

Oct. 24, 1939.

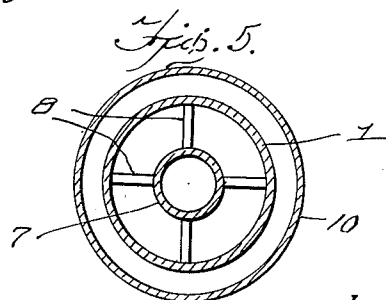
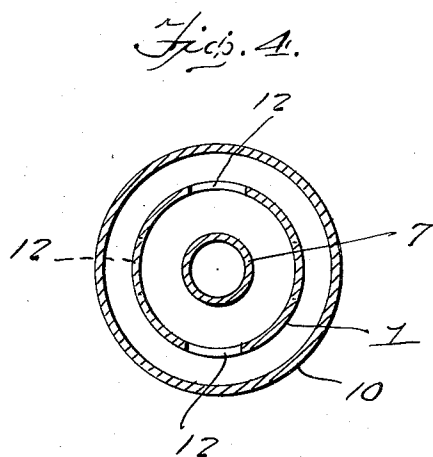
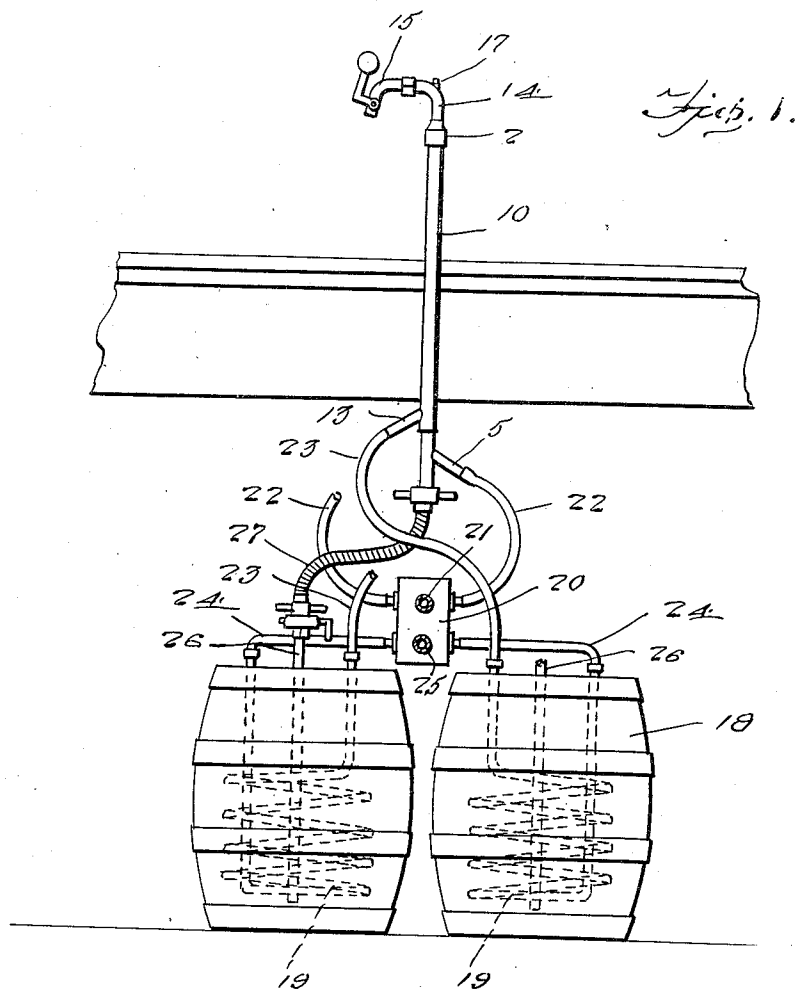
M. DEL NERO

2,177,207

BEER COOLER

Filed Nov. 18, 1937

2 Sheets-Sheet 1



Inventor

M. Del Nero

By *Clarence A. O'Brien*
Hyman Berman

Attorneys

Oct. 24, 1939.

