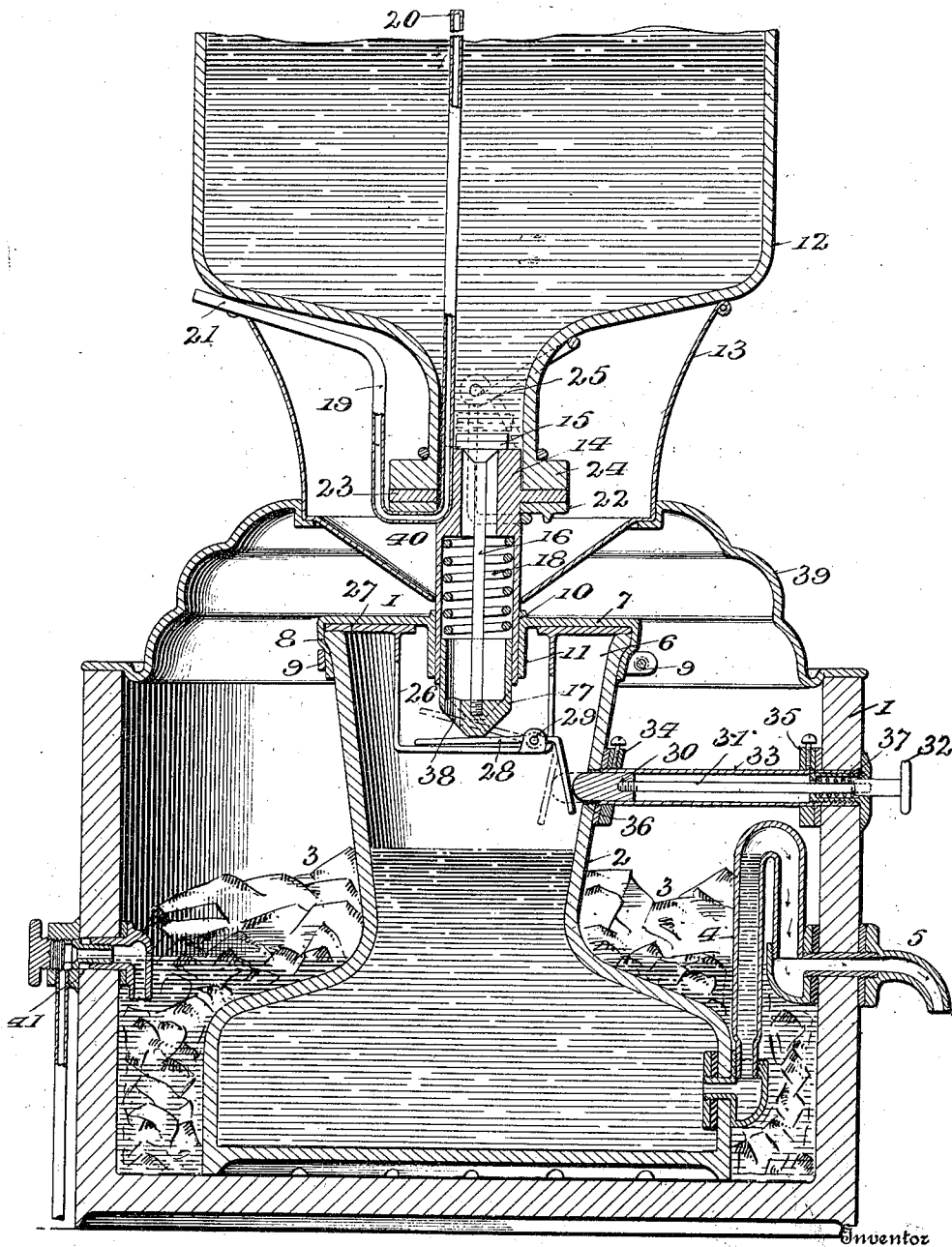


W. E. PATNAUDE.
LIQUID COOLER.
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1,018,924.

Patented Feb. 27, 1912.



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LIQUID-COOLER.

1,018,924.

Specification of Letters Patent.

Patented Feb. 27, 1912.

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To all whom it may concern:

Be it known that I, WILLIAM E. PATNAUDE, a citizen of the United States, residing at Merrimac, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Liquid-Coolers, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in liquid coolers, and is of that type which comprises an ice or cooling chamber containing a liquid cooling receptacle and an inverted bottle or cooler which supplies and replaces in the liquid cooling receptacle the amount of cooled liquid drawn therefrom, whereby small quantities of liquid are cooled and replaced in the receptacle as the cool liquid is drawn from the cooling receptacle.

The accompanying drawing is a central vertical sectional view of a cooler embodying the present improvement.

