

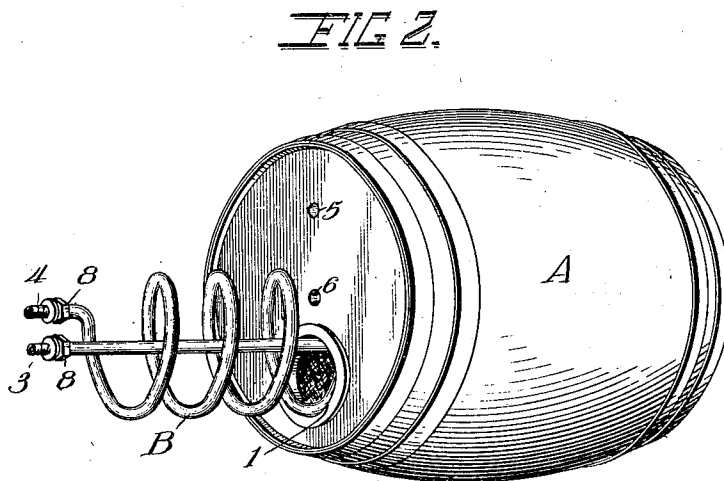
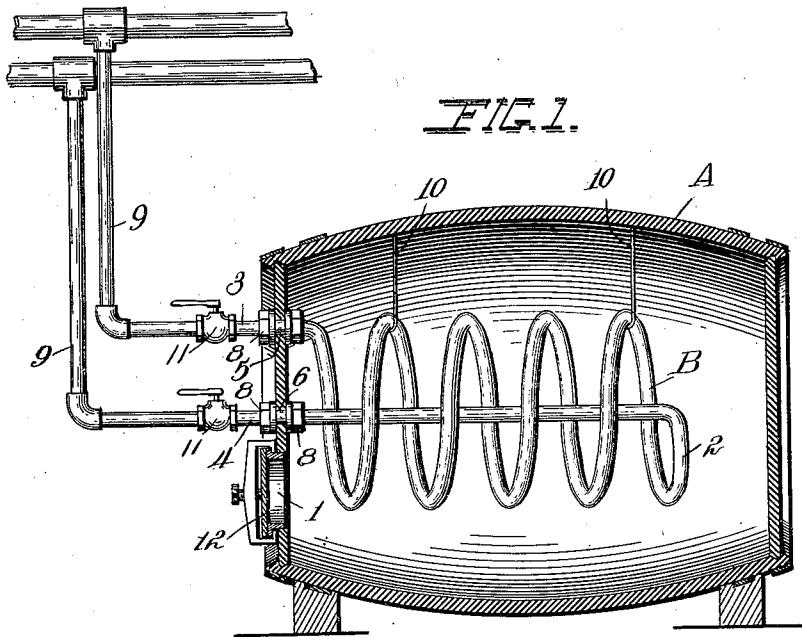
No. 806,935.

PATENTED DEC. 12, 1905.

W. L. STRAUS & G. ENGEL.

COMBINATION SPIRAL SCREW COOLING DEVICE.

APPLICATION FILED DEC. 24, 1904.



Witnesses
Milton L. Lenoir.
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UNITED STATES PATENT OFFICE.

WILLIAM L. STRAUS AND GOTTFRIED ENGEL, OF BALTIMORE, MARYLAND; SAID ENGEL ASSIGNOR OF ONE-HALF OF HIS RIGHT TO LOUIS KIRCHEINER, OF BALTIMORE, MARYLAND.

COMBINATION SPIRAL-SCREW COOLING DEVICE.

No. 806,935.

Specification of Letters Patent.

Patented Dec. 12, 1905.

Application filed December 24, 1904; Serial No. 238,242.

To all whom it may concern:

Be it known that we, WILLIAM L. STRAUS and GOTTFRIED ENGEL, citizens of the United States, residing at Baltimore city, State of Maryland, have invented new and useful Improvements in Combination Spiral - Screw Cooling Devices, of which the following is a specification.

Our invention relates to an improvement in cooling apparatus for liquids, and is intended to be used for cooling beer, especially in reference to the elimination of certain albuminoids and resinous bodies precipitable by prolonged cooling temperature; and it consists in certain novel features of construction and combinations of parts, which will be hereinafter described, and pointed out in the claim.

In the accompanying drawings, Figure 1 is a vertical section through the tank, showing the coil secured therein and coupled up to a supply-pipe; and Fig. 2 is a view illustrating how the pipe is screwed into the tank through the manhole.

A represents a tank, which may be in the form of a barrel, hogshead, keg, or other form and which may lie on the side or stand on one end. This tank has a manhole 1 in one head or side, at a point away from the center preferably.

A coil of tubing or piping B is adapted to extend through the tank to conduct a cooling fluid circuitously throughout the entire area, whereby to quickly and effectually cool the contents of the tank uniformly throughout. The coil is so formed that it is in the shape of a screw, being of slightly less diameter from the axis to the circumference than the diameter of the manhole. The inner end 2 constitutes the point of the screw and the straight portion of the pipe or tube extending through the center of the coil the axis about which the coil is turned.

To assemble the parts, the point 2 at the inner end is first inserted in the manhole, and then the coil is turned after the manner of a screw or auger, with the straight central portion of the pipe or tube resting against an edge of the hole as an axis. This operation

continues until the entire coil is screwed into the tank, when the two parallel ends 3 and 4 are inserted through holes 5 and 6, respectively, bored in the head or end of the tank to receive them, the ends being thrust through from the inside and the nuts 8 8 screwed up tight against the inside and outside of the head or end of the tank to secure them in place. Pipes 9 9 are then connected with these ends by suitable couplings, whereby to convey the cooling fluid to and from the supply-pipe. Hooks 10 10 may be provided to suspend the coils when the tank rests on its side. Cocks 11 11 are located in the pipes 9 9 for regulating and controlling the supply. A cover 12 is provided for the manhole and secured down in the usual manner. In this way is provided a simple arrangement for inserting a cooling pipe or tube in any form of tank. This tube may be withdrawn as easily as it is applied by simply reversing the order just described.

Slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of our invention, and hence we do not wish to limit ourselves to the exact construction herein set forth; but,

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination with a tank having a manhole therein of a coil of piping or tubing, one end of which coil extends through the axial center of the coil and the other end parallel therewith, and removed therefrom a distance slightly less than the diameter of the manhole, whereby the entire coil may be screwed into the tank through the manhole and the ends thereof afterward inserted through holes in the end of the tank from the inside outward.

In testimony whereof we affix our signatures in presence of two subscribing witnesses.

WILLIAM L. STRAUS.
GOTTFRIED ENGEL.

Witnesses:

PHIL PETERSON,
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