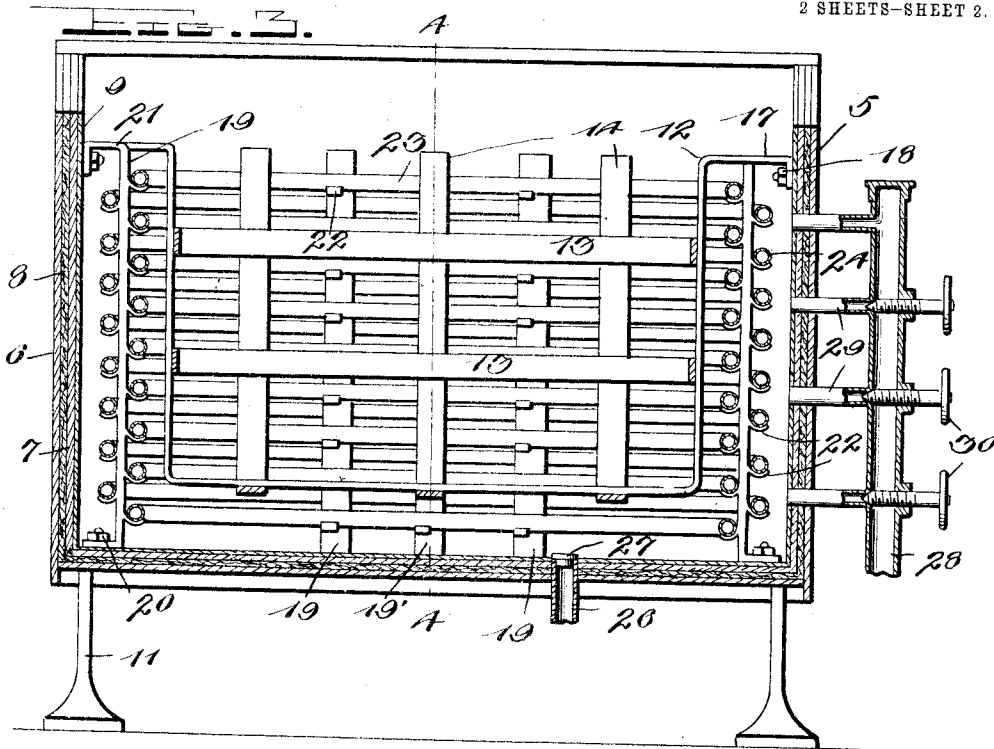
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UNITED STATES PATENT OFFICE.

WILLIAM FAHRMAN, FRANK FAHRMAN, AND DANIEL BOLTON, OF JOPLIN, MISSOURI.

LIQUID-COOLER.

1,029,981.

Specification of Letters Patent.

Patented June 18, 1912.

Application filed February 24, 1912. Serial No. 679,789.

To all whom it may concern:

Be it known that we, WILLIAM FAHRMAN, FRANK FAHRMAN, and DANIEL BOLTON, citizens of the United States, residing at Joplin, in the county of Jasper and State of Missouri, have invented certain new and useful Improvements in Liquid-Coolers, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to liquid coolers and more particularly to a refrigerating device for beer, soda water and similar beverages.

The invention has for its primary object the provision of improved means for supporting a plurality of pipe coils within a reservoir and in juxtaposition to an ice containing basket, the convolutions of the respective coils being so arranged that the ice water within the reservoir may freely flow around and between the same.

Another object of the invention resides in the provision of improved means for mounting the ice basket and the pipe hangers within the reservoir, said hangers being connected at their upper ends to the basket and acting in the nature of braces or supports therefor.

A still further object of the invention resides in the provision of a device of the above specified character which is simple, durable and efficient in construction, and may be manufactured at comparatively small cost.

With the above and other objects in view, the invention consists of the novel features of construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a liquid cooler embodying the present invention partly broken away to show the construction of the reservoir walls; Fig. 2 is a section taken on the line 2—2 of Fig. 1; Fig. 3 is a section taken on the line 3—3 of Fig. 2; and Fig. 4 is a section taken on the line 4—4 of Fig. 3.