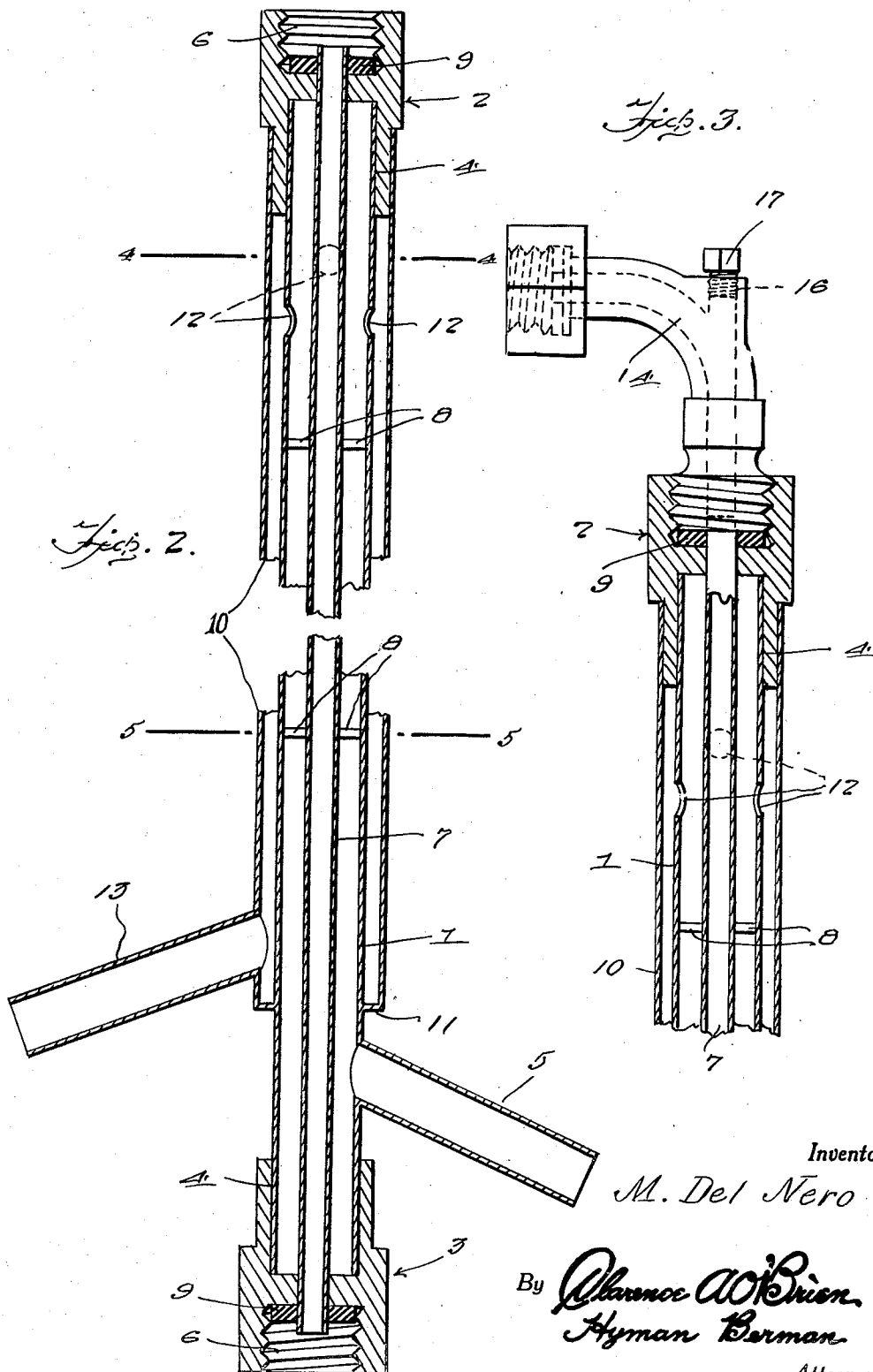
M. DEL NERO

2,177,207

BEER COOLER

Filed Nov. 18, 1937

2 Sheets-Sheet 2



Inventor

M. Del Nero

By

Almonce A. O'Brien
Hyman Berman

Attorneys

UNITED STATES PATENT OFFICE

2,177,207

BEER COOLER

Martial Del Nero, Rome, N. Y.

Application November 18, 1937, Serial No. 175,336

1 Claim. (Cl. 225—3)

The present invention relates to new and useful improvements in beer dispensing means of the type wherein the beverage is maintained under pressure in a container at a point remote from the discharge faucet, such as in a basement or lower floor.

The primary object of the invention is to provide, in a manner as hereinafter set forth, novel means for cooling the beverage while in transit from the container to the faucet.

Other objects of the invention are to provide a beverage cooler of the aforementioned character which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein;

Figure 1 is an elevational view, showing the device installed.

Figure 2 is a view in vertical section through the cooler.

Figure 3 is a view in vertical section through the upper portion of the cooler, showing an elbow which carries the faucet or spigot mounted therein.

Figure 4 is a view in horizontal section, taken substantially on the line 4—4 of Fig. 2.

