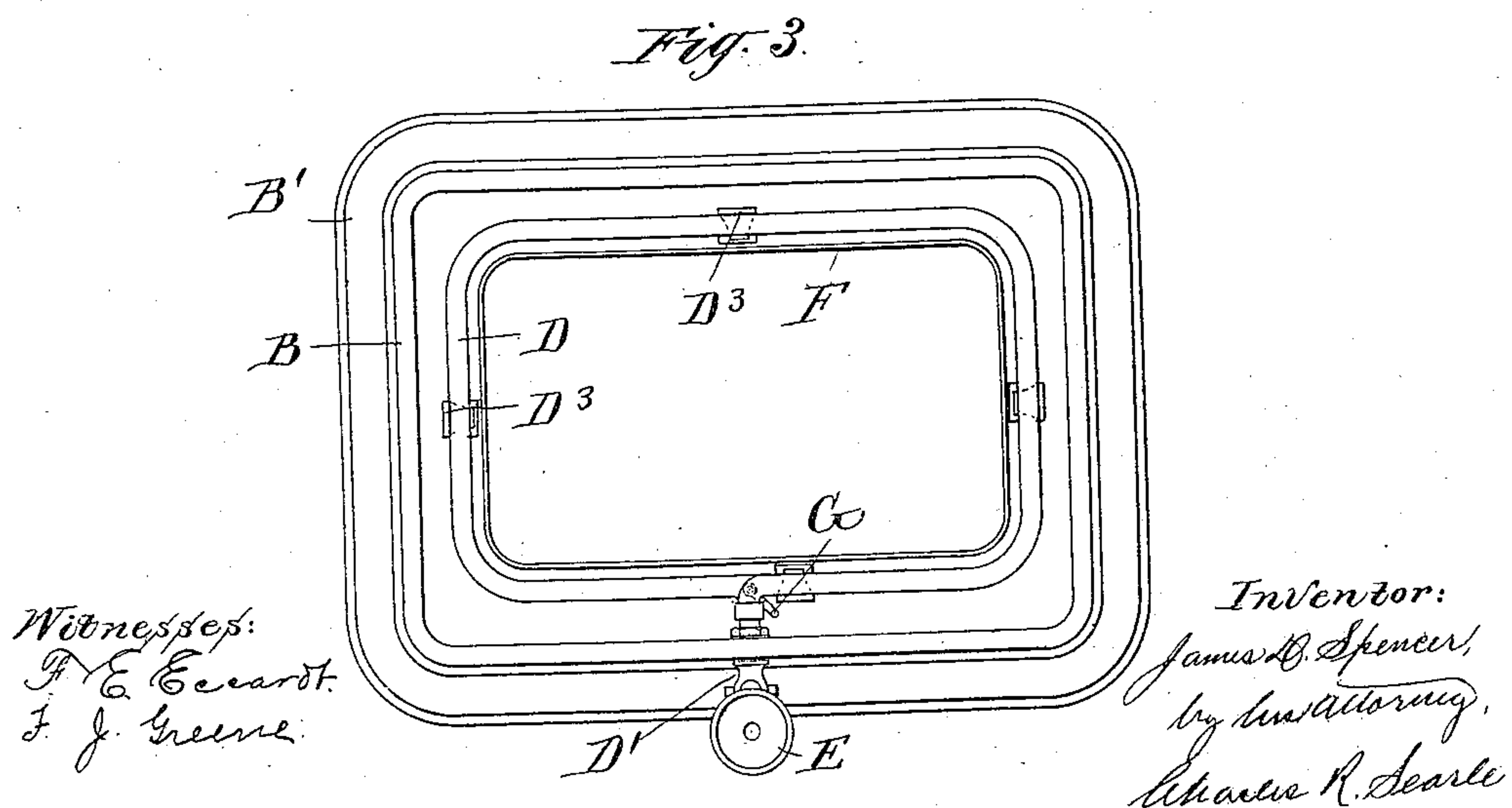
