Oct. 28, 1941. A. R. TOMSON 2,260,958

BEER COOLER

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Fig. 1.

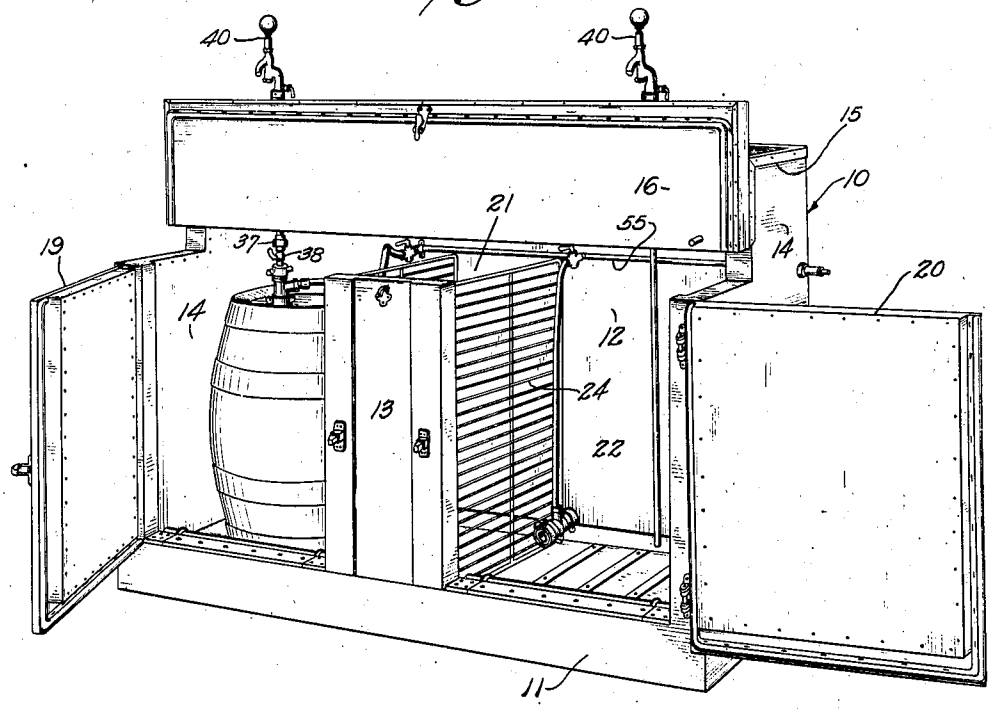


Fig. 4.

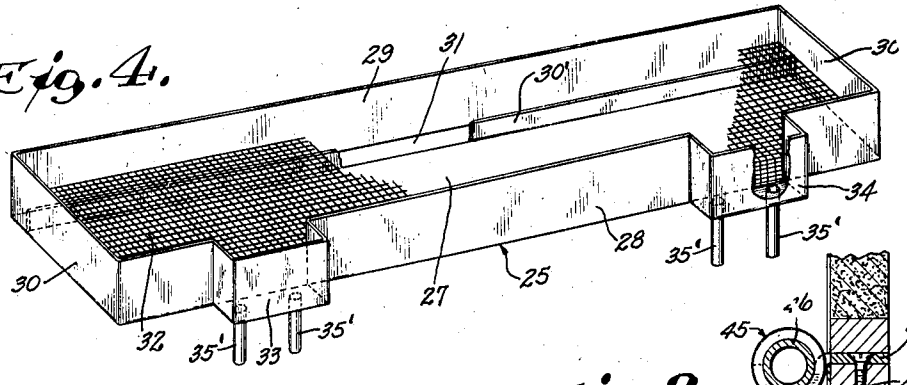


Fig. 8.

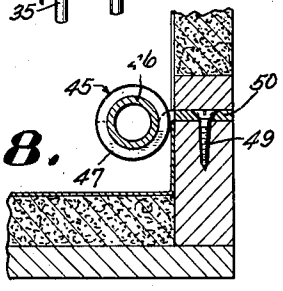
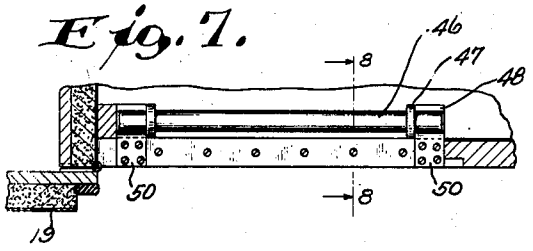


Fig. 7.



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Fig. 2.

