

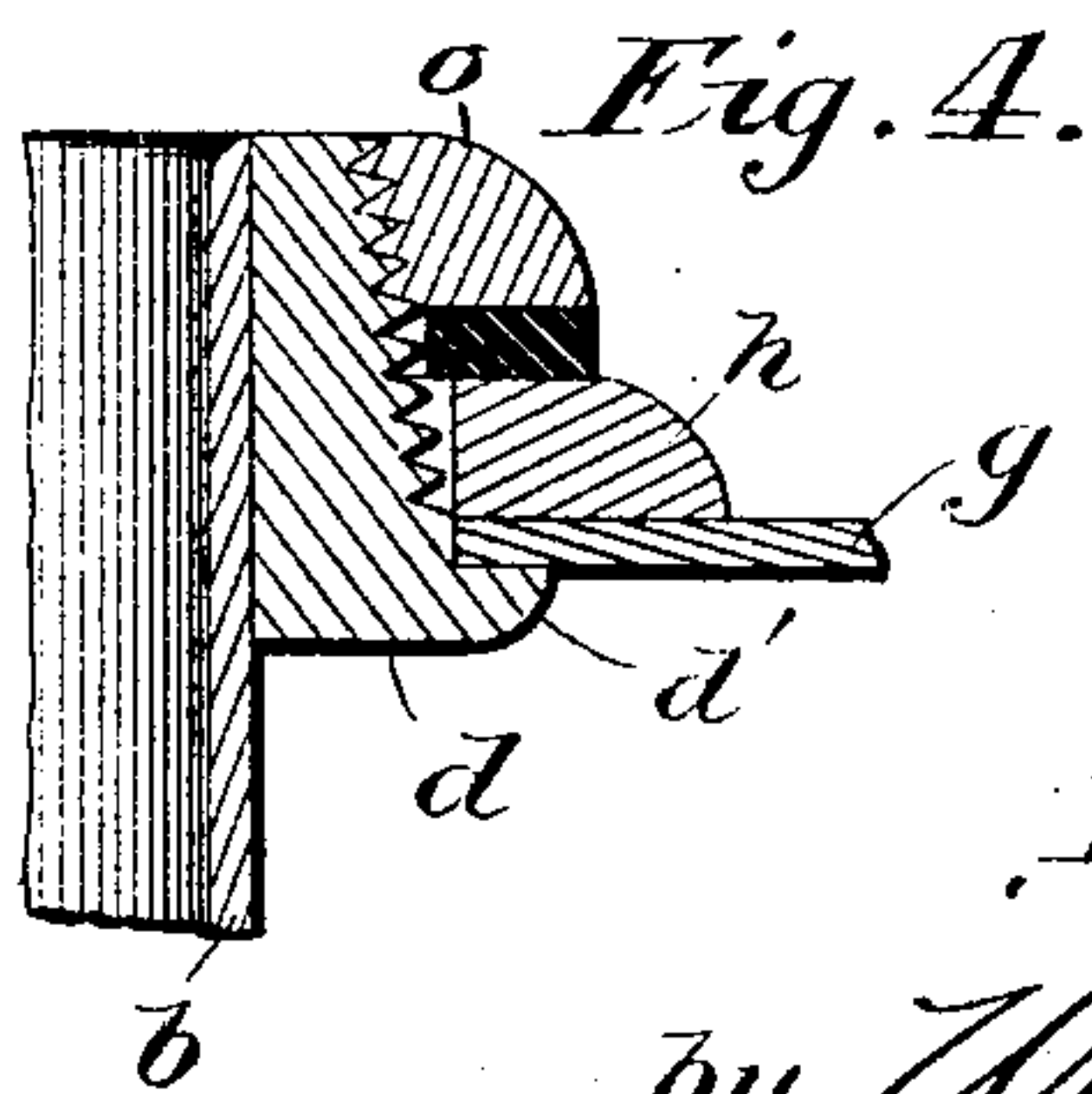