Referring in detail to the drawings 5 designates a suitable tank or reservoir which as shown is of rectangular form, though it will be understood that this reservoir may be of any preferred shape. The walls of this reservoir consist of the outer and inner spaced walls 6 and 7 which are preferably

of wood, the space between said walls being filled with a suitable heat non-conducting granulated material indicated at 8, cork preferably being employed. The wall 7 is provided with an inner lining 9 of zinc or other sheet metal. This tank or reservoir is provided with a hinged top 10 so that access may be readily obtained to the interior thereof. The bottom of the reservoir is preferably of the same construction as the side and end walls thereof and to the same the upper ends of suitable standards or supporting legs 11 are attached.

Within the reservoir 5 an ice container or basket generally indicated by the numeral 12 is arranged, and said basket is constructed from a plurality of longitudinal and transverse metal straps 13 and 14 respectively which are securely riveted or otherwise fastened together at their intersecting points. These crossed metal straps form an open frame through which the water from the melting ice contained within the basket escapes and gradually accumulates within the reservoir 5. The transversely disposed straps 14 have the upper ends of their vertical portions laterally extended as indicated at 15 and are securely bolted or otherwise fastened as indicated at 16 to the side walls of the reservoir. Certain of the longitudinal straps 13 which have their other ends vertically disposed to form the end walls of the basket are also laterally extended as shown at 17 and secured to the end walls of the tank or reservoir by means of the bolts 18. Hanger bars 19 are rigidly bolted as at 20 to the bottom of the tank or reservoir 5, the upper ends of these hanger bars being laterally extended as indicated at 21 and secured in a similar manner to the side and end walls of the reservoir. These hanger bars are disposed between the walls of the ice basket and the walls of the reservoir and are provided upon each of their faces with a plurality of rack plates 22. The curved rack plates 22 on one side of the hanger bars are disposed alternately with relation to the series of rack plates on the opposite side of said bar. Similar hanger bars 19' are secured to the laterally disposed upper end portions of the strap plates of the ice basket and are flanged at their lower ends, said flanges resting upon the bottom wall of the tank or reservoir 5. These latter hanger bars serve as braces or supports for the basket frame to assist in supporting the basket

in position and thereby obviate liability of breakage of the metal strap plates by the great weight of the ice contained in said basket. It will be obvious that if desired
 5 the hanger bars 19' alone may be depended upon to support the pipe coils, the first named bars 19 being eliminated.

It will be appreciated that by providing the two series of rack plates upon the hanger
 10 bars, the cooler may be utilized for the refrigeration of two beverages differing in character, and in the drawings I have shown the inner and outer pipe coils 23 and 24 respectively which extend from the main
 15 liquid tanks or receptacles. As an illustration of one of the uses of the invention, the outer pipe coil 24 may be connected to a beer keg containing light beer while the inner pipe coil is connected to the keg containing dark beer. The ends of these pipe
 20 coils are extended through one of the side walls of the tank or reservoir 5 adjacent to the ends thereof and to the same suitable draw-off cocks or faucets 25 are connected.
 25 The inlet pipes for the coils 23 and 24 are disposed through one of the end walls of the tank adjacent to the upper end thereof as shown in Fig. 1.

To the bottom of the tank or reservoir 5 a suitable drain pipe 26 is connected, and the end of said pipe may be closed by a suitable stopper or plug 27 so that the water from the melting ice can be retained within the reservoir until it reaches a desired depth.
 30 To the drain pipe 26 which leads to a sewer main, a stand pipe 28 is connected, and a plurality of lateral branch pipes 29 extend through one of the end walls of the reservoir and are adapted to drain the water therefrom at various levels. Valves 30 are
 40 arranged in the stand pipe 28 to close communication between said pipe and the lateral pipes 29. The upper laterally disposed pipe 29 extends through the casing wall at the
 45 upper ends of the pipe coils and constitutes an overflow pipe through which the water may find an outlet when it is allowed to continuously accumulate therein.