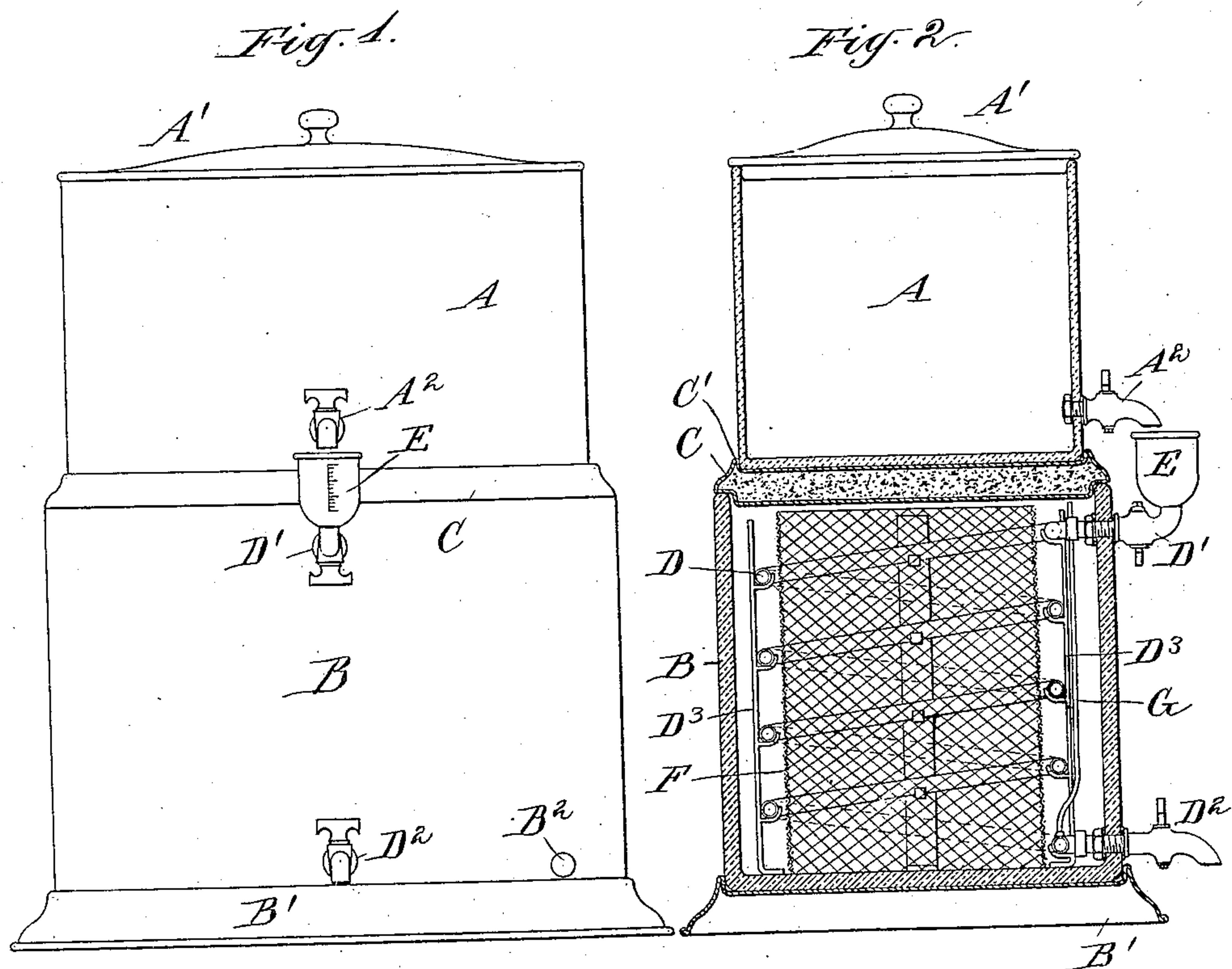