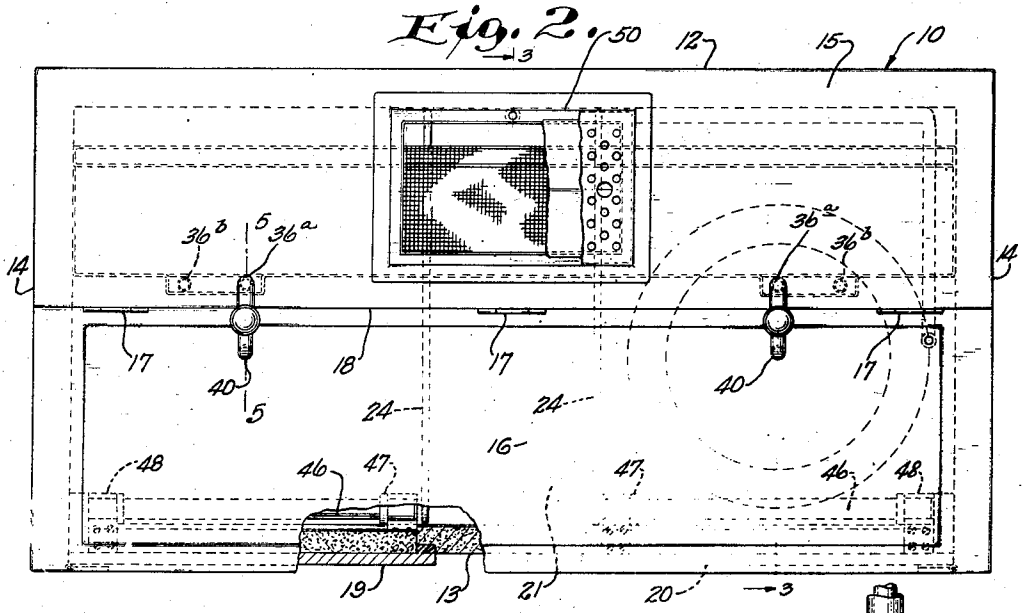


Fig. 3.

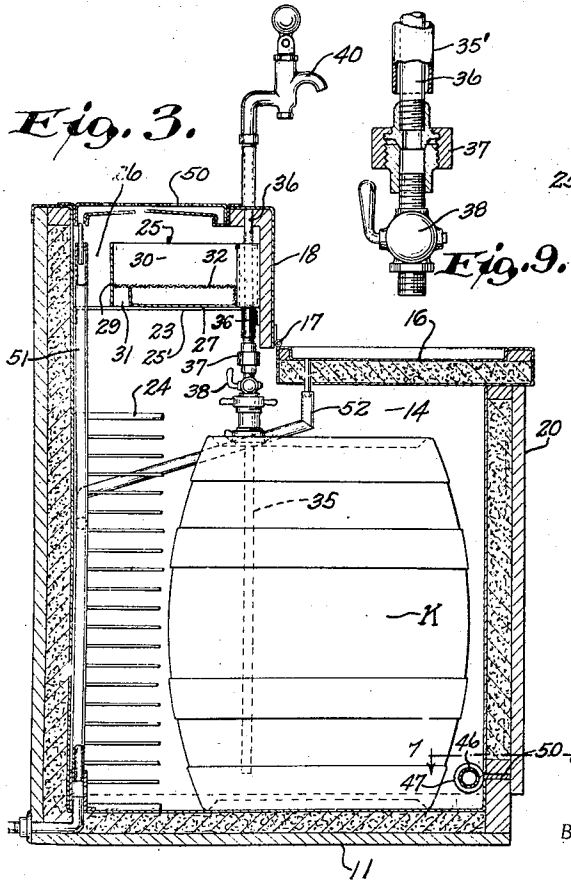


Fig. 9.

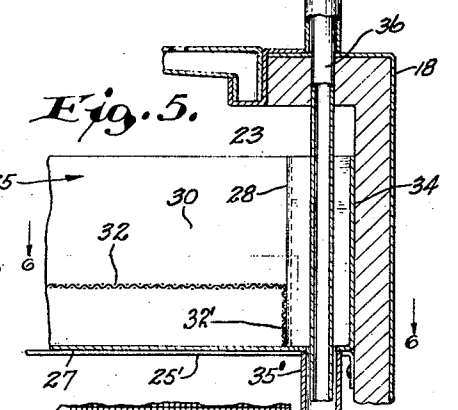


Fig. 5.

