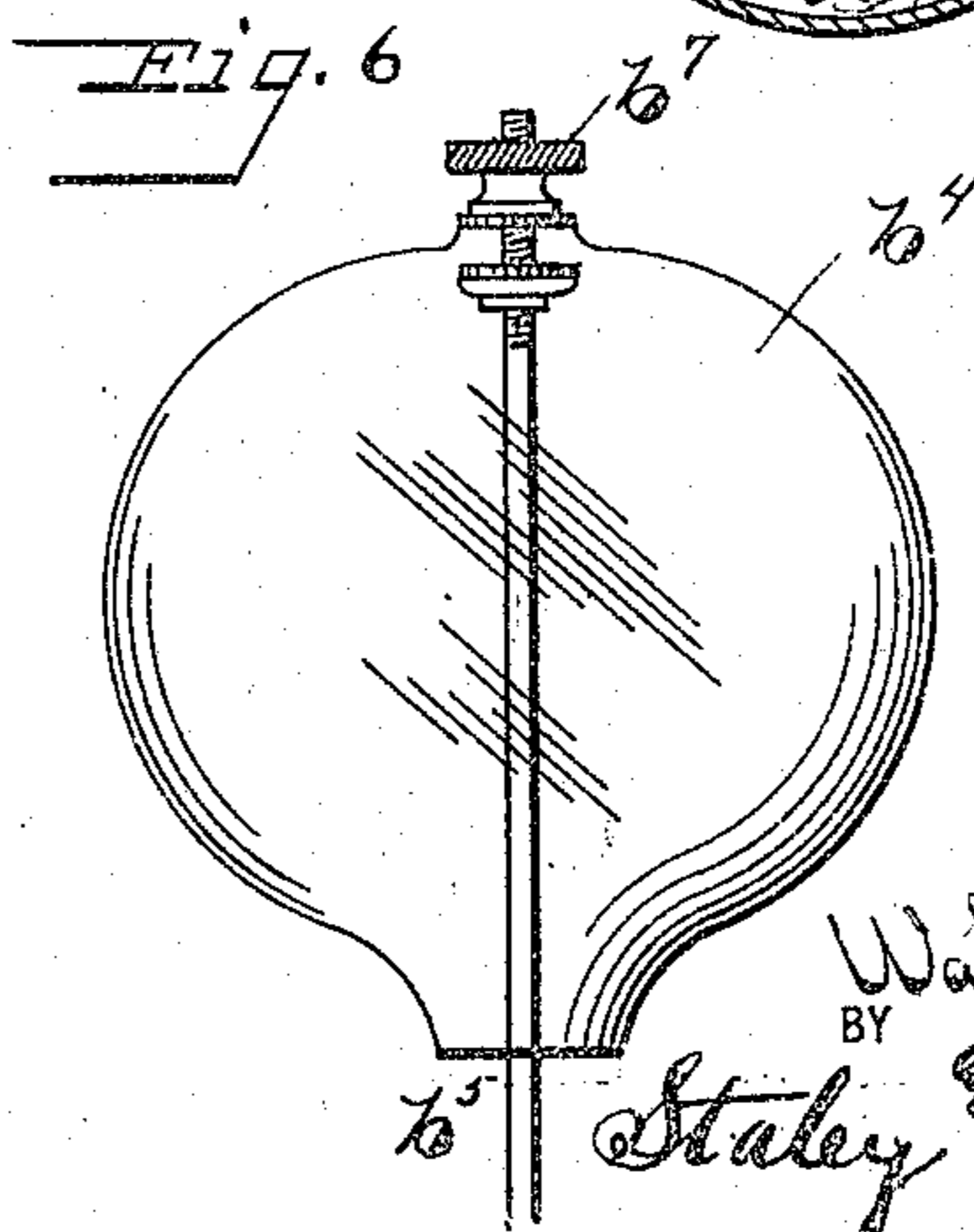
