No. 667,206. Patented Feb. 5, 1901.

T. R. FAUGHNAN.

BEER COOLING APPARATUS.

(Application filed July 10, 1900.)

(No Model.)

Fig. 1.

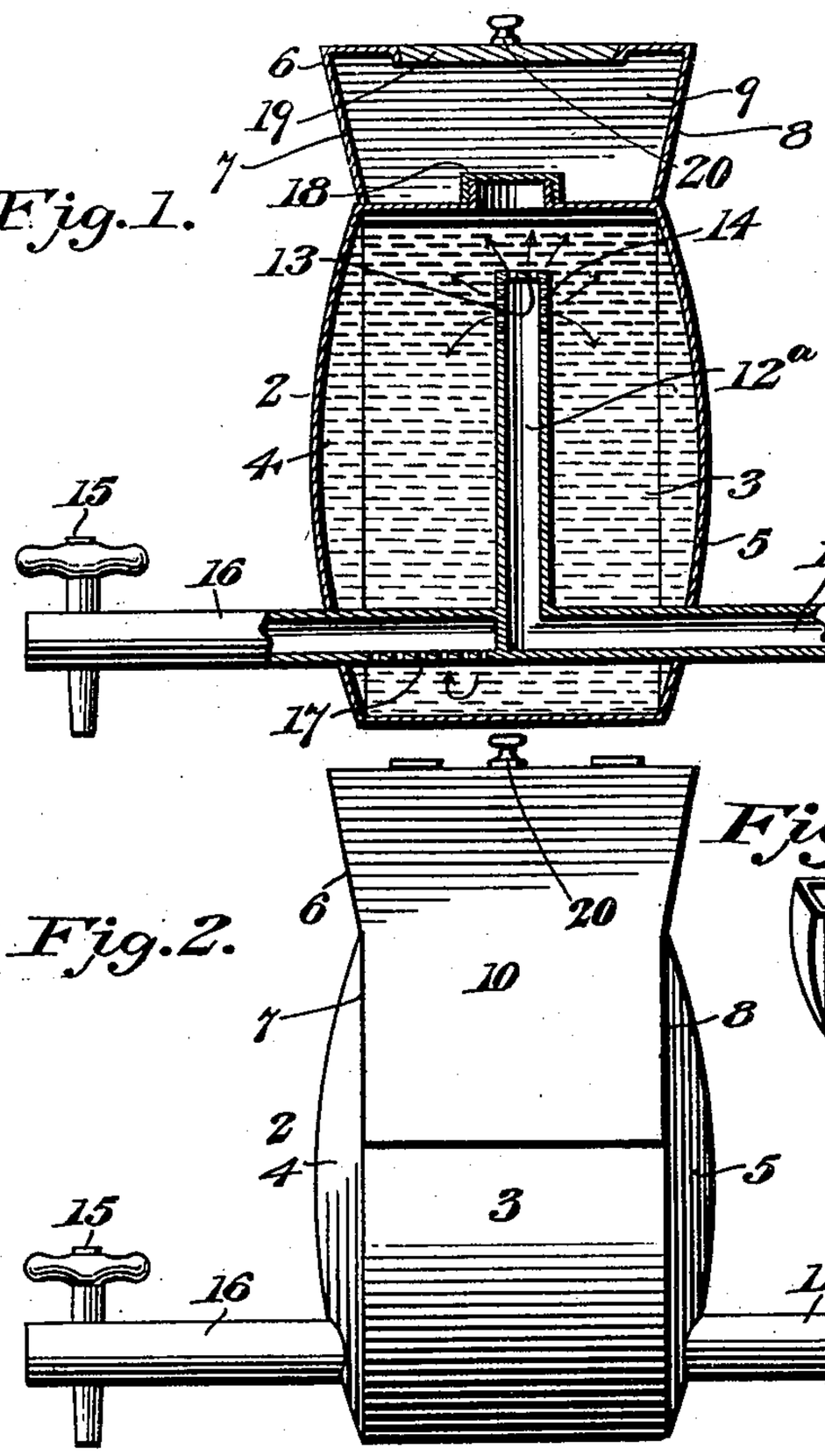


Fig. 5.