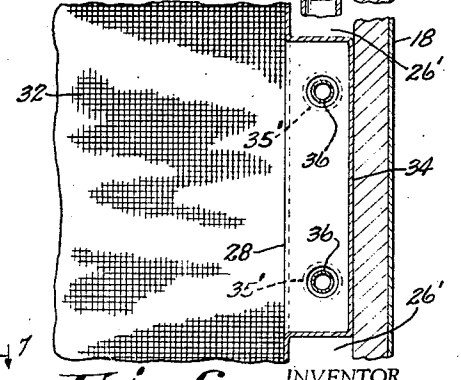


Fig. 6.

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UNITED STATES PATENT OFFICE

2,260,958

BEER COOLER

Albert R. Tomson, Milwaukee, Wis., assignor to Lamac Store Fixture Company, Milwaukee, Wis., a corporation of Wisconsin

Application May 21, 1938, Serial No. 209,193

8 Claims. (Cl. 225—40)

This invention relates generally to a cooling and dispensing apparatus for carbonated beverages and is particularly designed for advantageous use as a direct draw box for beer.

One of the objects of the invention is to provide an apparatus of this character which is designed and adapted to use ice as the cooling or refrigerating medium and which cools the beer to any temperature at which beer can be sold with satisfaction and yet provide for the drawing of a glass of beer without the use of rubber or block tin coil connections for the beer to flow through before it reaches the glass. The beer flows from the barrel or keg directly through the tap rod and faucet to the glass.

Another object of the invention is to provide a cooling and dispensing apparatus of this character and having these advantages and which is simple and durable in construction, reliable and efficient in operation, attractive in appearance, convenient in use, and susceptible of comparatively inexpensive manufacture.

Another object of the invention is to provide a cooling and dispensing apparatus of this character in which provision is made for cooling the beer in the tap rod and tap fitting and incidentally also cooling the head of the keg or barrel.

A still further object of the invention is to provide an apparatus of this character wherein the tap rod is so constructed as to facilitate tapping of a keg of beer.

A still further object of the invention is to provide an apparatus of this character which is equipped with means facilitating placing of a keg or barrel of beer in the box or the removal of the same therefrom.

Other objects and advantages reside in certain novel features of the construction, arrangement and combination of parts which will be hereinafter more fully described and particularly pointed out in the appended claims, reference being had to the accompanying drawings forming a part of this specification, and in which:

Figure 1 is a perspective view showing an apparatus embodying the present invention with the doors and lower drip pan opened up for the sake of illustration;

Figure 2 is a view in top plan illustrating the cabinet closed and with parts broken away and shown in section for the sake of illustration;

Figure 3 is a view in vertical cross section taken on line 3—3 of Figure 2, parts being shown in elevation for the sake of illustration;

Figure 4 is a perspective view of the cooling pan, parts being broken away for the sake of illustration;

Figure 5 is a fragmentary view in vertical cross section taken on line 5—5 of Figure 2;

Figure 6 is a fragmentary view in horizontal cross section taken on line 6—6 of Figure 5;

Figure 7 is a fragmentary view in horizontal cross section taken on line 7—7 of Figure 3;

Figure 8 is a similar view in vertical cross section taken on line 8—8 of Figure 7; and

Figure 9 is a detail view of the coupling employed between the sections of the tap rod.

Referring to the drawings, it will be seen that the apparatus embodying the present invention comprises a cabinet designated generally at 10 and which is made up generally of a bottom 11, inner and outer side walls 12 and 13 and end walls 14. The top of the cabinet or box is of step formation including an upper top section 15 and a lower swingable drip pan section 16 which is hinged as at 17 to a vertical wall or panel 18 connecting the sections of the top. The inner side wall 13 is provided with doors 19 and 20 which are suitably latched when closed. A suitable latch is also provided for the swingable drip pan 16. The walls making up the box are suitably constructed and insulated.

Internally the box is divided up into a main ice chamber 21, receptacle receiving compartments 22, and an auxiliary cooling chamber 23 overlying and common to said chamber and said compartments. Wire racks or partitions 24 extend transversely between the inner and outer side walls and are disposed in spaced relation to each other to define the ice receiving compartment 21.

The cabinet herein shown and described for the sake of illustration is adapted to accommodate two kegs or receptacles containing the beer or other carbonated beverage to be dispensed. Of course, the cabinet may be constructed to take any desired number of kegs or barrels.

The auxiliary cooling chamber extends the full length of the cabinet and is in direct and open communication with the main ice chamber and both receptacle receiving compartments 22. A cooling pan designated generally at 25 is disposed in the auxiliary cooling chamber 23 and extends for substantially the full length thereof although it has a transverse dimension somewhat less than that of the chamber 23 to provide a space 26 through which air may freely circulate or flow.

