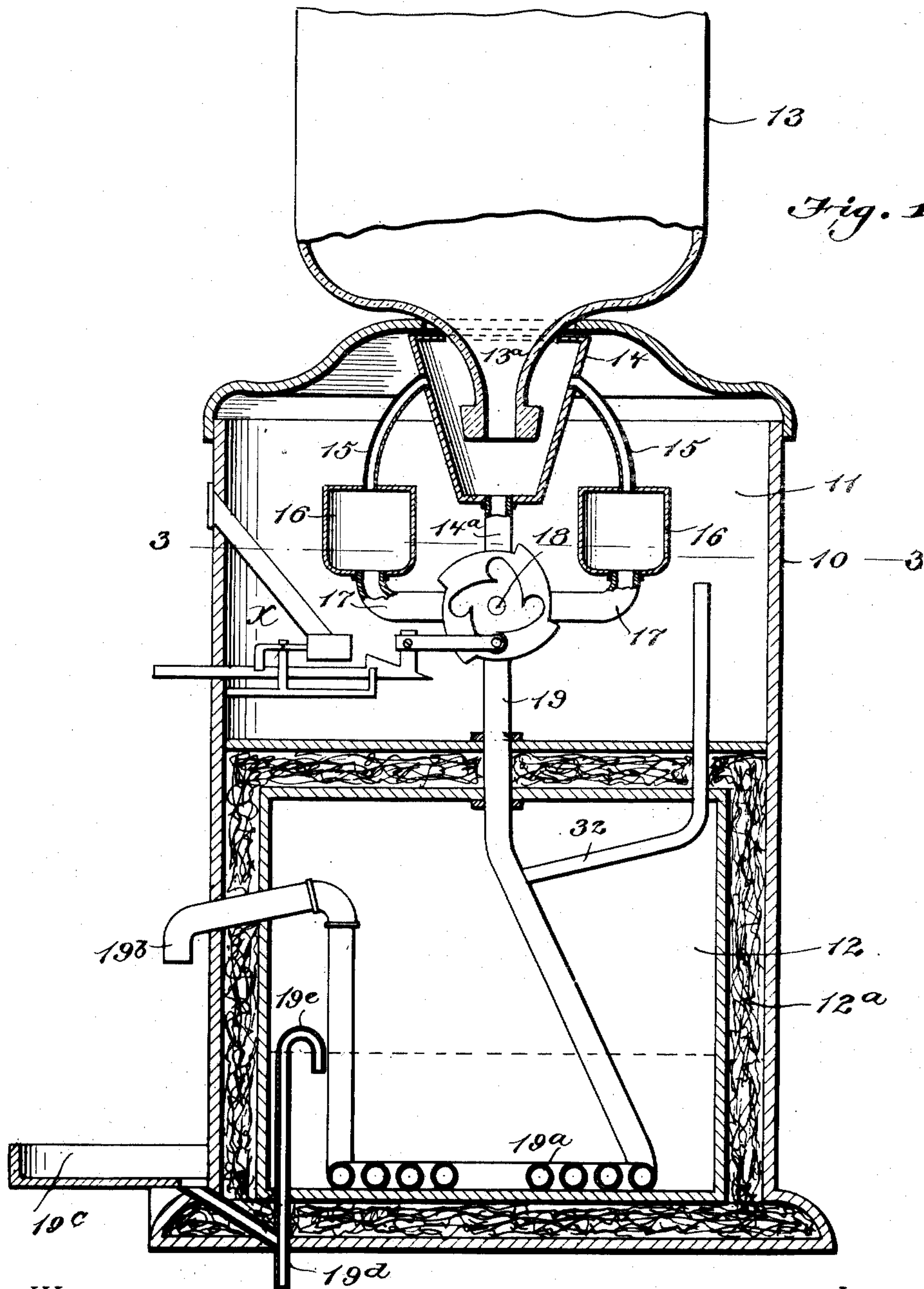


No. 864,580.

PATENTED AUG. 27, 1907.

