

1,062,727.

Fig. 2.

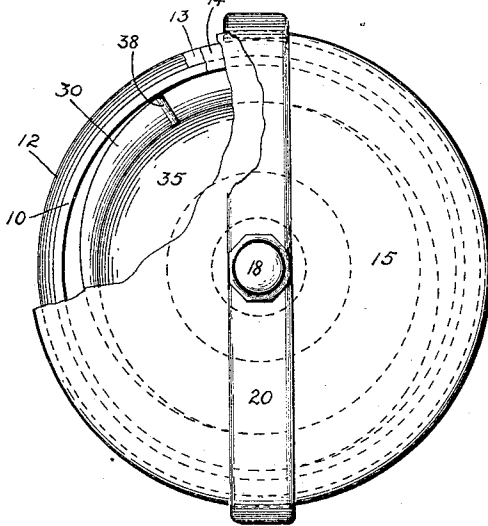
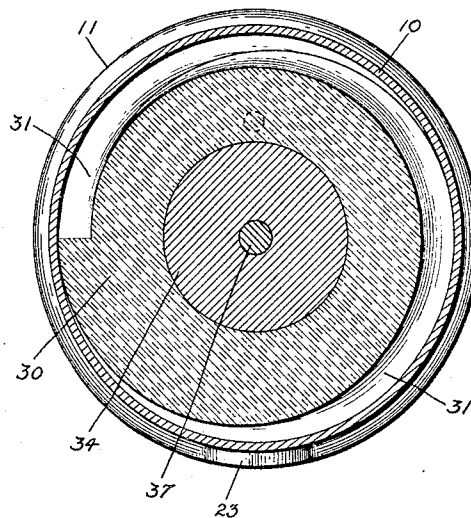


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

FRANK A. PHILLIPPI, OF POTTSTOWN, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO WILLIAM H. REIFSNYDER AND ONE-THIRD TO RUDOLPH KELLER, BOTH OF POTTSTOWN, PENNSYLVANIA.

BEER-COOLER.

1,062,727.

Specification of Letters Patent.

Patented May 27, 1913.

Application filed October 16, 1912. Serial No. 726,177.

To all whom it may concern:

Be it known that I, FRANK A. PHILLIPPI, a citizen of the United States, and a resident of Pottstown, in the county of Montgomery and State of Pennsylvania, have invented certain new and useful Improvements in Beer-Coolers, of which the following is a specification.

This invention relates to improvements in beer coolers and particularly to that class in which the beer or other liquid is caused to flow circuitously through the coils, or the like, submerged in a cooling medium whereby the liquid is reduced to a desirable temperature.

The objects of the invention are to provide means for such refrigeration expeditiously and with certainty; also to provide means which are readily cleansed from impurities as the residue of the liquid, and which will not in itself color or contaminate the liquid in its passage through.

A further object is to arrange the apparatus in such manner that it can be extended, or its capacity increased, at any time without discarding the original installation and with very little difficulty, and at a minimum of expense.

These and other objects are attained by the novel construction and combination of parts hereinafter fully described and shown in the accompanying drawings, forming part of this specification, and in which:—

Figure 1 is a side elevation of the apparatus, portions being broken away and others shown in section so as to illustrate the construction. Fig. 2 is an end view of the same, parts also being broken away, and, Fig. 3 is a sectional view taken on line 3—3 of Fig. 1.

This invention comprises a cylinder or tube 10 made of any approved material, as block tin, to one end of which is secured a disk 11 having a flanged edge 12 surrounding the end of the pipe, while at the opposite end is likewise rigidly secured a metal ring 13 encircling the pipe. Adjacent to the ring at the end of the tube is a gasket or packing ring 14 against which is a disk 15 having an outer flange 16 encircling both the packing ring and metal ring 13; another flange 17 extends inwardly fitting the bore of the tube 10 for a short distance. At the center of the disk 15 is a boss or hub 15' containing a

countersink or depression for the point of the screw 18; this screw is threaded into a thickened central portion 19 of the clamp-bar 20 which passes across the end of the tube and is provided with arms 21 terminating in hooked members 22 adapted to engage with the ring 13. Thus it may be seen that the tube may be sealed hermetically or that the cover disk 15 may be readily removed when desired.

From the lower flange 12 and from the ring 13 are lugs 23 and 24 respectively closely fitting the outer wall of the tube 10 and through which are openings 25 and 26 adapted to receive respectively the inlet and outlet pipes communicating with the supply source and discharge. Within the tube and neatly fitting its bore are a plurality of glass disks 30, each having on its periphery a volute groove 31 so arranged that when the disks are assembled side by side a complete circuitous screw-like effect is obtained from one end to the other; in order that the sides of the glass disks may properly register there is provided an indentation 32 on one side of each disk, while immediately opposite is a corresponding projection 33, the same serving to correctly aline the disks in assembling. These disks are mounted on a core 34, preferably made of wood paraffined or otherwise treated to render it non-absorbent; this core is made slightly shorter than the combined thickness of the several glass disks which are clamped tightly together by means of the plates 35 having the hubs 36 through which pass the screws 37 the points of which are embedded in the wooden core.

From the construction as indicated it will be evident that the glass disks on their core can be withdrawn from the tube as a united body when it may be desired, as for the purpose of cleansing; it being necessary merely to loosen the clamp screw 18 whereupon the clamp bar 20 may be readily removed; it is further noticeable that in this operation the inlet and outlet pipe connections remain unbroken, thereby saving much time and trouble. It will also be readily seen that as the volute is comprised of sections it can be made of any length whereas if it were solid this could not be done without far more expense and difficulty.

As in devices of this character it is well known that foaming is caused by disturbing

the liquid, as in causing it to flow around sharp corners, care has been taken to avoid the same, the inlet and outlet to the worm sections being protected by well rounded extensions 38 formed with the plates 35.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A beer cooler comprising a cylinder having one rigidly secured head, means for removably securing the other head to said cylinder, a ring secured to the cylinder opposite to the fixed head, means combined with said ring for the outlet support, means combined with said fixed head for the inlet support, a plurality of glass disks having grooves in their peripheries so formed as to present a continuous helical passage around the interior of said cylinder when said disks are placed side by side therewithin, a mount-

ing for said disks and a clamping means thereof.

2. In a beer cooler, a cylindrical casing having one fixed head and one removable head, a plurality of disks fitted therein, means whereby said disks are engaged one with another, means for clamping said disks together said disks having on their peripheries grooves adjoining each other and forming a helical passage extending from end to end, and means whereby all of said disks may be withdrawn from said cylinder as a unit.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK A. PHILLIPPI.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."