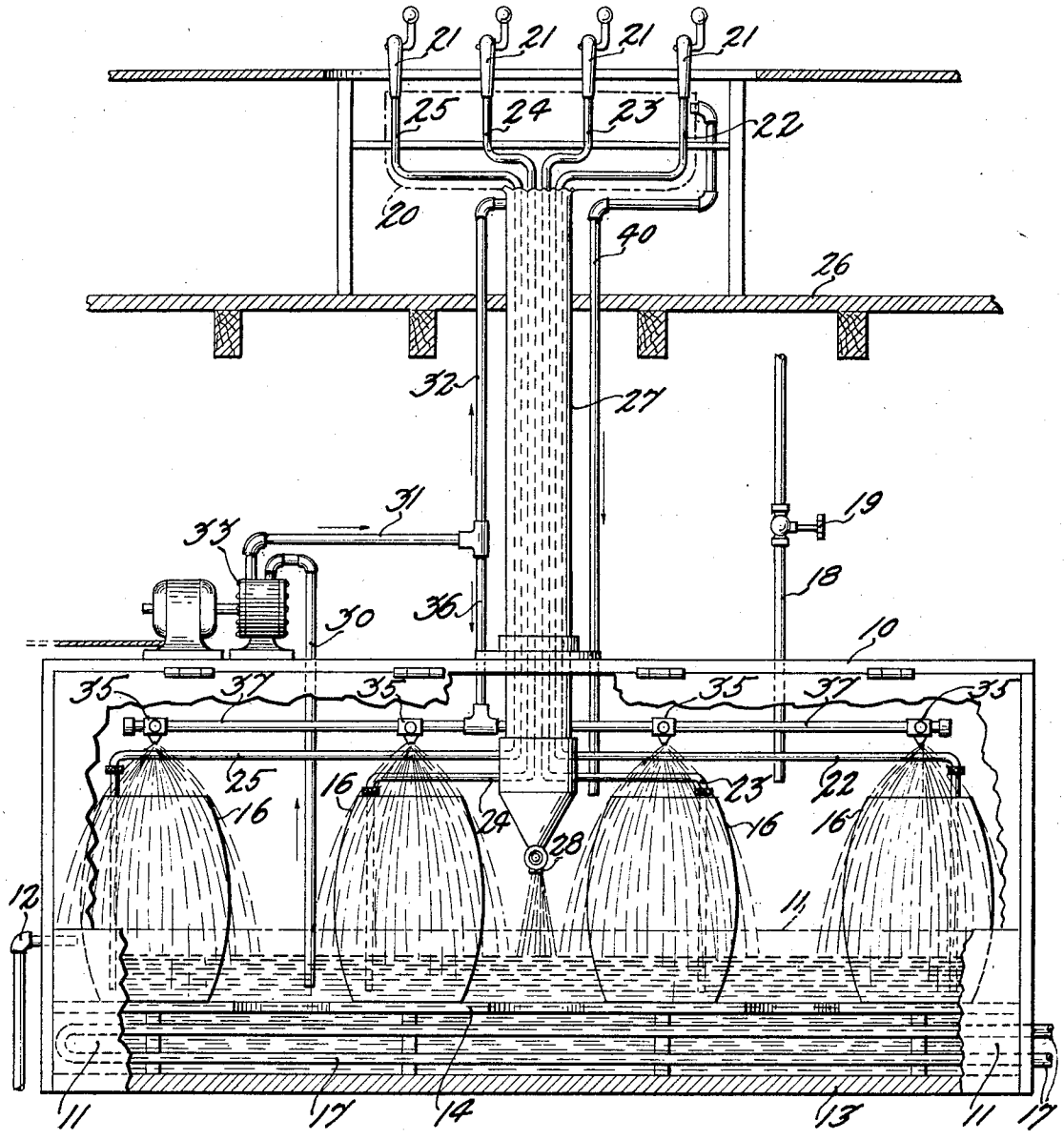
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REFRIGERATION APPARATUS

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REFRIGERATION APPARATUS

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6 Claims. (Cl. 62—101)

This invention relates to refrigeration means in general and more specifically to refrigeration apparatus intended for the rapid and efficient cooling of potable liquids both before and during their passage from the original containers to a point of dispensation located remote from that of said containers.

An object of the invention is to provide improved means of the type specified by which containers of beer or various other beverages may be more readily subjected to a cooling process with an aim towards reducing the amount of labor involved in the handling of such containers.

A further object of the invention is to provide a simple and effective means by which conventional metallic beverage containers can be thoroughly cooled in a relatively short space of time.

Various other objects and advantages of the invention will be in part obvious from an inspection of the accompanying drawing and a careful consideration of the following particular description and claims of one form of mechanism embodying my invention.

In the drawing:

The drawing is a front elevation of the present invention partly in section.

With reference to the drawing, **10** designates a cabinet preferably thermally insulated, with respect to its walls, and provided with a lower tank like construction **11** adapted to hold a fluid such as water at any level not in excess of the position of an overflow relief pipe **12**.

Within said tank **11** there is disposed at some height above the bottom **13** a platform **14** designed to support a plurality of containers **16** in a manner as to be partially below the water line as shown.