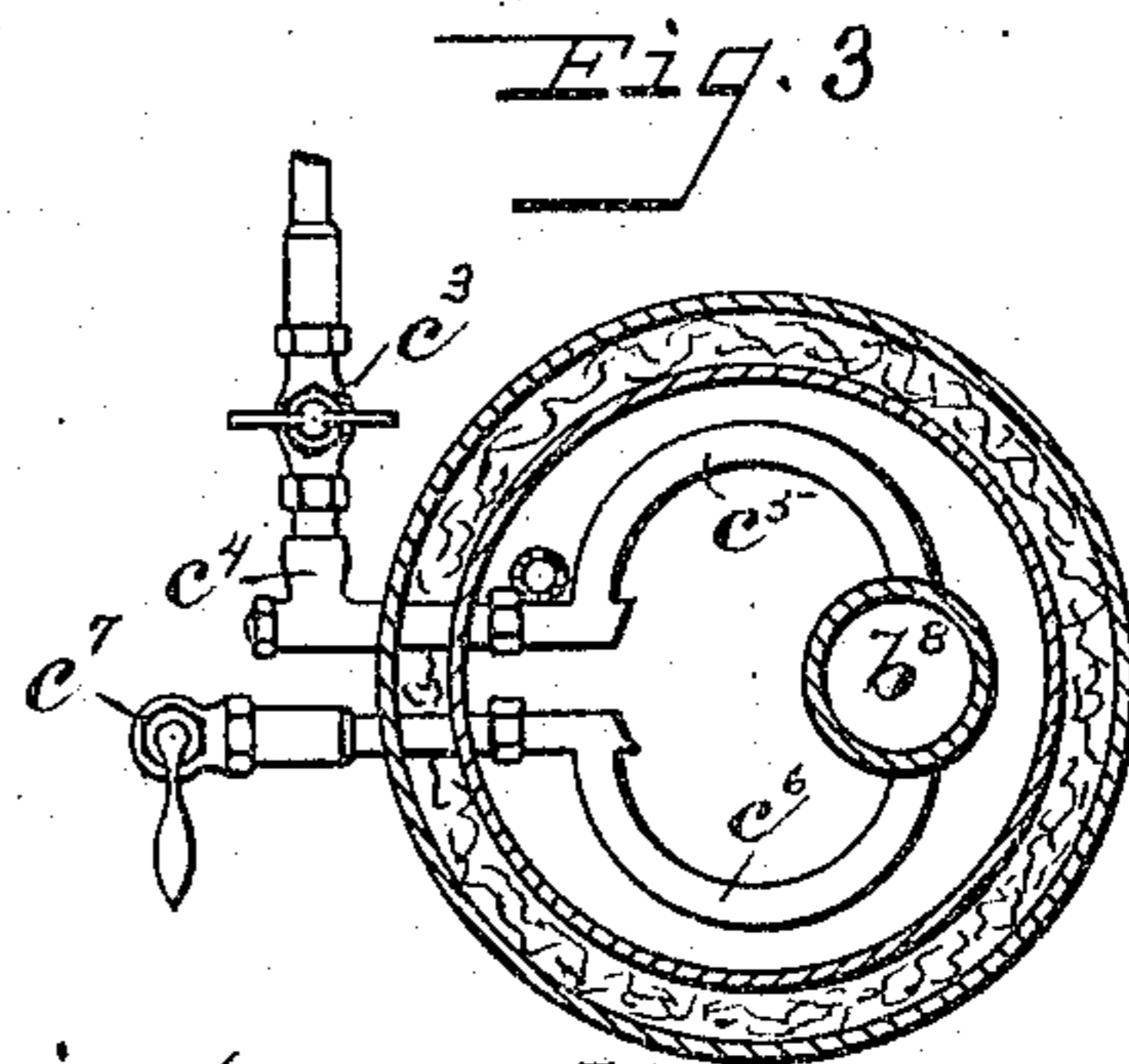