W. H. WALTER.
LIQUID DISPENSING MECHANISM.
APPLICATION FILED MAY 23, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

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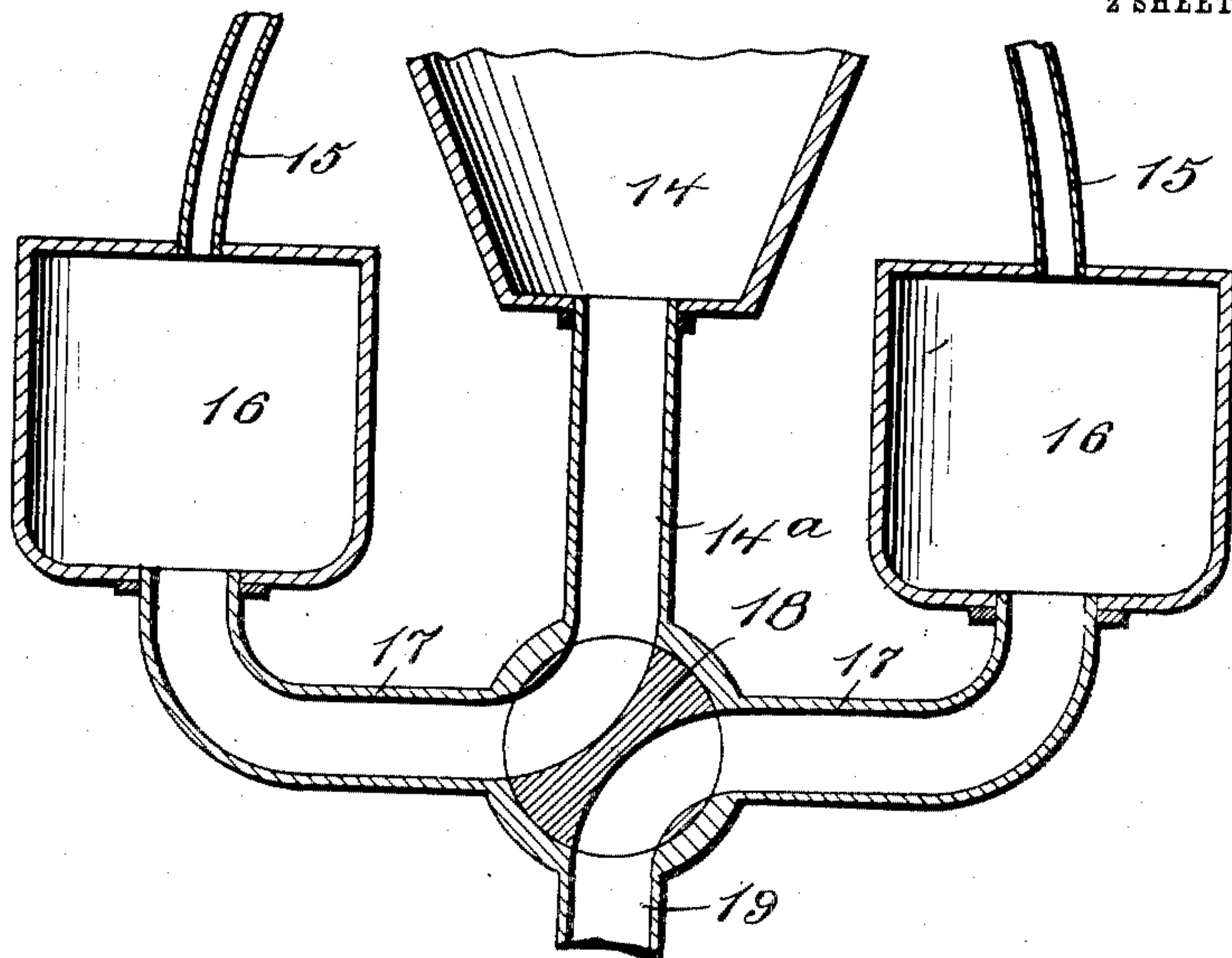


Fig. 2.