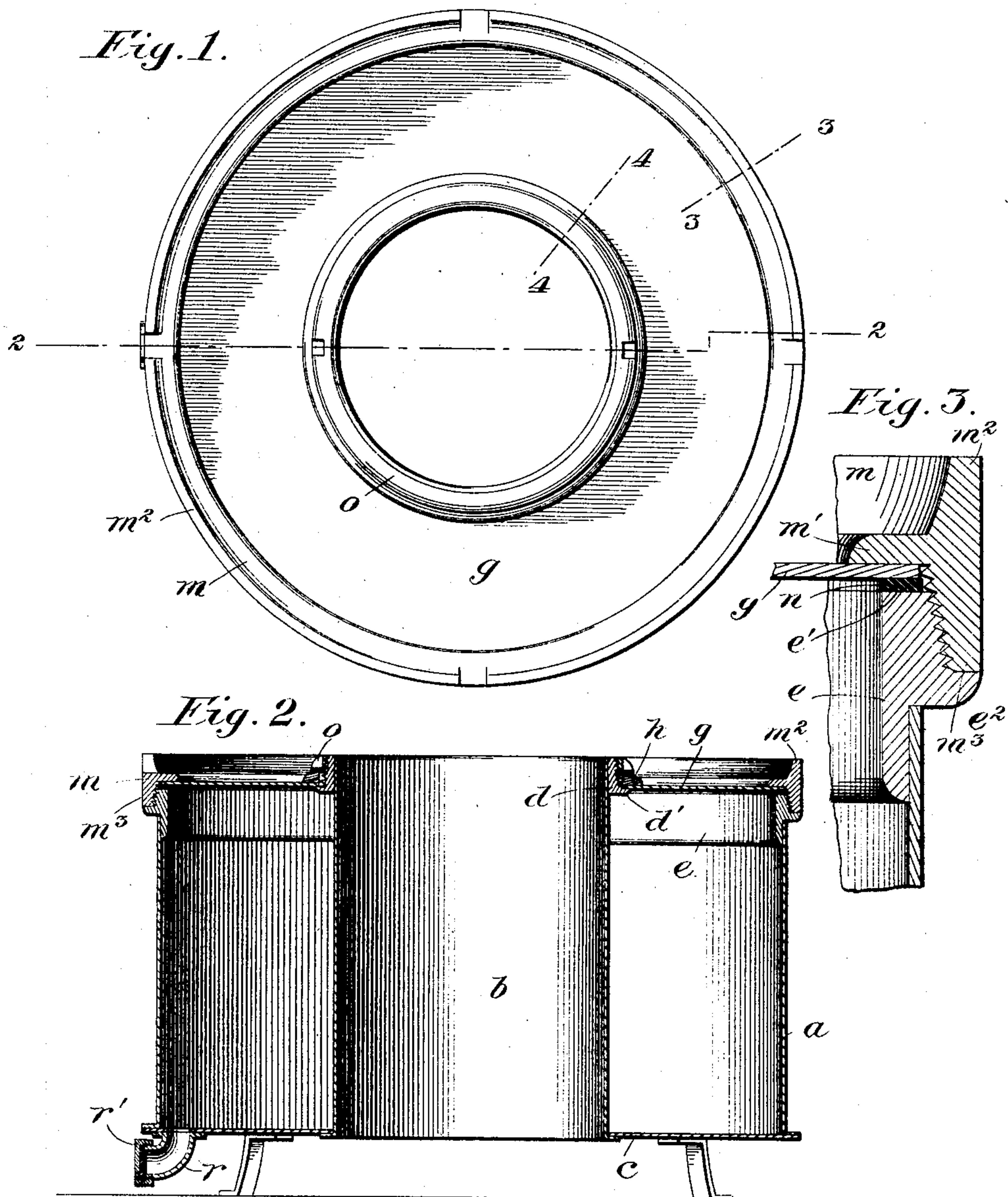
No. 765,112.

