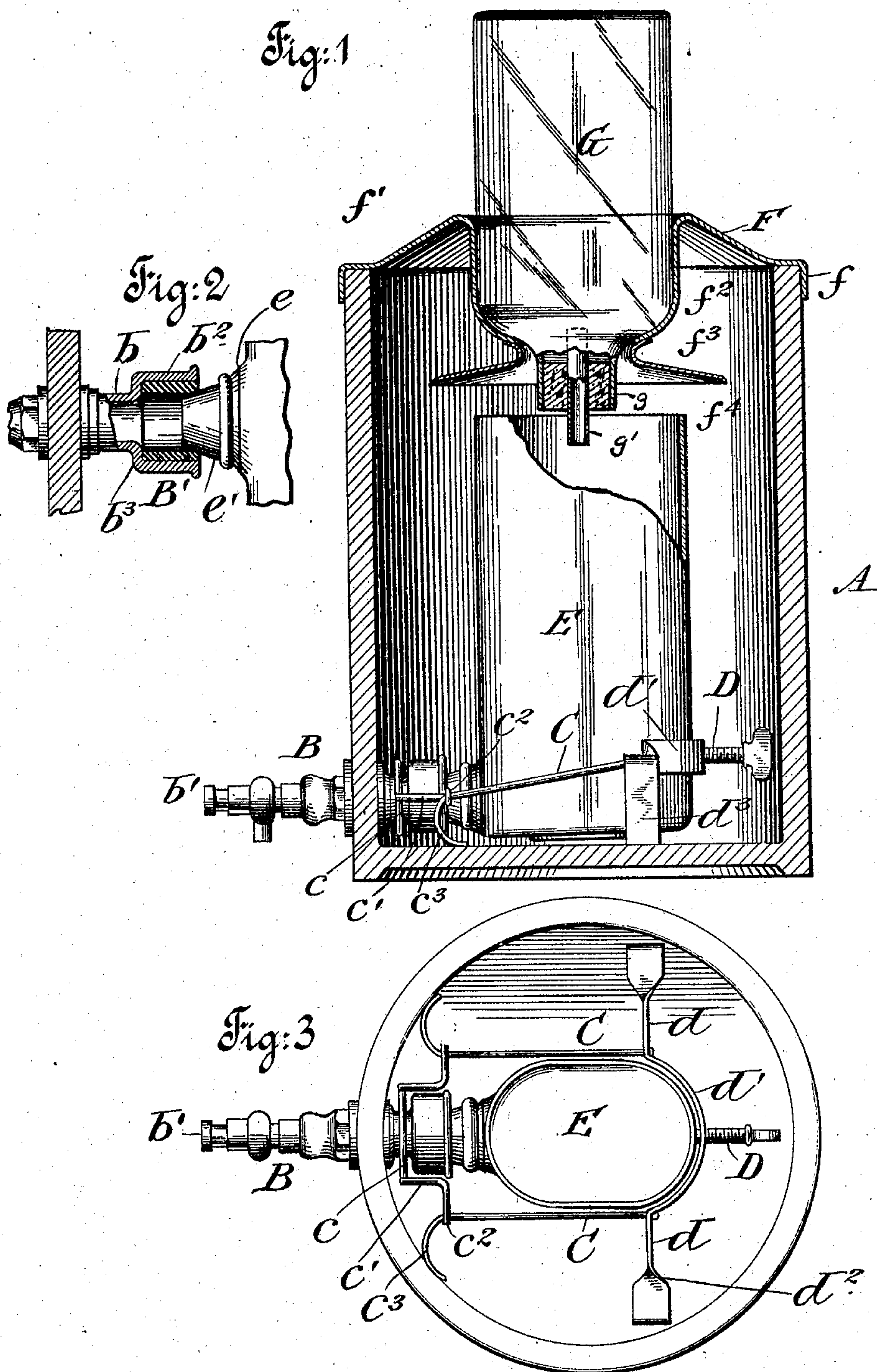


No. 806,112.

PATENTED DEC. 5, 1905.

H. G. CORDLEY.
LIQUID COOLER.

APPLICATION FILED JULY 8, 1904.



Witnesses
Chas L Wolf
M. Bender.

Inventor
Henry G Cordley

UNITED STATES PATENT OFFICE.

HENRY G. CORDLEY, OF GLENRIDGE, NEW JERSEY.

LIQUID-COOLER.

No. 806,112.

Specification of Letters Patent.

Patented Dec. 5, 1905.

Application filed July 6, 1904. Serial No. 215,521.

To all whom it may concern:

Be it known that I, HENRY G. CORDLEY, a citizen of the United States, and a resident of Glenridge, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Liquid-Coolers, of which the following is a specification.