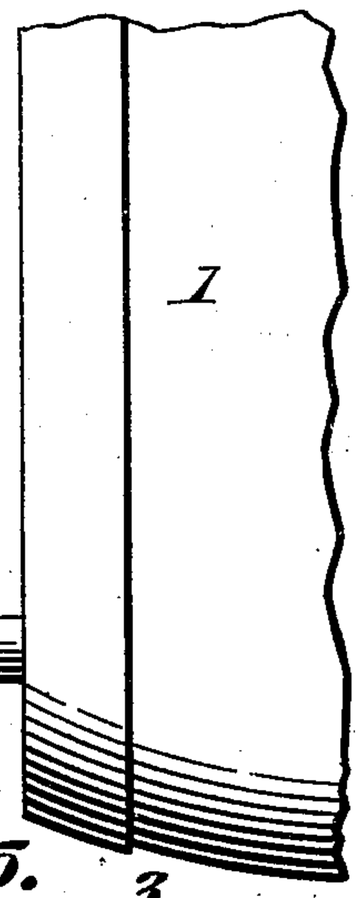


Fig. 2.

Fig. 3.

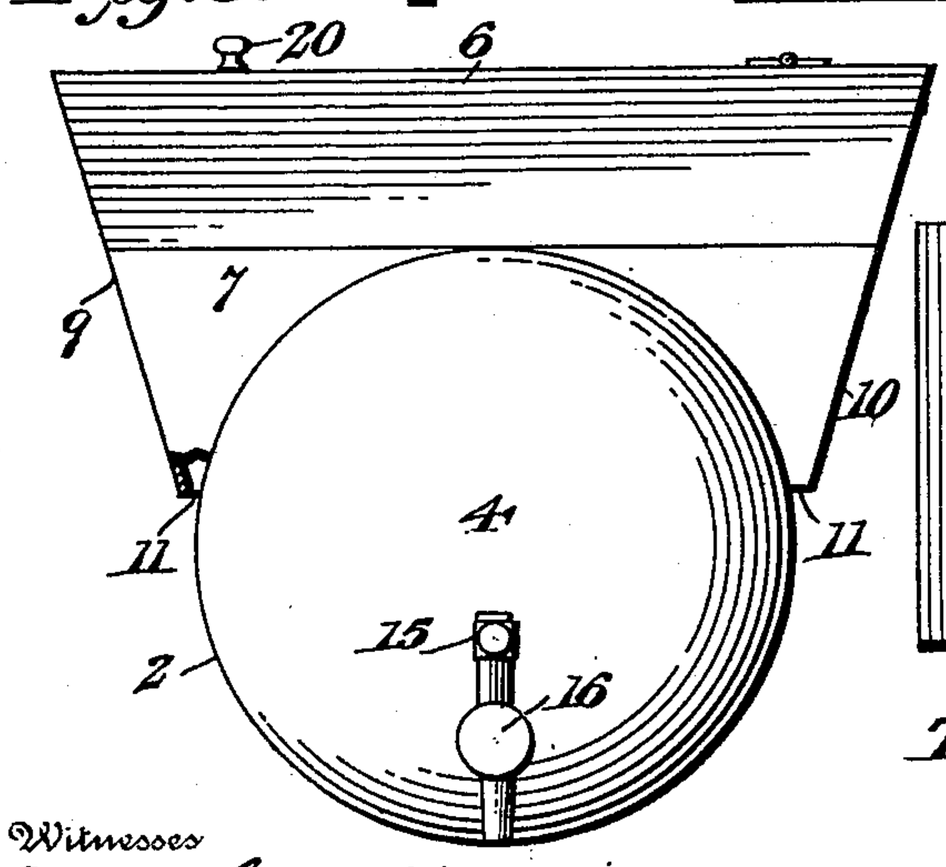
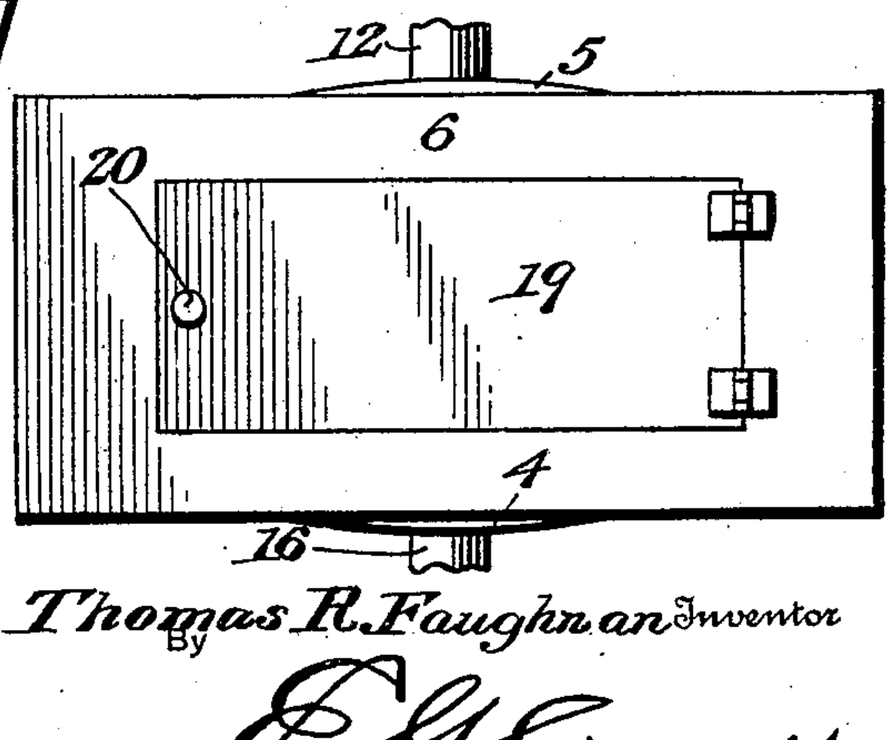