The pan 25 is constructed of sheet metal and

as shown to advantage in Figures 3 to 6, the pan 25 has a sheet metal bottom wall 27, vertically extending front and rear side walls 28 and 29, and end walls 30. The bottom wall 27 extends from the front wall 28 to a point adjacent to but slightly spaced from the wall 29 and is provided with an upturned flange 30'. The flange 30' and side wall 29 define a slot-like opening 31 through which air may freely pass. A false bottom 32 of screening or other suitable reticulated material is provided in the pan, the false bottom resting on the upper edge of the flange 30' and having one end down turned as at 32' and engaged with and if desired, suitably secured to the bottom 27 adjacent the side wall 28.

The side wall 28 is formed with projections or extensions 33 and 34 of similar construction and provided with openings in their floors or bottoms from which tubes 35' depend. There are two such tubes 35' associated with each projection. Two are provided to adapt the device for use in tapping either center or side tap kegs.

The pan 25 is supported in the cooling chamber by means of supporting straps 25' extending transversely of the cooling chamber and suitably fastened to the outer side wall 12 and panel 18 of the cabinet. The projections or extensions 33 and 34 of the pan space the major part of its rear side wall from the panel 18 thereby providing air space 26' through which the air also circulates.

When the device is in use a keg or barrel of beer designated at K is placed in either one or both of the compartments 22. Before placing the keg in position it is tapped. This may be conveniently done by virtue of the special tap rod provided which includes a lower section 35 and an upper section 36 releasably interconnected by a quickly detachable coupling 37. The lower section 35 is provided with a suitable shut-off cock 38. Before the keg is placed in the compartment 22 it is tapped by driving the lower section 35 of the tap rod through the tap fitting in the usual way. The keg is then placed in the compartment and the coupling 37 manipulated to unite the sections 35 and 36, after which the shut-off cock is open. The upper section 36 of the tap rod is provided with a dispensing faucet 40.

The upper section 36 of each tap rod is selectively inserted through either one of a pair of openings designated at 36*a* and 36*b* provided in its end of the top of the cabinet thereby adapting the structure for tapping either center or side tap kegs.

To facilitate the placing of a keg or barrel in each compartment 22 and also its removal therefrom, a roller designated generally at 45 is provided adjacent the sill of each door opening. The roller may consist of a piece of pipe or metal tube 46 provided adjacent its ends with collars 47. The end portions of the pipe 46 beyond the collars 47 are rotatably mounted in brackets 48 which are attached by screws 49 to the sills and have semicircular portions 50 in which the ends of the pipe are rotatably supported.

The top section 36 of the tap rod passes through the pan and through one of the openings in one of the projections thereof and also down through the tube 35'.

An appropriate quantity of crushed ice is placed on the screen in the pan and exerts a cooling effect on the tap rod by reducing the temperature in the chamber 23 and also by virtue of the fact that the cold water resulting from the melting of the ice will run out through the openings and down through the tubes 35' and hence trickle down the tap rod and over the tap fitting and on to the top of the keg. In this way the beer in the tap rod and tap fitting is maintained at the proper temperature since there is a direct cooling effect on the upper section of the tap rod and tap fitting as well as the cooling effect on the keg itself.

When the keg is empty it may be readily removed by uncoupling the coupling 37 and rolling the barrel out over the roller 45.

The top 15 of the cabinet is provided with an upper drip pan structure designated generally at 50 and provided with a suitable drain 51 with which the lower drip pan 16 also connects by means of a drain pipe 52. The cabinet is also provided with suitable overflow and drain so that the level of the water never exceeds a predetermined point in the bottom of the cabinet. Air or gas lines designated generally at 55 may also be provided as part of the permanent equipment of the box, but as these features are in themselves conventional and form no part of the present invention they are not described in detail.

While I have shown and described one construction in which the invention may be advantageously embodied, it is to be understood that the construction shown has been selected merely for the purpose of illustration or example and that various changes in the size, shape and arrangement of the parts may be made without departing from the spirit of the invention or the scope of the subjoined claims.

The invention claimed is:

1. A cooling and dispensing apparatus for carbonated beverages comprising a cabinet having an ice chamber and a compartment, a receptacle containing the beverages to be dispensed disposed in the compartment and provided with a tap fitting, said cabinet having a cooling chamber overlying the compartment and in open communication therewith, a cooling pan disposed in the cooling compartment and adapted to contain ice, the top of the cabinet overlying the pan and the pan having alined openings, a tap rod extending through the alined openings and having its lower portion inserted in the receptacle and provided exteriorly of the cabinet and at its upper end with a faucet, and means associated with the opening of the pan for causing ice water to trickle down around the tap rod.