Figure 5 is a horizontal sectional view, taken substantially on the line 5—5 of Fig. 2.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a cooling tube 1 of suitable metal on the end portions of which substantially duplicate upper and lower fittings 2 and 3, respectively, are fixed. The fittings 2 and 3 comprise smooth sockets 4 in their inner ends in which the end portions of the cooling tube 1 are fixed. An inlet neck 5 communicates with the cooling tube 1 adjacent the lower end thereof. In their outer ends, the fittings 2 and 3 are provided with threaded sockets 6.

Extending between the fittings 2 and 3 in the cooling tube 1 and spaced therefrom is a beverage conduit 7 of suitable material. Suitable spacers 8 are provided between the beverage conduit 7 and the cooling tube 1. As illustrated to advantage in Fig. 2 of the drawings, the end portions of the beverage conduit 7 project into the

sockets 6 and are encircled by resilient washers or gaskets 9.

The reference numeral 10 designates a tubular jacket which is mounted on the cooling tube 1 in spaced, concentric relation thereto. The jacket 10 terminates in a closed lower end 11 above the inlet neck 5 of the tube 1. The upper end portion of the jacket 10 is fixed on the lower portion of the fitting 2. The tube 1 communicates at its upper end portion with the jacket 10 through openings or ports 12. A discharge neck 13 is provided on the lower end portion of the jacket 10.

Threadedly mounted in the socket 6 of the upper fitting 2 is an elbow 14 which communicates with the beverage conduit 7. The gasket 9 in the fitting 2 prevents leakage between the elbow 14 and the conduit 7. The reference numeral 15 designates a conventional spigot which is mounted on the elbow 14. At an intermediate point, the elbow 14 has formed therein a vertical opening 16 which is aligned with the conduit 7. This facilitates the insertion of a suitable brush or other device for cleaning the conduit 7. A removable plug 17 closes the opening 16.

In Fig. 1 of the drawings, the reference numeral 18 designates a plurality of beer kegs having cooling coils 19 mounted therein. The reference numeral 20 designates a heat insulated header which is connected to a suitable pump or compressor (not shown) for receiving refrigerated water therefrom. The delivery pipe 21 of the header 20 is connected by flexible conduits 22 to the nipples or necks 5 of the tubes 1. The discharge nipples 13 of the jackets 10 are connected by flexible conduits 23 to the intake ends of the coils 19. The discharge ends of the coils 19 are connected by conduits 24 to the return pipe 25 of the header 20. The reference numeral 26 designates tap rods in the kegs 18. Flexible conduits 27 connect the rods 26 to the lower fittings 3 of the cooling devices in communication with the conduits 7 of said devices.

It is thought that the operation of the invention will be readily apparent from a consideration of the foregoing. Refrigerated water from a compressor flows through the delivery pipe 21 of the header 20 and enters the cooling tubes 1 of the devices through the flexible conduits 22 and the inlet nipples 5. Of course, one of the cooling devices is provided in the delivery line from each keg 18. The refrigerated water flows upwardly around the conduit 7 in the tube 1 and enters the jacket 10 through the ports 12. Of course, the water then flows downwardly in the jacket 10 and is discharged through the nipple 13.

Upon leaving the cooling devices, the water flows through the flexible conduits 23, through the coils 19, the conduits 24, the pipe 25 of the header 20 and returns to the compressor. It will thus
5 be seen that novel means has been provided for maintaining the beverage at the desired temperature while in transit to the spigot or faucet as well as when it may be standing in the line.

It is believed that the many advantages of a
10 beer cooler constructed in accordance with the present invention will be readily understood and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction
15 and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

A heat exchange unit for use with a beverage
20 containing keg having a tap rod therein, a header for the intake and discharge of cooling fluid under pressure, and a cooler coil in the keg connected at one end to the intake side of the header; said unit comprising a cooling tube having upper
25 and lower end fittings closing the same and outlet ports therein adjacent the upper end there-

of, a draft tube of smaller and uniform diameter extending axially through the cooling tube and forming therewith a cooling chamber substantially coextensive in length with that of the cooling tube, the lower end fitting being adapted for
5 the connection of said draft tube to the tap rod for the passage of the beverage from the keg upwardly through said draft tube, an overflow jacket surrounding the cooling tube, an inlet nipple at the lower end of said cooling tube for con-
10 nection to the discharge side of the header whereby cooling fluid from the latter may rise in said cooling tube to discharge out of said ports into said jacket, the jacket having a closed lower end
15 spaced above said lower end fitting and said inlet nipple being connected to the cooling tube between said lower end of the jacket and said lower
20 end fitting for the introduction of the cooling fluid directly into the cooling tube, and a discharge nipple extending from the lower end of said jacket for connection to the other end of
said coil whereby overflow fluid in said jacket may discharge back into said coil to flow back
to the intake side of the header.

MARTIAL DEL NERO.