Preferably under said platform, there is arranged in any convenient manner, one or more coils **17** connected with an ammonia compression or other refrigeration system (not shown) which will circulate therethrough a heat absorbing medium. In order that additional water may be supplied to said tank when needed, a pipe **18** and valve **19** may be employed for that purpose.

The containers **16** are connected to the faucets **21** by means of their respective pipes **22**, **23**, **24**, and **25** which extend downward into said containers. Suitable pressure apparatus for the purpose of causing the liquid to rise in said pipes may be employed but has not been shown since such is well known in the trade and accordingly not a feature of this invention.

It is conventional practice to store such containers or kegs, where possible, in the cellar and to convey the liquids therefrom to the tap room such as on the floor **26** above by means of the pipes mentioned.

One of the essential features of my invention is that all of the pipes aforesaid extend through a preferably cylindrical conduit **27** having a funnel shaped upper portion **20** which is shown in the present instance as extending from just below the faucets **21** and through the floor **26** vertically downward to a substantial distance within the cabinet **10** where it terminates into a controllable outlet **28** formed as a constriction the function of which is to constrain the rate of flow from within the conduit to a degree less than the influx. In operation this conduit is kept filled with the chilled water pumped from the tank **11** below by means of the pipes **30**, **31** and **32** and the motor driven pump **33**. Some of the chilled water is conveyed by this operation to the spray nozzles **35** by means of the pipes **36** and **37** which will cause the containers to be constantly deluged with the icy fluid.

Attention is directed to the fact that there are shown and described three distinct and separate means all of which operate in unison to chill the beverages contained in the barrels or kegs; it will be understood however that any of said means can be used separately or in pairs if so desired. It will be further understood that if only the kegs were kept chilled that portion of the beverage that remained in the pipes between the kegs and the taps above would soon assume the temperature of the surrounding atmosphere. Accordingly I have provided by means of the hereinbefore described conduit, through which all of said feed pipes pass, a highly effective and convenient method of maintaining a constant uniform temperature of any beverages dispensed by this system.

The invention is not limited to the particular arrangement shown since possible variations in the space available for the disposition of the cabinet and the location of the faucets **21** may necessitate a change in the formation of the conduit and the associated piping. It is suggested that said conduit extend upwardly as close to the faucets as possible in order to obtain the highest efficiency. The coils **17** may be disposed somewhat differently than shown if found more convenient of installation otherwise.

Variations may be resorted to within the scope of the invention and portions of the improvements may be used without the others, whilst not departing from the spirit of the invention.

Having thus described my invention, I claim:

1. In apparatus of the class described, the combination of a cabinet, a receptacle in said cabinet adapted to retain a fluid, means to chill said fluid, a support adapted to maintain a plurality of containers partially submerged in said fluid, pump means adapted to deluge said containers with said fluid, a plurality of pipes adapted to extend from within said containers to faucet means, a conduit through which said pipes extend, and means to circulate a portion of said chilled fluid through said conduit.

2. In a refrigeration apparatus, the combination with one or more beverage containers, of a receptacle adapted to retain a chilled fluid, means to support said containers partly submerged in said fluid, a conduit, pipes extending from within said containers through said conduit to draft means remotely located, and fluid conveyor means comprising a pipe line and a driven pump adapted to deluge said containers with said chilled fluid and to maintain said conduit full of said fluid.

3. In refrigeration apparatus, the combination with a plurality of beverage containers, of a receptacle to contain a chilled fluid, supporting means adapted to maintain said containers in a partly submerged condition in said fluid, a conduit extending from adjacent said containers to adjacent a dispensing faucet means, pipes extending from said containers through said conduit to the draft means, a pump to convey a portion of the chilled fluid to said conduit and over said containers, and means to maintain said fluid in a chilled condition.

4. In apparatus of the class described, the combination with a plurality of containers, of a tank in which said containers are supported in a manner as to be partly submerged in a chilled fluid therein, a spray means providing a nozzle over each container; said spray means being adapted to deluge said containers with said fluid, a pump having suitable connections to draw some of the fluid from said tank for said spray means, a pipe line for each container extending from its interior to a remote draft means, a conduit through which said pipes extend, pipe connections coacting with said pump tending to maintain the conduit full of the chilled fluid, and a constricted controllable exit on said conduit for the fluid to return to said tank.

5. In apparatus of the class described, the combination with a multiplicity of beverage containers, of a receptacle adapted to contain a fluid, means to chill said fluid, a conduit adapted to be filled with a portion of said chilled fluid and extending upwardly from within said receptacle to a point adjacent dispensing faucet means, a plurality of pipe lines one for each container extending from said beverage containers longitudinally through said conduit to said faucet means respectively, a further pipe line comprising a circulating pump adapted to deliver said chilled fluid to the upper portion of said conduit, and a controllable exit means at the lower portion of said conduit to govern the rate of circulation of the fluid and its expulsion from the conduit.

6. In apparatus of the class described, the combination with a multiplicity of beverage containers, of a spraying means for said containers, a conduit adapted to contain a chilled fluid for circulation therein, at least one pipe line for each of said containers all of said pipe lines extending adjacently through said conduit from said containers to respective dispensing faucet means, and a further pipe line comprising a driven pump adapted to deliver said chilled fluid to said conduit and to said spray means.

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