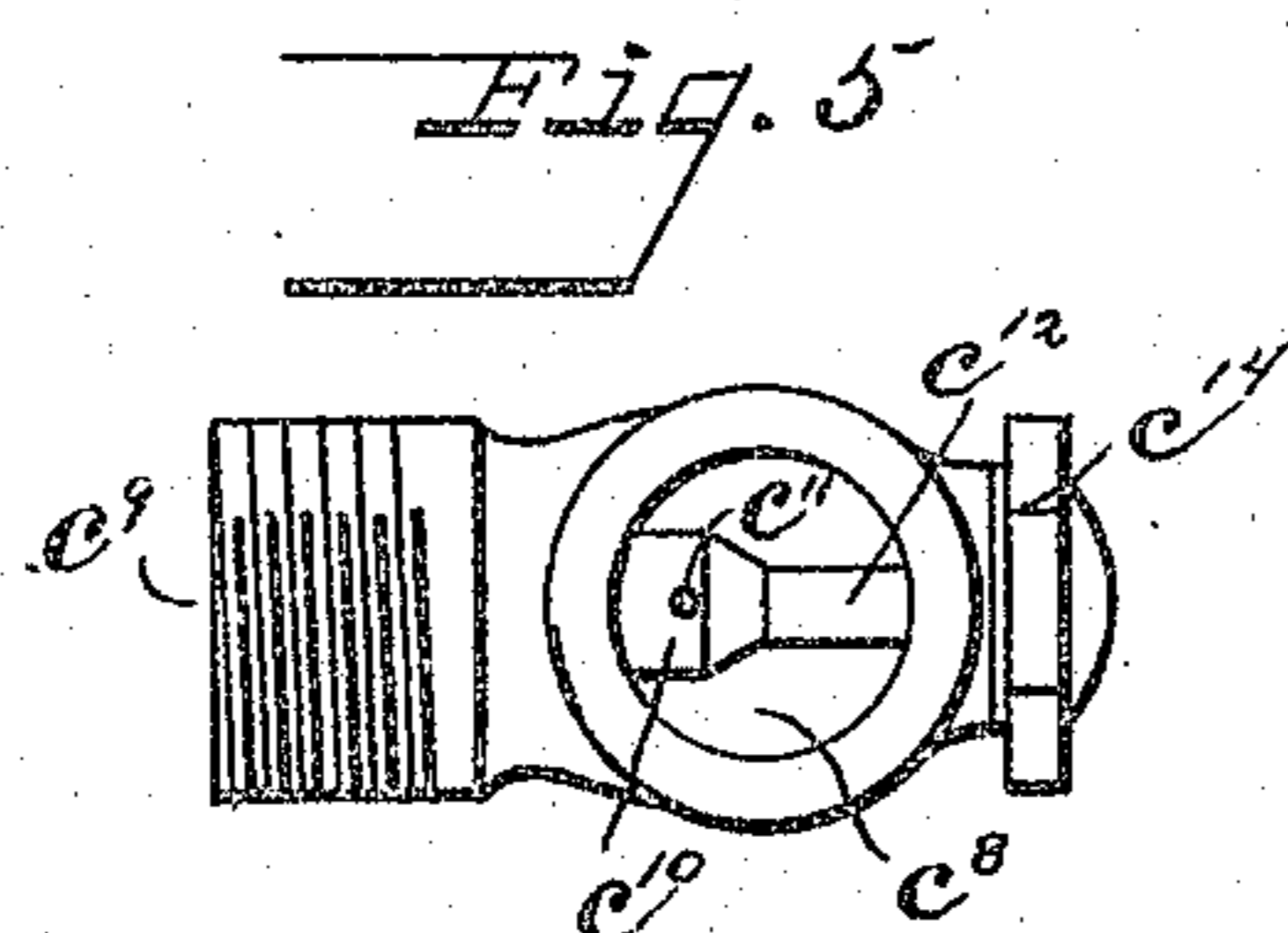
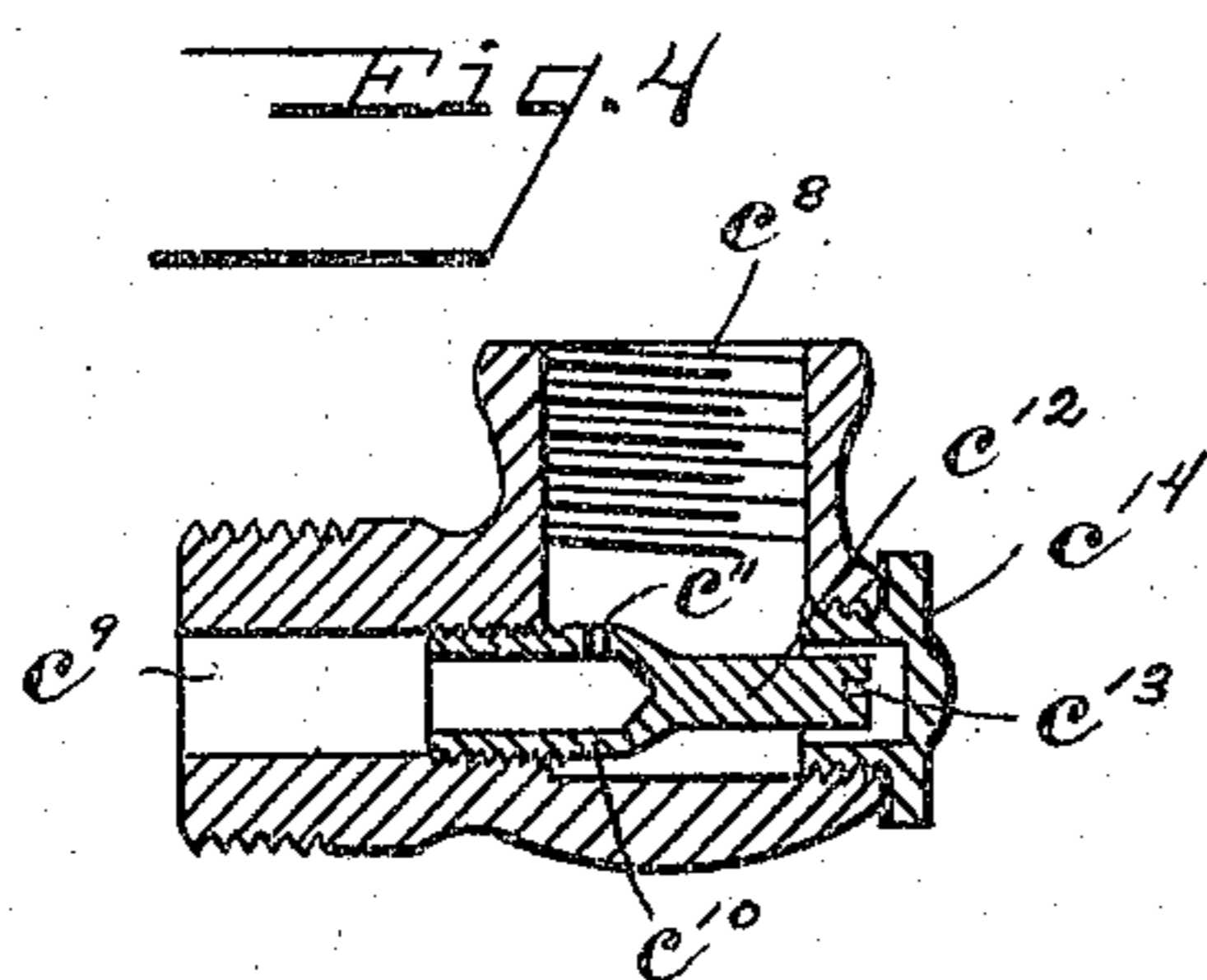