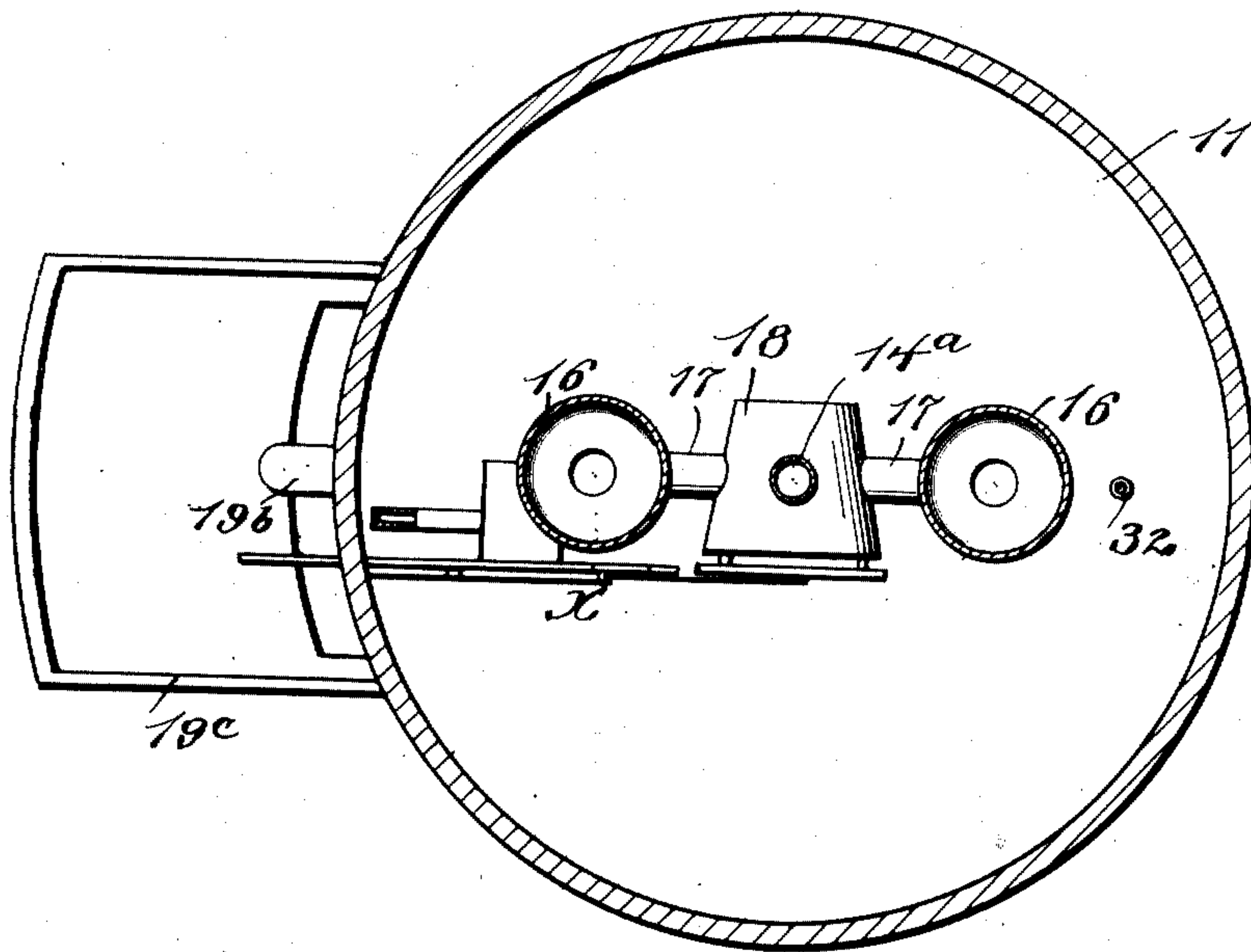


Fig. 3.

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UNITED STATES PATENT OFFICE.

WILLIAM H. WALTER, OF CHICAGO, ILLINOIS.

LIQUID-DISPENSING MECHANISM.

No. 864,580.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed May 23, 1906. Serial No. 318,389.

To all whom it may concern:

Be it known that I, WILLIAM H. WALTER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Liquid-Dispensing Mechanism, of which the following is a specification.