Fig. 4.



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UNITED STATES PATENT OFFICE.

THOMAS ROWLEY FAUGHNAN, OF COLUSA, CALIFORNIA.

BEER-COOLING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 667,206, dated February 5, 1901.

Application filed July 10, 1900. Serial No. 23,133. (No model.)

To all whom it may concern:

Be it known that I, THOMAS ROWLEY FAUGHNAN, a citizen of the United States, residing at Colusa, in the county of Colusa and State of California, have invented a new and useful Beer-Cooling Apparatus, of which the following is a specification.

My invention relates to improvements in beer-coolers, and has for its object the production of a simple and inexpensive device by means of which draft-beer and other liquors may be refrigerated before being drawn through the spigot.

To the accomplishment of this object the invention consists in constructing a comparatively small cooling-chamber upon the exterior of and in communication with the keg, barrel, or other container and maintained at a low temperature by direct contact with ice contained within an ice-receptacle carried by the cooling-chamber and constructed in a manner to cause the cold water produced by the melting of the ice to flow over the wall of the cooling-chamber. The refrigerated beer is designed to be drawn from the cooling-chamber through a spigot in the manner to be hereinafter more fully described, illustrated in the accompanying drawings, and defined in the appended claims.

Referring to said drawings, Figure 1 is a sectional view through my cooling apparatus complete, showing the same in communication with a beer-barrel. Fig. 2 is a side elevation of the cooling apparatus. Fig. 3 is a front elevation thereof, and Fig. 4 is a plan view with the lid of the ice-hopper closed. Fig. 5 is a perspective view of a modified form of my device.

Referring to the numerals of reference employed to designate corresponding parts in the several views, 1 indicates a barrel or other reservoir containing beer or other liquor. Located upon the exterior of the barrel I provide a comparatively small cooling-chamber 2 of substantially circular form and defined within a circular side wall 3 and concaved end or front and back walls 4 and 5. Supported upon the cooling-chamber is an ice receptacle or hopper 6, having its front and rear walls 7 and 8 cut away in semicircular form to permit the flaring side walls 9 and 10 of said receptacle or hopper to extend from a point somewhat above the chamber to the plane of its horizontal diameter, the walls 9 and 10 being slightly removed at their lower ends from contact with the periphery of the cooling-chamber to leave drip-openings 11, designed to permit ice-water from the melting ice to flow around the wall of the cooling-chamber below the ice-hopper. The walls 7 and 8 of the hopper may and preferably do assume a flaring form from a horizontal line at about the level of the top of the cooling-chamber.

12 indicates a liquid-induction pipe extending into the cooling-chamber 2, adjacent to its bottom, from the barrel 1 and provided within said chamber with an upstanding or vertical discharge end 12^a, terminating adjacent to the top of the chamber and provided with a foraminous extremity formed by piercing the closed end 13 of said pipe and the walls thereof adjacent to said end with a large number of minute openings 14, designed to project the liquid under pressure received from the beer-barrel against those portions of the walls of the cooling-chamber which are in direct contact with the ice contained within the ice-hopper. The liquid thus sprayed in comminuted form into the cooling-chamber and into contact with its refrigerated walls is effectively cooled and passes thence to the bottom of the chamber 2, upon the exterior of the pipe 12, where it is drawn off through an ordinary spigot 15, the stem 16 of which is tapped through the front wall 4 of the chamber in axial alinement with the horizontal portion of the pipe 12 and has its inner end closed by the upstanding portion of said pipe. In order to permit the liquid to find access to the stem 16 of the faucet, it is provided in its under side within the chamber 2 with a series of minute perforations 17.