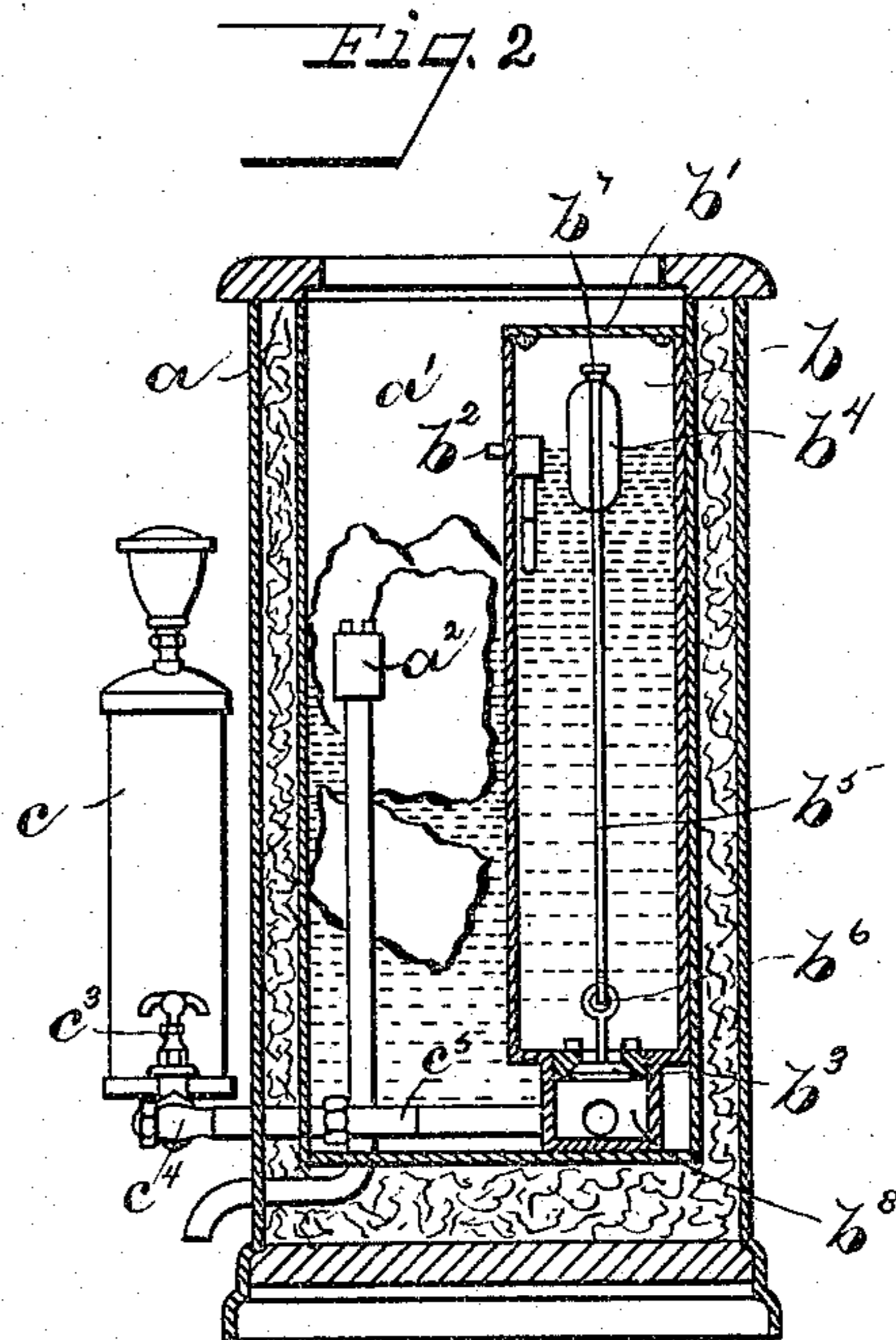