This invention is a coin operated machine for dispensing liquids, and comprises valve controlled means to measure and dispense the liquid. It is intended to be used in stores, cafés, and other public places for the purpose of dispensing liquids, and includes as an especial feature means for cooling the liquids so dispensed. It will serve to put within convenient reach of all persons a cheap and cool drink, by a novel mechanical means to be hereinafter described.

In the accompanying drawings, Figure 1 is a vertical section of the device. Fig. 2 is a detail in section showing the valve passages. Fig. 3 is a detail in horizontal section on the line 3—3 of Fig. 1.

Referring specifically to the drawings, 10 indicates an outer cylindrical casing which contains the coin operated valve mechanism and also the ice chamber through a coil in which the liquid is discharged. The valve operating mechanism and parts of the apparatus are contained in an upper chamber 11. The lower or ice chamber 12 is provided with an insulation 12^a to retain the cold and serves as a refrigerating chamber for cooling the liquid sold.

13 is a reservoir, preferably a large glass bottle, which is inverted so that it discharges through the mouth 13^a. This is mounted in an opening on top of the casing 10 with the neck of the bottle extending through the opening and the shoulder of the bottle resting on top of the casing. The mouth of the bottle projects into and is sealed in a trap vessel 14 in the upper chamber, and leading from the bottom of this vessel is a tube 14^a which is provided with a controlling valve 18.

At 16 are indicated two closed measuring cups, which determine the quantity of liquid supplied at each operation, and these cups are respectively filled and discharged at each operation of the device, one cup being filled while the other is being emptied. Air tubes 15 connect the top of the cups with the vessel 14, so as to provide an air vent to allow the cups to fill and also to return any overflow into the trap vessel 14. These cups are connected by pipes 17 to the controlling valve 18, which is a four-way valve, as shown in Fig. 2, and is consequently operated by a quarter turn. The main discharge pipe 19 leads down from the valve into the refrigerating chamber 12 at the bottom of which it is provided with a coil 19^a which terminates in a discharge nozzle 19^b which extends through the wall of the casing in position to fill a glass on a bracket 19^c.

19^d is a drainage tube having one branch extending to the bracket and another branch forming an overflow from the ice chamber with a half circle air trap 19^e at the top. Leading into the main discharge pipe 19 near the upper end thereof is an air vent pipe 32, for the purpose of relieving the air or air pressure from the coil and assure a perfect delivery of the fluid. This air vent joins the pipe 9 on substantially a level with the nozzle 19^b.

The valve 18 may be operated by any desirable or suitable coin mechanism. I have indicated such a mechanism, as a whole, at X.

In the operation of the device the coin is deposited in a slot provided for the purpose, and by means of the coin mechanism referred to the valve is given a quarter turn. The coil and delivery pipe are first primed by filling the same with the liquid to the level of the discharge nozzle. When the mechanism is actuated the liquid will flow from the bottle or reservoir through the pipe 14^a and through one of the ports of the valve into one of the cups 16, filling said cup, and at the same time the other cup 16 will discharge through its outlet pipe and the other port of the valve, into the discharge pipe 19, as clearly shown in Fig. 2, causing a corresponding discharge from the delivery nozzle. At the next operation the respective cups are emptied and filled in a similar manner. There is thus always a charge or quantity of liquid to be delivered in the cooling coil, where it remains until the device is operated, and during which period it is effectively cooled.

I claim:

In a liquid dispensing mechanism, in combination, a casing having an upper chamber and a lower refrigerating chamber, a liquid reservoir comprising an inverted bottle the neck of which extends through an opening in the top of the casing, a trap vessel in the upper chamber, into which the mouth of the bottle extends, a four-way valve and its casing located in said upper chamber under the trap vessel, a pair of measuring cups located in the upper chamber and having pipe connections with the valve casing and vent pipe connections from the top thereof to the trap vessel, a pipe connecting the trap vessel and the valve casing, and a delivery pipe extending from the valve casing down through the refrigerating chamber and having a coil in the bottom of said chamber and a discharge nozzle above the coil, whereby a quantity of liquid is retained in the coil at all times, the valve being constructed to fill one measuring cup and empty the other at each operation.

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

WILLIAM H. WALTER.

Witnesses:

NELLIE FELTSKOG,
H. G. BATCHELOR.