It will be observed that the uniting of the induction-pipe to the inner end of the spigot-stem effects the organization of said pipe and stem in a rigid structure upon which the weight of the receptacle is distributed, inasmuch as these elements pierce the opposite walls of the chamber and are united upon the interior thereof.

18 indicates a screw-plug in the top of the chamber 2, which plug is designed to be opened to constitute a vent when the cooling-

chamber is being initially filled and is also designed to permit access to the interior of the chamber for the purpose of cleaning the latter at desired intervals.

19 indicates a cover for the ice-hopper, preferably hinged thereto and provided with a catch 20 to retain the cover in place.

Assuming the device to be organized as shown in Fig. 1 and the ice-hopper to be filled with ice, the spigot 15 is opened and a circulation is induced through the cooling-chamber. The beer, subjected, as usual, to a considerable pressure, will flow from the barrel 1 and through the pipe 12 to the top of the cooling-chamber, into which and against the refrigerated walls of which it will be projected in a fine spray through the apertures 14. The beer having been sufficiently cooled, it will pass downwardly in the direction of the arrows and into the stem of the spigot through the openings 17, from whence it will be drawn through the valve or plug of the spigot in the usual manner. Attention is called to the fact that the foraminous end of the pipe 12 not only constitutes a comminuter for causing the projection of the beer in comminuted form against the cold walls of the chamber, but also constitutes an effective filter, the perforated portion of the spigot-stem 16 also constituting a filter or screen, as well as facilitating the commingling of the liquid and gas immediately previous to the discharge of the beer from the spigot.

In Fig. 5 of the drawings I have illustrated a modification of the construction illustrated in the preceding figures, the hopper in this instance being of practically semicircular form and arranged to wholly contain the cooling-chamber. The employment of this form of hopper makes it possible to pack the ice almost entirely around the chamber, and it may therefore be desirable in some instances to substitute this construction for that heretofore described. Obviously the water is carried off from the semicircular hopper through suitable drain-openings (not illustrated) provided in the bottom thereof.

While the present embodiment of my invention appears at this time to be preferable, I do not wish to be understood as limiting myself to the embodiment of the invention illustrated and described, because obviously many changes, modifications, and variations of this device might be effected without departing from the spirit of the invention. I therefore reserve the right to effect such changes, variations, and modifications of both construction and arrangement as may fall within the scope of the protection prayed.

What I claim is—

1. In a beer-cooling apparatus, the combination with a cooling-chamber and an ice-receptacle carried thereby, of a liquid-induction pipe extending into the cooling-chamber, and a spigot having a foraminous stem likewise extending into the cooling-chamber and closed at its extremity by the directly adjacent liquid-induction pipe.

2. In a beer-cooling apparatus, the combination with a cooling-chamber and an ice-receptacle carried thereby, of a liquid-induction pipe extending into the cooling-chamber and having a lateral extension, and a spigot having a foraminous stem likewise extending into the cooling-chamber and closed at its extremity by the directly adjacent liquid-induction pipe, whereby the liquid is prevented from escaping into the end of the stem and is compelled to escape through the foraminous portion thereof.

3. In a beer-cooling apparatus, the combination with a cooling-chamber and an ice-receptacle carried thereby, of a liquid-induction pipe extending into the cooling-chamber adjacent to its bottom and having a vertical end extending to a point in proximity to the top of the cooling-chamber and provided with a foraminous extremity, and a spigot having a foraminous stem extending into the cooling-chamber and closed at its extremity by the liquid-induction pipe.

4. In a beer-cooling apparatus, the combination with a cylindrical cooling-chamber, of an ice-hopper carried by and partially surrounding said chamber and having drip-openings located adjacent to the cylindrical wall only thereof, a liquid-induction pipe extending into the cooling-chamber, and a spigot having a foraminous stem likewise extending into the cooling-chamber and closed at its extremity by the directly adjacent liquid-induction pipe.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

THOMAS ROWLEY FAUGHNAN.

Witnesses:
FRED BROSIUS,
JAMES WELCH.