No. 869,745.

PATENTED OCT. 29, 1907.

J. D. SPENCER.
COOLER FOR LIQUIDS.
APPLICATION FILED JULY 5, 1906.



Witnesses:
F. E. Geardt.
J. J. Greene.

Inventor:
James D. Spencer,
by his attorney,
Charles R. Searle

UNITED STATES PATENT OFFICE.

JAMES D. SPENCER, OF NEW YORK, N. Y.

COOLER FOR LIQUIDS.

No. 869,745.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed July 5, 1906. Serial No. 324,715.

To all whom it may concern:

Be it known that I, JAMES D. SPENCER, a citizen of the United States, residing in the city of New York, borough of Bronx, in the county of Westchester and State of New York, have invented a certain new and useful Improvement in Coolers for Liquids, of which the following is a specification.

The invention relates to means for cooling liquids and more particularly for cooling beverages, as tea or the like, and the object of the invention is to provide an apparatus in which the temperature of the liquid to be cooled is not materially lowered until the quantity or charge required is to be drawn, and in which such charge can be cooled to the temperature desired.

The invention consists in certain novel features and details of construction and arrangement by which the above objects are attained, to be hereinafter described.

The accompanying drawings form a part of this specification and show an approved form of the invention as adapted for dispensing tea.

Figure 1 is a front elevation of the apparatus. Fig. 2 is a transverse vertical section, the line of section being at or near the center. Fig. 3 is a plan view of cooling chamber and its connected parts, the reservoir being removed.

Similar letters of reference indicate the same parts in all the figures.

The drawings show the invention as arranged for serving cooled tea and the apparatus will be thus described.

It is a property of tea infusions that they remain clear for considerable periods unless subjected to low temperatures. The addition of ice not only dilutes the infusion but in a short time causes it to become clouded and unattractive in appearance, and it is desirable, especially in demonstrating, to present the infusion at the desired low temperature and strength and also clear. I attain these results by lowering the temperature of the charge or portion of the infusion required for inspection and consumption and drawing such charge before sufficient time has elapsed to impair its appearance.

A is a reservoir, shown as rectangular, which may be of glass or other material not affected by the tannic acid or other components of the infusion, having a cover A¹ and a discharge-cock A² at the front, and B is a cooling-chamber which may be described as of porcelain or earthenware, having a lid or cover C of non-conducting material, adapted to fit thereon and having an upturned ledge or flange C¹ in which the reservoir A is received. The cooling-chamber is supported on an ornamental base B¹ and contains a coil D connecting at the upper portion at the front with a stop-cock D¹ and at the lower end with a draw-off cock D². The upper stop-cock D¹ carries a funnel-shaped receptacle E preferably of glass and provided with a graduated

scale to permit the quantity received to be determined, and located immediately beneath the discharge-cock A² on the reservoir. The coil D is supported by standards D³ and is protected by a wire screen F within its convolutions adapted to contain ice and hold it out of contact with the coil. B² is a removable plug for draining the interior of the cooling chamber.

An infusion of tea being supplied to the reservoir, and water and ice, or a freezing mixture if preferred, supplied to the cooling-chamber, the upper stop-cock is closed and the discharge-cock A² opened to permit the charge or quantity desired to enter the receptacle E, the stop-cock D¹ is then opened and the charge flows into the chilled coil where its heat is absorbed and it is then allowed to flow through the cock D² into a suitable glass or cup. Only one charge is admitted to the coil and the latter is completely emptied at each discharge to insure that none remains long enough to develop the cloudy condition. The desired temperature is attained by permitting the charge to remain in the coil a longer or shorter period before drawing it off. The diameter of the pipe forming the coil should be of large diameter, and the pitch of the convolutions should be sufficiently abrupt to permit rapid and complete discharge.

G is a vent-pipe extending from a low point in the coil to a height above the latter in the cooling-chamber and serving to allow air contained in the coil to escape in advance of the charge in its descent, and thus avoid interference with the flow.

The non-conducting cover C offers a convenient support for the reservoir while protecting the tea from the low temperature of the cooling-chamber and preventing the loss of sufficient heat to induce the clouded condition.

Modifications may be made in the forms and proportions within wide limits, and various methods may be employed to reduce the temperature of the cooling-chamber. The apparatus in the form shown or in modified form may be used for other beverages than tea, or may be employed to cool liquids of various kinds for laboratory and other purposes.

I claim:—

A cooling-chamber, a coil therein, a graduating measuring receptacle connected to the upper end of said coil, a stop-cock between said receptacle and coil, a draw-off cock at the lower end of said coil, a vent-pipe extending from a low point in said coil to a point above the latter and terminating within said receptacle below its cover, a non-conducting cover for said chamber, a reservoir supported on said cover, and a discharge-cock in said reservoir arranged to discharge into said receptacle.

In testimony that I claim the invention above set forth I affix my signature, in presence of two witnesses.

JAMES D. SPENCER.

Witnesses:

CHARLES R. SEARLE,
F. E. ECCARDT.