The subject of this invention is a novel cooler particularly designed for dispensing table-water and other liquids of a special character, but can be equally satisfactorily utilized for the cooling and dispensing of ordinary drinking-water, the cooler pertaining to that type of construction wherein an adequate volume of the liquid can be maintained in a cooled condition without contact with the ice and also without the necessity for subjecting the reservoir-supply to the action of the ice. In such type of construction the flow of liquid to the inner receptacle is controlled by a trap-seal, whereby when such seal is established the flow of liquid from the main reservoir to said receptacle will be suspended, but when the trap-seal is broken the flow of liquid from said inner reservoir to said inner receptacle will be resumed.

One of the prominent features connected with the present invention resides in the special provision whereby the inner receptacle can be conveniently lowered in position and brought in free liquid-tight engagement with a bearing communicating with the discharge-faucet, the arrangement admitting of the ready disengagement and removal of said inner receptacle for cleansing or replacing the same when desired.

There are other important features connected with the invention which, in addition to that alluded to, are clearly set forth in the subsequent detailed description.

In the accompanying drawings, forming part of this specification, Figure 1 is a vertical sectional elevation of a liquid-cooler embodying my invention, an upper portion of the inner receptacle being broken away to more clearly illustrate the provision for securing the trapping feature. Fig. 2 is an enlarged detail sectional view illustrating the means whereby the free liquid-tight joint is secured. Fig. 3 is a plan view of the cooler with the top and upper liquid-reservoir removed.

Similar reference characters are employed to designate corresponding parts in the views wherein they occur.

The body A of the cooler may be of any suitable construction and material, a simple

and satisfactory form being to mold the same of some material which is an indifferent conductor of heat. Indurated fiber will fulfil the requirements, the characteristics and properties of which fiber are so well known that the special description thereof is not deemed necessary.

Extending liquid-tight through the body A, at a point closely adjacent to the bottom thereof, is a stem or connection *b* of a dispensing-faucet B, which may be of any suitable type, that shown representing in outline a self-closing construction wherein pressure upon the button *b'* will act counter to a closing-spring to unseat the valve and permit the liquid-discharge. At a point within the tank or body A the stem *b* is provided with a socket B', containing an annular gasket *b''* of yielding material, the socket being of greater external diameter than the stem *b*, so as to provide a shoulder *b'''*, against the interior of which the gasket rests.

Within the tank is an inner receptacle C, having a discharge-nozzle *e*, adapted to fit within the end of socket B' against the gasket *b''*. For the purpose of holding this inner receptacle in position, so that its nozzle *e* will make a liquid-tight joint with the socket B', a frame is provided within the tank and resting on its bottom, but otherwise independent of the tank. This frame comprises a ring *c*, which embraces the stem *b* of the faucet forward of the shoulder *b'''* of the socket B' and having lateral arms *c'* terminating in loops or eyes *c''*. Bearing in these loops or eyes *c''* are the forward ends of parallel stays C, which extend rearward and are secured at their rear ends to lateral wings *d* of a strap, the intermediate part *d'* of which is curved to conform to the shape of the inner receptacle E. The ends of these stays C forward of the loops or eyes *c''* are curved downward to form bends *c'''*, which rest upon the bottom of the tank. In order to properly hold the inner receptacle in position, it is desirable to have the rear strap somewhat above the plane of the faucet. In order to maintain the strap in this elevated position, its lateral wings *d* are extended to form supporting-legs *d'''*, which rest upon the bottom of the tank. These wings are preferably twisted, as indicated at *d''*, so as to present a broad foot to rest upon the bottom of the tank. At its central point the curved part *d'* of the back strap is tapped to receive a clamping-screw D, having a flat head to adapt it for manipulation by the fingers.

The nozzle *e* of the inner receptacle E is embraced and reinforced by a conical metal nipple *e'*, adapted to enter the opening of the socket B' and bear against the gasket *b*².

5 It will be seen from the above arrangement of the parallel stays C and the ring *c* with its arms *c'* that the inner receptacle E will be held rigidly against lateral movement. At the same time by reason of the connection of
10 the stays C with the eyes *c*² the rear of the frame will be permitted sufficient vertical play to allow of the ready insertion and removal of the inner receptacle E.

The inner receptacle E will be of some material suitable for transmitting the cooling effect of ice external to the same. It has been found satisfactory in practice to mold said inner receptacle of comparatively thick glass, the bottom being shaped so as to insure said
20 receptacle resting positively on the tank-bottom when placed in position within the frame, as illustrated in Figs. 1 and 3, and also to drain through the faucet.

The cover or lid of the tank contains an opening of somewhat liberal dimensions. While the structure and shape of said cover or lid can widely vary, it is represented in Fig. 1 as being of sheet metal shaped or pressed up to present a marginal depending flange for
30 embracing the top edge portion of the tank, said lid or cover further embodying an annular ring portion *f'*, merging in a bowl-shaped depending part *f*², having a lower contracted throat *f*³, to which latter is secured a horizontally-flaring guard or shield *f*⁴ for receiving and shedding water of condensation clear of the inner receptacle.

