

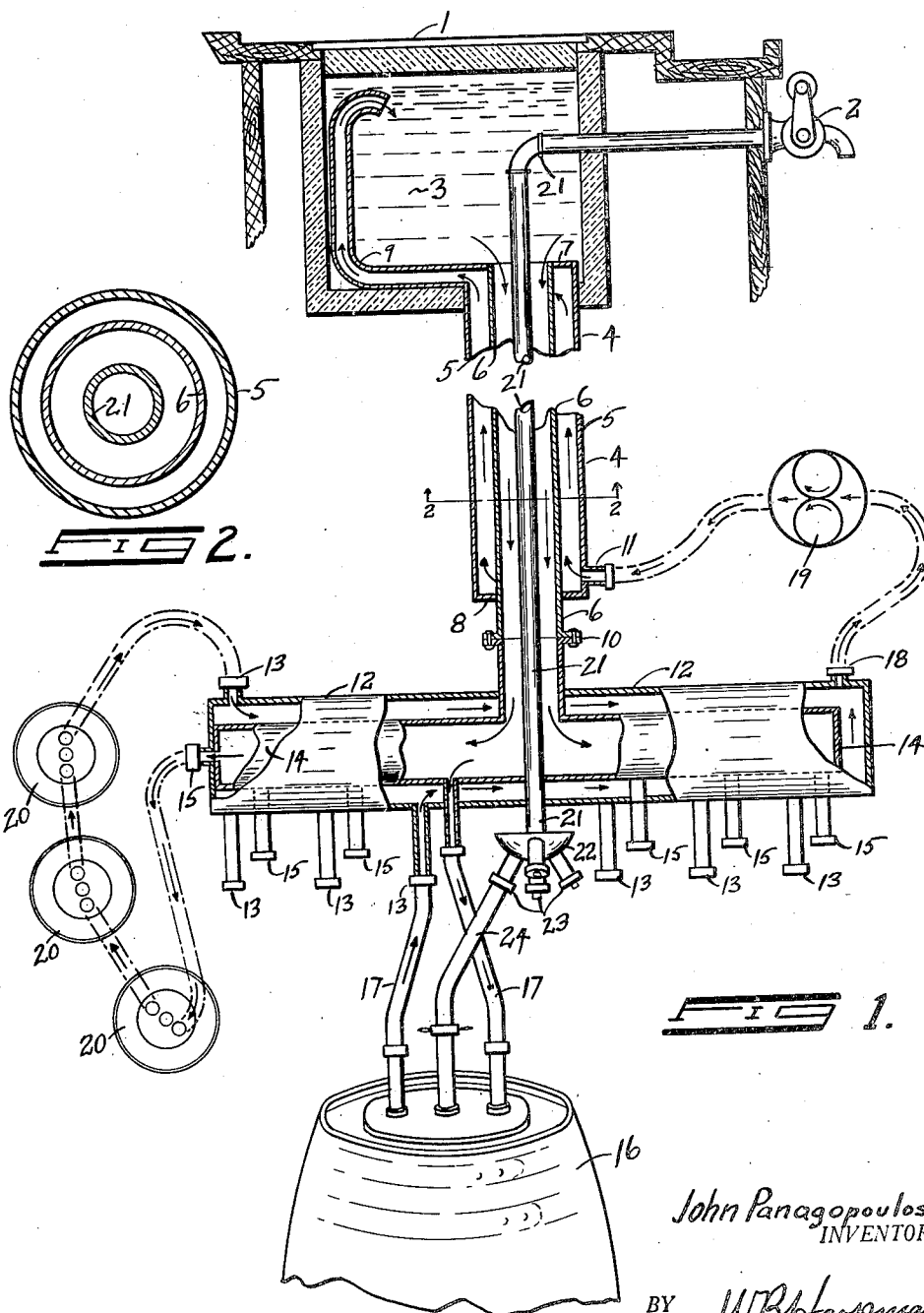
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BEER DRAWING SYSTEM

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BEER DRAWING SYSTEM

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The present invention relates to the art of beer cooling and dispensing and involves a special application of the invention broadly disclosed and claimed in Patent No. 2,051,013, issued August 11, 1936, to Herman E. Schulse.

Among the objects of the invention are to provide an installation of the above type in which the brew from the kegs is dispensed at a remote spigot usually on the floor above that of the keg, the brew being cooled and maintained cool not only within the kegs but also through its course of flow to the remote faucet at the bar.

Another object is to provide an installation of the above type by which a multiplicity of kegs may be kept in reserve in condition sufficiently cool in a non-refrigerated cellar to be proof against spoilage and in which the shifting or connecting of kegs in the basement is required only at very long intervals, far greater than those determined by the drawing of the contents of a single keg.

The present invention is directed to an improvement upon that of my copending application Serial No. 122,378, filed January 26, 1937, issued on October 19, 1937, under Patent No. 2,096,591.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, can be made within the scope of what is claimed, without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawing, wherein:

Figure 1 is a side elevation of a beer drawing system with parts in cross section.