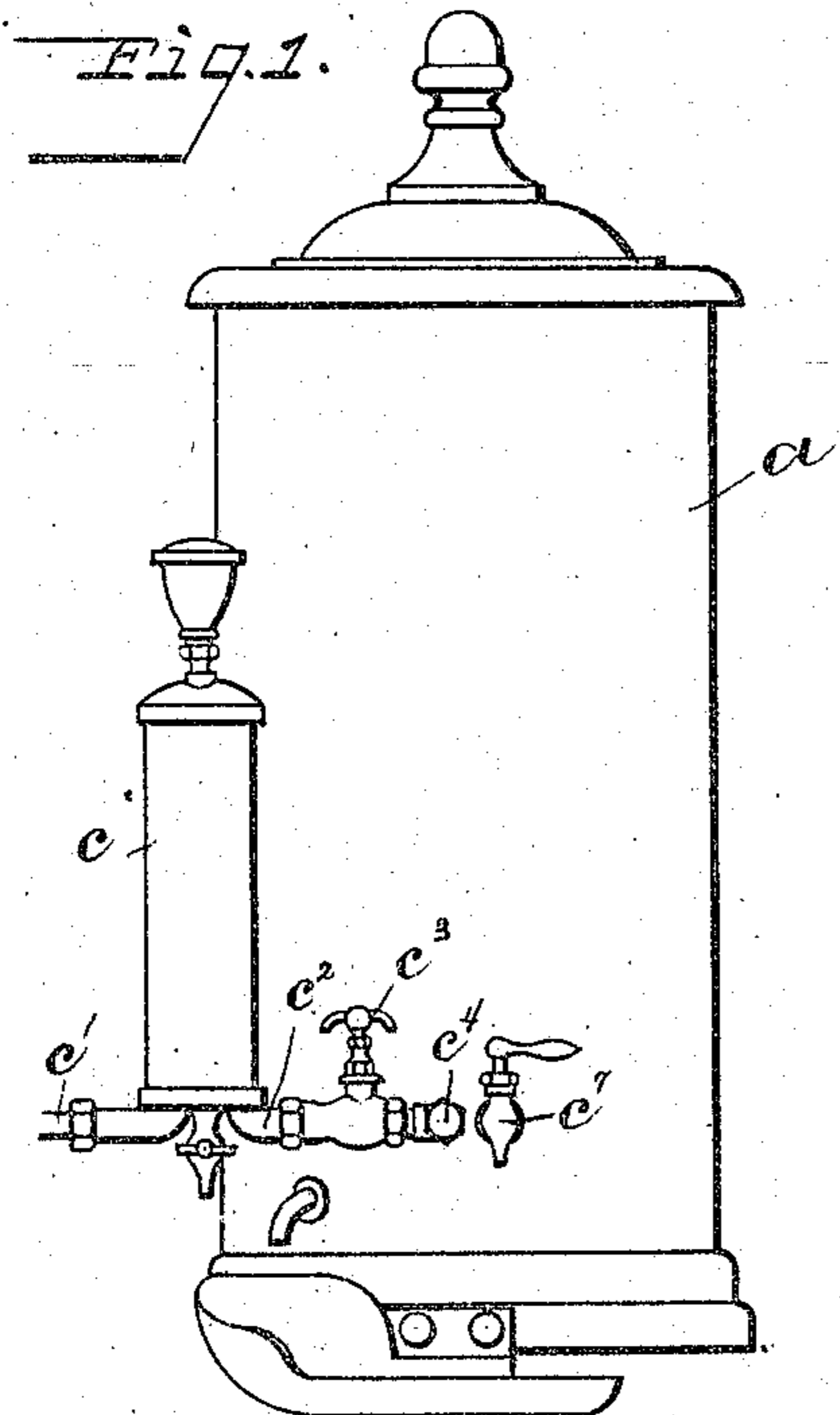