G designates an upper reservoir in the form of a removable glass bottle of ordinary shape
40 having its neck portion extending through the throat *f*³ and having the shoulder between the neck and the body resting in the bowl-shaped part *f*² of the cover. The mouth of the bottle is preferably provided with a cork *g*, through
45 which extends a tube *g'*, the lower end of this tube when the bottle is in place extending below the upper edge of the inner receptacle E.

From the description thus far it will be readily comprehended that with the bottle and
50 cover removed and the clamp-screw D sufficiently unscrewed the inner receptacle E can be lowered in position within the frame, so that its metal reinforced discharge projection will clear the socket B', both being brought in
55 horizontal alinement with the opening in said socket. Manifestly by now turning the clamp-screw so as to cause the inner end of the same to bear against the rear surface of the inner receptacle the latter will be forwardly forced,
60 so that its conical nipple will engage within the gasket-lined socket, and thus establish a liquid-tight communication between the interior of said receptacle and the faucet. When the receptacle E has been adjusted as described,
65 ice is placed in the tank A in external relation

to said receptacle. Next by placing the cover in position and thereafter inverting the bottle G, so that the same will be in the supported relation illustrated in Fig. 1, the discharge
70 nozzle or opening presented by the tube-carrying stopper of said bottle will be within the upper portion of the inner receptacle, with the result that the bottle liquid will be supplied to said receptacle and will fill the
75 same to such extent as will submerge the discharge portion of the bottle. When such submersion occurs, a sealed action will be attained, thereby causing the suspension of the liquid flow. Under such conditions an adequate volume of liquid will be present in the
80 inner receptacle and subjected to an efficient cooling without direct contact with the ice. Upon the withdrawal of a part of such cooling liquid through the faucet the trap-seal between the inner reservoir and receptacle will
85 be broken and so continued until the resumption of the liquid flow shall have restored to the inner receptacle an amount of liquid equal to that withdrawn and requisite for the reestablishment of the trap-seal.
90

As will be readily seen, the improved cooler is not only simple and efficient and novel in construction, but is highly attractive in appearance and can be maintained in a thoroughly hygienic condition.
95

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

1. In a liquid-cooler the combination of a tank provided with a discharge-faucet having
100 a socket within the tank, an inner receptacle provided with a nozzle engaging the socket, and means for holding the inner receptacle in position comprising a frame extending around the inner receptacle provided with means at
105 its forward end for engaging the faucet and provided with legs adapted to rest on the bottom of the tank for supporting its rear portion, substantially as described.

2. In a liquid-cooler the combination of a
110 tank provided with a discharge-faucet having a socket within the tank, an inner receptacle provided with a nozzle engaging the socket, and means for holding the inner receptacle in position comprising a frame extending around
115 the inner receptacle provided with means at its forward end for engaging the faucet and provided in its rear portion with adjustable means bearing against the inner receptacle,
120 substantially as described.

3. In a liquid-cooler the combination of a tank provided with a discharge-faucet having
125 a socket within the tank, an inner receptacle provided with a nozzle engaging the socket, and means for holding the inner receptacle in position comprising a frame engaging the faucet and having side stays and a rear strap and means carried by the rear strap bearing against the inner receptacle, substantially as described.
130

4. In a liquid-cooler the combination of a tank, provided with a discharge-faucet having a socket within the tank, an inner receptacle provided with a nozzle engaging the socket, 5 and means for holding the inner receptacle in position, comprising a frame engaging the faucet and having side stays and a rear strap, the rear strap having its ends extended to form supporting-legs adapted to rest on the bottom 10 of the tank and means carried by the rear strap bearing against the inner receptacle, substantially as described.

5. In a liquid-cooler the combination of a tank, provided with a discharge-faucet having 15 a socket within the tank, an inner receptacle provided with a nozzle engaging the socket and means for holding the inner receptacle in position consisting of a frame comprising a ring engaging the faucet forward of the socket 20 and provided with lateral eyes, side stays en-

gaging the lateral eyes, and a rear strap secured to the rear ends of the side stays, substantially as described.

6. In a liquid-cooler the combination of a tank provided with a discharge-faucet, an in- 25 ner receptacle communicating with said faucet, means for holding the inner receptacle in position, and a lid for the tank embodying a bowl-shaped depending part adapted to receive and support a liquid-reservoir and hav- 30 ing a lower contracted throat and a flaring shield secured to the latter, substantially as described.

Signed at New York, in the county of New York and State of New York, this 5th day of 35 July, A. D. 1904.

HENRY G. CORDLEY.

Witnesses:

CHAS. L. WOLF,
M. BENDER.