PATENTED JULY 12, 1904.

R. S. VALENTINE.
BEER COOLER TANK.

APPLICATION FILED FEB. 18, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

ROBERT SURRY VALENTINE, OF RICHMOND, VIRGINIA, ASSIGNOR OF ONE-HALF TO HERBERT M. HOPE, OF PETERSBURG, VIRGINIA.

BEER-COOLER TANK.

SPECIFICATION forming part of Letters Patent No. 765,112, dated July 12, 1904.

Application filed February 18, 1903. Serial No. 144,013. (No model.)

To all whom it may concern:

Be it known that I, ROBERT SURRY VALENTINE, a citizen of the United States, and a resident of Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Beer-Cooler Tanks, of which the following is a specification.

My invention relates to beer-coolers, and more especially to the construction of cooling-tank of the type disclosed in United States Letters Patent No. 687,879, granted December 3, 1901.

The object of the invention is to provide a construction of tank of the type referred to which will admit of the thorough cleansing thereof with facility; and to this end the invention includes the combination and arrangement of parts to be hereinafter described, and particularly pointed out in the claims.

While the invention is susceptible of various modifications, I have illustrated in the accompanying drawings and shall hereinafter describe what is now conceived to be the preferred embodiment of the same.

In the drawings, Figure 1 is a plan view of my improved tank; and Fig. 2 is a transverse sectional view thereof, taken on the line 2 2. Fig. 3 is a detail sectional view of the connection between the sleeve and the removable head, and Fig. 4 is a like view of the connection between the removable head and the upper edge of the body.

A serious objection to the type of tank before referred to, which comprises a cylindrical body, an open-ended sleeve arranged axially thereof, and heads permanently connected to the outer edges of the body and ends of the sleeve and forming therewith a closed chamber about the sleeve in which the beer to be cooled is held, is the difficulty presented to the thorough cleansing of this beer-chamber.

As before premised, my invention is primarily designed to provide a construction which will permit of the thorough cleansing of this beer-chamber with facility. To effect this end, my improved tank includes generally the provision of means for removably or

detachably connecting one of the heads to the sleeve and body, which means may be quickly manipulated for securing the head securely and hermetically to the edge of the body and to the upper end of the open-ended sleeve arranged axially of the latter and for detaching the head to give free access to the interior of the beer-chamber.

In the particular embodiment of my invention illustrated in the accompanying drawings the body or vertical side wall of the cooling-tank, which is preferably of cylindrical shape, is indicated by the letter *a*, and the open-ended sleeve, arranged centrally or axially thereof, by the letter *b*. The latter is permanently attached or secured at its lower end to the edge of a central opening in the disk *c*, which is permanently attached or secured at its outer edge to the lower edge of the body *a* and constitutes the bottom of the tank.

Permanently secured to the top of the sleeve *b*, exteriorly thereof, is a collar *d*, having a tapered threaded outer periphery and an external annular flange *d'* below said threaded portion, the upper face of which provides a shoulder or seat to receive and support the portion of the removable head contiguous to the edge of a central opening therein.

Permanently secured to the upper edge of the body *a* is an annular ring *e*, preferably of cast metal, having a flat upper edge or face *e'*, arranged coincident with or substantially in the same horizontal plane as the seat formed by the flange *d'*, which face is designed to provide a support for the outer edge of the head. Arranged approximately centrally of the outer periphery of the ring *e* is an annular flange *e''*, the under face of which provides a stop or abutment for the upper edge of the body *a*. The portion of the ring above the flange *e''* is provided exteriorly with a tapered threaded portion, while the part of the ring below the flange fits snugly within the upper end of the body and is permanently secured thereto.

The removable head comprises a flat disk *g*, having a central circular opening therein of approximately the diameter of the threaded

portion of the collar d , the edge of which is strengthened or reinforced by a cast-metal ring h , permanently attached to the upper face of the disk g contiguous to the edge of said central opening therein, while to the outer edge of the disk a peripheral ring m , preferably of cast metal, is permanently attached. The latter includes a centrally-arranged inwardly-projecting annular web or flange m' , the under flat face of which abuts against and is secured directly to the upper face of the disk g and upon opposite sides of the outer edge of which vertically-disposed annular flanges are located. The uppermost of these flanges m^2 acts to retain the ice in position piled upon the top of the cooler, while the depending flange m^3 is threaded internally for engagement with the correspondingly-threaded portion of the ring e .

In securing the head in place the threads of the flange m^3 are engaged with the threads of the ring e and the head screwed down in place, the portions of the disk contiguous to the central opening therein finding a seat upon the face of the flange d' , while the under face of the disk contiguous to its outer edge finds a seat upon the upper flat edge e' of the ring e , between which and said face a suitable ring of compressible packing n may be interposed to insure a tight joint between the abutting surfaces.

To form a hermetic joint between the head and the sleeve b , a nut o is threaded upon the collar d , which when screwed down forces the reinforced portion of the head into firm contact with the seat provided therefor by the flange d' . To insure a hermetic joint between the end face of the nut and top of the ring h , upon which the former bears, a compressible packing-ring is preferably interposed between the two.

In order to facilitate screwing of the head upon the body, notches are preferably located at diametrically opposite points in the flange m^2 , with which a suitable turning-lever may be engaged. Similar notches or openings may be provided in the nut o to be engaged by a wrench or lever for screwing the latter in place or for unscrewing the same.