No. 885,125.

PATENTED APR. 21, 1908.

W. G. WUICHET.
COOLER.

APPLICATION FILED JULY 12, 1902.



WITNESSES:

L. H. Walker
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UNITED STATES PATENT OFFICE.

WALTER G. WUICHET, OF DAYTON, OHIO, ASSIGNOR TO THE PASTEUR-CHAMBERLAND FILTER COMPANY, OF DAYTON, OHIO, A CORPORATION OF OHIO.

COOLER.

No. 885,125.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed July 12, 1902. Serial No. 115,373.

To all whom it may concern:

Be it known that I, WALTER G. WUICHET, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Coolers, of which the following is a specification.

My invention relates to improvements in coolers and more especially to that type of cooler employing an inner reservoir with a common supply and discharge chamber connected therewith.

The object of my invention is to provide an improved cooler of the type having a storage reservoir therein such that when the discharge is open only a limited quantity of the liquid will flow from the supply into the discharge, the greater portion or substantially all of the discharge coming from the reservoir in which it has been cooled.

With this and other objects in view my invention consists in the constructions and combinations hereinafter described and set forth in the claim.

In the accompanying drawings, Figure 1 is a front elevation of a device embodying my invention. Fig. 2 is a sectional elevation of same. Fig. 3 is a transverse section omitting the filter, the connection being made direct with the liquid supply. Figs. 4 and 5 show two views of a reduced inlet, and Fig. 6 is a view of the float.

Like parts are represented by similar characters of reference in the several views.