Figure 2 is a cross section on a larger scale taken on line 2—2 of Figure 1, and showing the tube within a tube construction of this section of the device.

In the drawing bar 1 is shown provided with a spigot 2. A cooling tank 3 equipped with an appropriate refrigerating coil (not shown) therein is shown positioned within the bar 1 and has a vertical cooling chamber positioned below it which comprises a tube 5 having a smaller tube 6 positioned within it, the jacket between the tubes 5 and 6 being closed at the top by a closure 7, and at the bottom by a closure 8. A pipe 9 communicates with said jacket at the side of the tube 5 near its upper end and extends upward to near the top of the cooling tank 3. The lower end of the tube 6 extends below the closure 8

and terminates in an out-turned flange forming a union 10. Positioned below the union 10 and forming a part thereof, there is a manifold with a plurality of outlets and inlets for the circulation of the cooling agent to a number of beer kegs. This manifold comprises a tube-like member 12 having a plurality of taps 13 therein. A tube 14 of smaller diameter positioned within the tube 12 has a passage opening from it to the union 10, thus connecting it directly with the tube 6. A plurality of taps 15 extend from the tube 14 out through the sides of the tube 12. These taps 13 and 15 are adapted to circulate the cooling agent through a number of beer kegs. A keg 16, having its cooling coil (not shown) built therein, is shown connected by means of flexible hose 17 to a pair of taps 13 and 15. A tap 18 at one end of the manifold connects a circulating pump 19 to tap 11 near the lower end of tube 5.

At the opposite end of the manifold there is provided an extra pair of taps 13 and 15 which provide connections for cooling a plurality of additional beer kegs 20 connected in series. Positioned in the center of the vertical cooling chamber 4 and extending upwardly into the cooling tank 3 and outwardly to the spigot 2, there is a pipe 21 which provides passageway for the beer. The lower end of this pipe or brew line 21 extends downwardly through the manifold and terminates in a head 22 having a plurality of taps 23. One of these taps 23 is shown connected by means of a flexible tube 24 to the beer connection of the keg 16 and the other taps 23 are similarly connected to other kegs. Arrows on the drawing indicate the circulation of the cooling agent.

It will be apparent that when a plurality of kegs of the same beer are connected in parallel to the manifold 12 across the respective sets of tap terminals 13 and 15 thereof, the pump 19 throughout operation will cause a continuous circulation of cold water or the like through a continuous circuit including the jacket 5, 6 and pipe 9, including tank 3, the inner wall of tube 6, the inner tube 14 of the manifold and by way of the taps 15 through the various kegs 16 returning in parallel through the various taps 13 to the jacket 12—14 of the manifold and thence by way of tap 18 back to the pump. In this manner the contents of the keg 16 are maintained at all times at drinking temperature. The single beer pipe 21 communicating by way of head 22 to the various kegs on the line in parallel, it is apparent that when the spigot 2 is opened, beer will be drawn at the same time from each and every keg

on the line. This arrangement is feasible and practical where one type of beer is to be served. Therefore it is unnecessary for the bartender to connect fresh kegs to the cooling line except at the rather long intervals that all of the kegs on the line shall have been drained. The arrangement of an extra supply of kegs untapped and in reserve to have cooling fluid circulated there-through in series from the manifold is advantageous in assuring an emergency supply of brew pending replacement of the empty kegs with fresh ones. By reason of the higher linear resistance of the line connecting the kegs in series, which is operated at the same pressure as the individual kegs connected in parallel, the water will course at much slower rate through said kegs on reserve and will not keep them at drinking temperature but will yet maintain them at a temperature sufficiently low to guard against spoilage. Economy of equipment and refrigeration, is thus effected.

What I claim is:

1. A brew cooling and dispensing installation comprising a plurality of kegs having cooling conduits therein, a single dispensing faucet remote from the kegs, an elongated brew line extending from all of said kegs in parallel to said faucet, a conduit extending lengthwise of said brew line substantially the entire length of the latter and in heat exchange relation therewith and propulsion means communicating with the cooling conduits of said kegs in parallel and with the conduit along the brew line and serving to circulate cooling liquid through all of said conduits.

2. A brew cooling and dispensing installation comprising a plurality of kegs, cooling passages built thereinto, a dispensing faucet remote from all of said kegs, a single brew line extending from said kegs to said faucet, a cooling conduit extending lengthwise of said brew line and in heat exchange relation therewith and pump means communicating in parallel with the cooling passages built into the various kegs and also communicating with the cooling conduit along said brew line and serving to circulate cooling liquid through said passages and said conduit.

3. A brew cooling and dispensing installation comprising a plurality of kegs having hollow cooling passageways therein, an elongated brew line connected to all of said kegs in parallel, a cooling jacket about said brew line, the cooling passageways of said various kegs being connected in parallel with each other and in series with said jacket and a common propulsion means for circulating cooling liquid through said kegs in parallel and through said jacket in series therewith.