In carrying out this invention, a vessel 1 is provided in which ice or other convenient cooling means is provided. Located within this vessel is a liquid cooling receptacle 2, and this receptacle is smaller in cross-section than the vessel 1, and provides a chamber 3 therearound for ice or other suitable cooling agent. The lower portion of this cooling receptacle 2, has an outlet pipe 4, of an inverted approximately U-shaped form, the outer outlet end 5 of which is outside of the vessel 1.

The open upper end 6 of the receptacle 2, is provided with a cover of suitable form. As here shown, this cover is in the form of an inverted approximately cup-shaped member 7, made of rubber, the depending flange 8 of which tightly fits the outer surface of the receptacle and preferably a clamping band 9 is provided around the flange 8. This rubber cover is provided with an opening 10, having a depending rubber flange 11.

An inverted supply container 12, is supported upon a suitable seat 13, and the container has a projecting tubular stopper 14. The upper inner end of the stopper is adapted to be closed by means of a valve 15, which has a stem 16, extending longitudinally through the stopper and is attached to a head 17, which projects beyond the end of the stopper. A spring 18 serves to hold

the head 17 projected and the valve 15 normally in its closed position. A vent-pipe 19 has its upper end 20 extending into the inverted container 12, practically at its bottom, which is the upper end of the container when in its inverted position, while the lower end 21 of the pipe communicates outside of the container. Preferably this pipe is attached to and carried by the stopper. A flange 22 is formed as a part of or rigidly attached to the stopper, and a rubber or other suitable washer 23 is placed between this flange and the mouth 24 of the container. A suitable clamp 25, of any well-known form, is used to clamp the stopper in position with its flange 22 tightly against the washer 23, thus making a water-tight joint between the stopper and the mouth of the container.

A suitable yoke 26 has at its upper end a flange 27, which is placed between the cover 7 and the upper end of the vessel 2, and held in position by the cover. A bell-crank-shaped lever 28 is intermediately pivoted at the point 29 to the yoke 26, and is adapted to engage the reciprocating head 17 for moving it upward and unseating the valve 15. A push rod or head 30 is adapted to engage the opposite and lower end of the bell-crank lever, as shown, the said head having a stem 31, which passes through to a point outside of the vessel 1 and carries a push-button 32. This head and stem 30 and 31 move in and are supported by a tube 33, which is clamped between the outer side of the receptacle 2 and the inner side of the vessel 1, by means of suitable clamps 34 and 35, the head 30 projecting through an opening 36 formed in the receptacle 2. A suitable spring 37 serves to hold the head 30 and button 32 normally projected.

In operation the container 12 is inverted with its stopper 14 passing through the opening 10 of the cover and tightly fitting the flange 11. By pushing inward upon the button 32 the bell-crank lever 28 is moved to the position shown in dotted lines, moving the head 17 and the valve 15 to the position shown in dotted lines, which unseats the valve and permits the liquid to flow from the container through the stopper, through an opening or openings 38 in the head 17 into the vessel 2. The level of the liquid in the cooling receptacle 2 is thus raised and the liquid flows from the bottom of the ves-

sel through the outlet 4, as long as it flows from the container 12 into the receptacle. The liquid drawn from the receptacle, as stated, is taken from its bottom, which insures the drawing off of cool liquid, the warmer liquid from the container remaining at the top. As shown, the container seat 13 is supported by a suitable cover 39 for the vessel 1, and preferably the seat 13 has its bottom 40 funnel-shaped. A valved outlet 41 is provided for the ice chamber 3 in order to draw, when necessary, the water from the melted ice.

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

1. In a cooler of the type described, the combination of an inclosing vessel, a cooling receptacle therein, the cooling receptacle having an open valveless outlet, said outlet extending through the inclosing vessel at a plane above the bottom of the receptacle, an inverted container having its outlet communicating with the top of said cooling receptacle, a valve carried by and located directly within the container outlet, a valve actuating lever connected with the upper end of the cooling receptacle, and a push rod extending from the lever through the cooling receptacle and the inclosing vessel to the outside thereof, the parts operating as described.

2. A cooler of the type described, com-

prising an inclosing vessel a cooling receptacle within the vessel, an inverted container having its outlet communicating with said receptacle, a valve carried by and located directly within the container outlet, a yoke supported by the upper end of said receptacle, a valve actuating lever supported by the yoke and a lever actuating push rod passing through the receptacle and inclosing vessel, the parts operating as described.

3. A cooler of the type described, comprising an inclosing vessel, a cooling receptacle therein, a cover for said receptacle, an inverted container having an outlet passing through said cover, the cover and container outlet having an air-tight engagement, the receptacle having an outlet extending through the inclosing vessel at a plane above the bottom of said receptacle, a valve for the container outlet, means for actuating the valve from outside the inclosing vessel, and a vent pipe passing into the container and its inner end extending adjacent its upper portion and its outer end communicating outside of the container, substantially as and for the purpose described.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

WILLIAM E. PATNAUDE.

Witnesses:

JOSEPH E. KIMBALL,
JAMES A. TIRRELL.