In the said drawings, *a* represents an outer casing having double walls filled with a non-conducting material to form a cooling chamber, *a'*, in the usual way. Within the cooling chamber and preferably at one side thereof I provide a reservoir, *b*, to hold the liquid to be cooled, said reservoir having a removable cover, *b'*, and an overflow, *b²*, discharging into the cooling chamber. I further provide said reservoir with an inlet and a valve, *b³*, operated by a float, *b⁴*, having a connection thereto. This connection I preferably form of a rod, *b⁵*, connected at its lower end to the valve stem by a loop, *b⁶*, and at its upper end I preferably connect it to the float in any suitable manner but preferably by extending it through the open end of said float and through a perforation in the bottom (which is the top in its inverted position) of said float, said rod being screw-threaded at its upper end and provided with suitable nuts and

packing on each side of the wall of the float at said perforation to tighten the same in place and form an air-tight joint. The float may be readily removed by unscrewing and taking off the outer nut, *b⁷*.

c represents a filter of the pressure type, employing the Pasteur system, having a liquid supply inlet, *c'*, and an outlet, *c²*, having a connection through the casing, *a*, to the inlet valve chamber, *b³*, said connection comprising pipe fittings having a cutoff valve, *c³*, and a reducer, *c⁴*; the pipe fitting, *c⁵*, within the cooling chamber being preferably curved as shown to present more surface to cool the liquid it carries. A discharge pipe, *c⁶*, likewise curved for the purpose stated, leads from the chamber, *b³*, and is connected through the casing, *a*, with a discharge cock or faucet, *c⁷*. The said reducer, *c⁴*, is located without the cooling chamber and consists of a body having an inlet, *c⁸*, and outlet *c⁹*, at rightangles to each other, with a hollow plug, *c¹⁰*, screw threaded into said outlet, having a reduced opening, *c¹¹*, leading from said inlet to said outlet, said plug having a solid extension, *c¹²*, with a slot, *c¹³*, in its head suitable to receive a screw-driver to screw said plug in place. I further provide said body with an opening through which said plug can be readily put in place and removed at pleasure for cleaning, said opening being closed by a screw-threaded cap, *c¹⁴*. An overflow pipe, *a²*, projects upwardly in the cooling chamber to a sufficient height to maintain a quantity of liquid about a large portion of the reservoir as well as about the inlet and discharge pipes in said chamber.

It will be seen the liquid supply is conducted through the reducer in limited quantities into the reservoir until it reaches a height in said reservoir sufficient for the float to close the inlet valve. The liquid, being cooled in said reservoir, is drawn off at pleasure for use by opening the discharge cock, and by reason of the reducer admitting only a small quantity of liquid as compared with the amount discharged, practically all of the discharge is from the reservoir and of substantially the same temperature as it was in the reservoir.

By the construction described, employing the reduced inlet, coolers of this type have been made a success, as it was found that before the addition of this improvement it was impossible to draw off the cooled water

from the reservoir for the reason that the pressure of the supply would prevent the valve between the reservoir and the valve chamber, *b*⁸, from dropping. It is necessary to provide a supply for the cooler of greater capacity than would be required if the conditions and pressure always remained uniform, but the pressure of the water and its conditions vary greatly in different localities. Further, when a filter is employed in the supply pipe, besides the variation in the water, the capacity of the filter itself changes due to the filtering medium becoming clogged in time, and it is necessary for this reason to install a filter of greater capacity than would be required under favorable conditions—that is, where the water was very clear and the filter was cleaned often. For these reasons, therefore, the supply pipe must be of proportionately large capacity to insure a certain quantity of water being supplied to the storage reservoir under all conditions. Such being the case, it will be seen that in attempting to draw the water from the cooler, most if not all would come from the supply before it has been cooled and it was to obviate this difficulty that I devised the present invention of placing in the sup-

ply pipe near the cooler a reduced inlet. This feature insures at least three-fourths of the water drawn from the discharge being obtained from the storage reservoir where it has been cooled. It will be seen further that the device is automatic in its action in that the supply needs no regulation for the reason that the reduced inlet is of sufficient capacity to supply sufficient water to the reservoir to keep it well filled although the supply may vary for the various reasons mentioned.

Having thus described my invention, I claim:

In a cooler, a supply pipe having a reduced inlet, said reduced inlet consisting of a body having supply and discharge orifices, a hollow perforated plug screwthreaded in said body between said supply and discharge orifices, and a closed opening in said body in proximity to said plug, substantially as and for the purpose specified.

In testimony whereof, I have hereunto set my hand this 9th day of July A. D. 1902.

WALTER G. WUICHET.

Witnesses:

E. H. TURNER,
W. S. McCONNAUGHEY.