In order that the beer-chamber may be completely drained, a pipe or nipple r is preferably connected up to the bottom thereof, the outer end of which is provided exteriorly with a threaded portion to receive a cap r' , which forms a closure under ordinary conditions for the nipple. To insure a hermetic joint between this cap and the ends of the nipple, a suitable packing is interposed between the two.

The construction and operation of my invention will be readily understood upon reference to the foregoing description and accompanying drawings, and it will be appreciated that the parts and combinations recited

may be varied within a wide range without departing from the spirit and scope thereof.

Having thus described my invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. The combination with a beer cooler and tank, comprising a body, an open-ended sleeve arranged substantially axially thereof, and a bottom permanently connected to the lower edge of the body and to the lower end of said sleeve, of a removable head for the tank, means for detachably securing the same to the end of the sleeve, and means for detachably securing the same to the upper edge of the body, comprising a ring secured to said edge having an exteriorly-threaded portion, and a ring forming the periphery of the removable head provided with an inwardly-extending web or flange, an upwardly-extending flange providing an ice-retainer, and a depending interiorly-threaded flange designed to be screwed upon the threaded portion of the first-named flange.

2. The combination with a beer-cooling tank, comprising a body, an open-ended sleeve arranged axially thereof, and a bottom permanently connected to the lower edge of said sleeve and body, of a removable head comprising a disk having a central opening therein and a ring secured to the periphery of said disk having an inwardly-extending web or flange secured to the upper face of the disk contiguous to the outer edge thereof, and a depending flange interiorly threaded, a detachable connection between the edge of the central opening in said disk and the sleeve, and a ring permanently secured to the upper edge of the body having an exteriorly-threaded portion designed to engage with the threaded portion of the depending flange of the first-named ring, substantially as described.

3. The combination with a beer-cooling tank, comprising a body, an open-ended sleeve arranged axially thereof, and a bottom permanently connected to the lower edge of said sleeve and body, of a removable head comprising a disk having a central opening therein, and a ring secured to the periphery of said disk having an inwardly-extending web or flange secured to the upper face of the disk contiguous to the outer edge thereof, and a depending flange interiorly threaded, a detachable connection between the edge of the central opening in said disk and the sleeve, a ring permanently secured to the upper edge of the body having a flat upper edge to provide a support for the outer edge of the head, an exteriorly-threaded portion for engagement with the depending flange of the first-named ring, and a depending part snugly fitting within the body, and a packing interposed between said head and said upper flat edge of the ring, substantially as described.

4. The combination with a beer-cooling tank, comprising a body, an open-ended sleeve arranged substantially axially thereof, and a bottom permanently connected to the sleeve
 5 and body, of a detachable head having a central opening therein provided with a reinforcing-
 ring, means for detachably securing the head at its outer edge to the upper edge of the body,
 and means for detachably securing the head
 10 to the sleeve, comprising a collar permanently secured to the upper edge of said sleeve having an annular flange providing a seat for the
 portion of the head contiguous to the edge of the central opening therein, and a threaded
 15 portion above said seat, a nut threaded upon said collar designed to bear upon said reinforced ring, and a packing interposed between said nut and said reinforced ring, substantially as described.

20 5. The combination with a beer-cooling tank, comprising a body, an open-ended sleeve arranged substantially axially thereof, and a bottom permanently connected to the sleeve
 and body, of a removable head comprising a
 25 disk having a central opening therein provided with a reinforced edge, and a ring permanently secured to its periphery having a horizontally-

disposed web secured to the upper flat face thereof, an upwardly-extending retaining flanged portion, and a depending flanged portion interiorly threaded, a collar permanently
 30 secured to the upper end of the sleeve having a flange providing a seat for the portion of the disk contiguous to the edge of the central opening therein, and a threaded portion projecting
 35 through said central opening, a nut mounted thereupon, a ring secured to the edge of the body having a flat face or edge substantially coincident or in horizontal alinement with the
 seat formed by the flange on said collar, and
 40 further provided with a threaded portion to engage the threaded portion of said depending flange, and a packing interposed between said flat face and the adjacent portion of the
 disk, substantially as described. 45

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Richmond, in the county of Henrico and State of Virginia, this 10th day of February, 1903.

R. SURRY VALENTINE.

Witnesses:

W. J. EBEL,
 FRANK MARECK.