From the foregoing it is believed that the
 50 construction and many advantages which accrue to our improved cooling apparatus will be apparent. By means of the same beer or other beverages may be very quickly cooled in their passage through the pipe coils, the
 55 coils being of sufficient extent to insure the cooling of the liquid to a low temperature in its passage therethrough from the main tank or receptacle to the faucets 25. By mounting the ice basket and the pipe hang-
 60 ers within the reservoir in the manner specified, an extremely strong, rigid and durable structure is secured, said hangers and basket mutually serving to support the weight of the ice and the pipe coils. The invention
 65 is extremely simple in construction and may

be manufactured at a nominal cost so that the same may be produced on a reduced scale for individual service.

While we have shown and described the preferred construction and arrangement of
 70 the various parts, it will be understood that the invention is susceptible of considerable modification without departing from the essential feature or sacrificing any of the advantages thereof.

Having thus described the invention what is claimed is:—

1. In a liquid cooler, the combination with a tank or reservoir, of an ice container arranged within said reservoir and rigidly se-
 80 cured to the walls thereof, a plurality of hanger bars connected at their upper ends to the container and resting at their lower ends upon the bottom of the reservoir to serve as additional means of support for the
 85 container, and a plurality of pipe coils extending through the walls of said reservoir and mounted upon the hanger bars.

2. In a liquid cooler, the combination with a tank or reservoir, of an ice container arranged within said reservoir and spaced
 90 from the walls thereof, means to rigidly secure said container at its upper end to the side and end walls of the reservoir, a plurality of vertically disposed hanger bars
 95 connected at their upper ends to the container and resting at their lower ends upon the bottom of the reservoir, and a plurality of pipe coils mounted upon said hanger bars and having their end portions extended
 100 through the walls of the reservoir.

3. In a liquid cooler, the combination with a tank or reservoir, of an open-work ice basket arranged within said reservoir and spaced from the walls thereof, means to
 105 rigidly secure said basket at its upper end to the reservoir walls, a plurality of hanger bars connected at their upper ends to said basket and disposed between the same and the walls of the reservoir, said hanger bars
 110 resting at their lower ends upon the bottom of the reservoir and serving as additional means of support for the basket, and a plurality of pipe coils mounted upon said hanger bars and having their ends extended
 115 through the walls of the reservoir.

4. In a liquid cooler, the combination with a tank or reservoir, of an open-work ice containing basket arranged within said reser-
 120 voir in spaced relation to the walls thereof, means to rigidly secure said basket at its upper end to the reservoir walls, a plurality of hanger bars arranged between the basket and the side and end walls of the reservoir and fixed at their lower ends to the bottom
 125 of the reservoir, the upper ends of said hanger bars being rigidly secured to the reservoir walls, additional hanger bars connected at their upper ends to the basket and resting at their lower ends upon the bottom
 130

of the reservoir, and a plurality of pipe coils mounted upon said hanger bars.

5 5. In a liquid cooler, the combination with a tank or reservoir, of an open-work basket arranged therein and spaced from the walls of the reservoir, said basket having lateral extensions at its upper end rigidly fixed to the side and end walls of the reservoir, hanger bars connected to certain of said ex-
10 tensions and resting at their lower ends upon the bottom of the reservoir, additional hanger bars arranged between the basket and the walls of the reservoir and rigidly secured at their ends to the reservoir walls,
15 each of said hanger bars being provided upon its opposite sides with a vertical se-

ries of rack plates, the plates of one series being disposed alternately with relation to the plates of the other series, and spaced pipe coils arranged within said reservoir, 20 the convolutions of the respective coils being supported upon the respective series of rack plates on the hanger bars.

In testimony whereof we hereunto affix our signatures in the presence of two wit- 25 nesses.

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FRANK FAHRMAN.
DANIEL BOLTON.

Witnesses:

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E. B. CHESTNUT.