4. A brew cooling and dispensing installation comprising a dispensing bar, a cooling tank thereunder, a plurality of beer kegs in the basement below said bar and having cooling passageways therein, a common brew line connected in parallel to all of said kegs and extending upward through said tank and having a faucet at the outer end, a cooling jacket about said brew line in communication with said tank, the cooling passageways in the plurality of kegs being connected in parallel to each other and in series with said jacket and a pump for effecting circulation of cooling fluid in series through said conduit and said passageways, the flow through the latter being in parallel.

5. A brew cooling and dispensing installation comprising a dispensing bar, a cooling tank adjacent said bar, a brew line the outlet part of

which extends through said tank and having a faucet at the outer end thereof, said brew line extending downward to the basement, a plurality of kegs having cooling passageways built thereinto, said kegs being connected in parallel to said single brew line, a cooling jacket about said brew line for substantially the length thereof, a cooling manifold, the cooling passageways of the several kegs being connected in parallel across said manifold and a pump connected between said jacket and said manifold for circulating cooling liquid through said kegs in parallel and in series therewith through said jacket.

6. The combination recited in claim 5 in which the jacket about the brew line includes a tube immediately about said brew line supplied from said tank and delivering to an inner tube of the manifold and in which the pump connection is between the outer wall of the manifold and an outer wall of said jacket, which latter delivers the liquid after its course through the jacket and the manifold and the kegs back to the tank.

7. An installation for cooling brew comprising a manifold, a plurality of kegs connected in parallel across said manifold, a plurality of kegs on reserve connected in series across said manifold and a single pump connected across said manifold and circulating cooling liquid through said various kegs.

8. In a beer cooling and dispensing installation, the combination of a manifold comprising an outer tube and an inner tube, pairs of taps protruding outwardly from the respective tubes, kegs having cooling passageways connected to the respective pairs of taps, kegs having cooling passageways connected in series and taps one on each of the respective manifold tubes connected to the respective ends of said series line and a pump connected to circulate cooling fluid into and out of the respective manifold tubes and through the cooling passageways of the respective kegs.

9. A brew cooling and dispensing installation, comprising a bar having a cooling tank associated therewith, a plurality of beer kegs in the floor below said bar, a brew line having a faucet at its outer end and extending downwardly to said kegs, a cooling jacket about said brew line having an inner jacket encircling said brew line and supplied from said tank and an outer jacket about said inner jacket for return of liquid to said tank, a manifold near the lower end of said brew line, said manifold including an outer tube and an inner tube therein, the respective tubes having pairs of taps protruding therefrom, each of beer kegs having a cooling passageway therein, said passageways being connected in parallel across the respective taps, a head at the lower end of the brew line connected in parallel to the contents of the several kegs and a circulating pump connected between the outer wall of the manifold and the outer wall of the jacket.

10. The combination recited in claim 9 in which a plurality of beer kegs on reserve are connected in series across the manifold.

11. In a beer drawing and cooling system comprising a cooling tank, a vertical cooling jacket positioned below the said cooling tank, said jacket comprising a pair of tubes telescopically arranged to form separate inner and outer passages each communicating with said cooling tank for the flow of a cooling agent, a manifold comprising a pair of tubes telescopically arranged to form separate inner and outer passages, said inner passage of the manifold communicating with

the inner passage of the jacket and said outer passage of the manifold communicating with the outer passage of the jacket, the inner tube of said manifold being attached to the inner tube 5 of the jacket, a plurality of taps on each of the said tubes of the manifold, the ends of each of the said tubes of the manifold being closed, so as to form means for enabling a cooling agent to be circulated through said taps by way of con- 10 nections to internally cooled kegs, together with a pipe centrally positioned in the said jacket and extending upwardly into the said cooling tank and to a spigot positioned thereon, and extending downwardly through the said manifold and 15 to suitable connections to rods positioned in beer kegs, substantially as described.

12. In a beer drawing and cooling system comprising a cooling tank, a jacket positioned below the said cooling tank and communicating there- 20 with, and comprising a pair of tubes telescopically arranged, one about the other, the lower end of the outer one of the said pair of tubes being closed, and provided at its upper end with a restricted opening, a tube leading from said re-

stricted opening to a point near the top of the said cooling tank, a manifold comprising a pair of tubes telescopically arranged, the inner tube being attached to and communicating with the inner one of the said pair of tubes comprising the 5 said jacket, taps on the outer tube of the jacket and the outer tube of the said manifold, a pump and suitable connections positioned between the said taps and adapted to circulate a cooling agent, a plurality of secondary taps on each of the said 10 tubes of the said manifold, the ends of each of the said tubes of the manifold being closed, so as to form means for enabling a cooling agent to be circulated through the said secondary taps to internally cooled kegs by suitable connections, 15 together with a pipe centrally positioned in the said jacket and extending upwardly into the said cooling tank and to a spigot positioned thereon, and extending downwardly through the said manifold and to a suitable connection on draft 20 rods positioned in beer kegs, substantially as described.

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