2. A cooling and dispensing apparatus for carbonated beverages comprising a cabinet having an ice chamber and a compartment, a receptacle containing the beverages to be dispensed disposed in the compartment and provided with a tap fitting, said cabinet having a cooling chamber overlying the compartment and in open communication therewith, a cooling pan disposed in the cooling compartment and adapted to contain ice, the portion of the top of the cabinet overlying the pan and the pan having alined openings, a tap rod extending through the alined openings and having its lower portion inserted in the receptacle and provided exteriorly of the cabinet and at its upper end with a faucet, and a tube extending from the opening of the pan and loosely surrounding the tap rod to cause ice water collecting in the pan to trickle down around the tap rod.

3. A cooling and dispensing apparatus for carbonated beverages comprising a cabinet having an ice chamber and a compartment, a receptacle containing the beverage to be dispensed disposed

in the compartment, said cabinet having an auxiliary cooling chamber overlying the compartment and in open communication therewith, a cooling pan positioned in the cooling chamber and provided with a reticulated false bottom and also having a vertical opening therethrough whereby air circulated through the auxiliary cooling chamber and said compartment will pass into, over and around said pan and is chilled thereby, the top of said cabinet having an opening alined with the opening of the pan, a tap rod extended through the openings and having its lower end inserted in the receptacle, and a faucet connected with the upper end of the tap rod exteriorly of the receptacle.

4. A cooling and dispensing apparatus for carbonated beverages comprising a cabinet having an ice chamber and a compartment, a receptacle containing the beverage to be dispensed disposed in the compartment, said cabinet having an auxiliary cooling chamber overlying the compartment and in open communication therewith, a cooling pan positioned in the cooling chamber and provided with a reticulated false bottom adapted to receive crushed ice, said pan having a transverse dimension less than that of the cooling chamber so that air circulates freely over said crushed ice, said pan also having a vertical opening extending therethrough, said top having an opening alined with the vertical opening of the pan, a tap rod extended through the openings and having its lower end inserted in the receptacle, a faucet connected with the upper end of the tap rod exteriorly of the receptacle, and means associated with the opening of the pan for causing water to trickle down around the tap rod.

5. A cooling and dispensing apparatus for carbonated beverages comprising a cabinet having a compartment for receiving a receptacle containing the beverage to be cooled and a cooling chamber overlying said compartment, a tap rod extending through the top of the cabinet and through the cooling chamber and inserted in the receptacle, and a cooling pan in said chamber having a reticulated support for ice disposed above its bottom and provided with an opening through which the tap rod extends to allow ice water to trickle from the pan down around the tap rod and on to the head of the receptacle.

6. A cooling and dispensing apparatus for carbonated beverages comprising a cabinet having an ice chamber and a compartment adapted to receive the receptacle containing the beverage, said cabinet having an auxiliary cooling chamber overlying and in open communication with the compartment, a sheet metal pan supported in the cooling chamber and having a portion of its bottom bent upwardly to form a flange and also an opening in the bottom, a wire screen supported on the upper edge of the flange and on the pan and adapted to receive a supply of crushed ice, the air circulating through said compartment and chamber passing through the opening of the pan and over the ice.

7. A cooling and dispensing apparatus for carbonated beverages comprising a cabinet having an ice chamber and also having a compartment for receiving a receptacle containing the beverage, said cabinet having an auxiliary cooling chamber located above said compartment and in open communication therewith, said auxiliary cooling chamber being disposed immediately below the top of the cabinet, a pan in said auxiliary cooling chamber having a false bottom of reticulated material and adapted to receive ice fragments and keep the ice fragments out of the water resulting from melting of the ice, there being spaces between the pan and the cooling chamber, and the pan being open at its top whereby air circulating through the compartment and the cooling chamber will pass into, over, and around said pan and through the ice therein and be chilled thereby, the top of the cabinet overlying the pan and the pan having alined openings, and a tap rod extending through said alined openings and having its lower end inserted in the receptacle and provided exteriorly of the receptacle and at its upper end with a faucet.

8. A cooling and dispensing apparatus for carbonated beverages comprising a cabinet adapted to receive a receptacle containing the beverage to be dispensed, said receptacle having a tap fitting, the top of said cabinet having an opening alined with the tap fitting of the receptacle, a tap rod inserted through the opening and through the tap fitting of the receptacle, a dispensing spout connected to the upper end of the tap rod, and a pan in said cabinet adapted to contain ice and having a vertical opening through which the tap rod passes and whereby ice water will trickle down around the tap rod and on to the top of the receptacle.

ALBERT R. TOMSON.