(No Model.) 2 Sheets—Sheet 1.

E. D. BERTINE.

FEED TANK FOR WATER PIPES.

No. 428,823. Patented May 27, 1890.

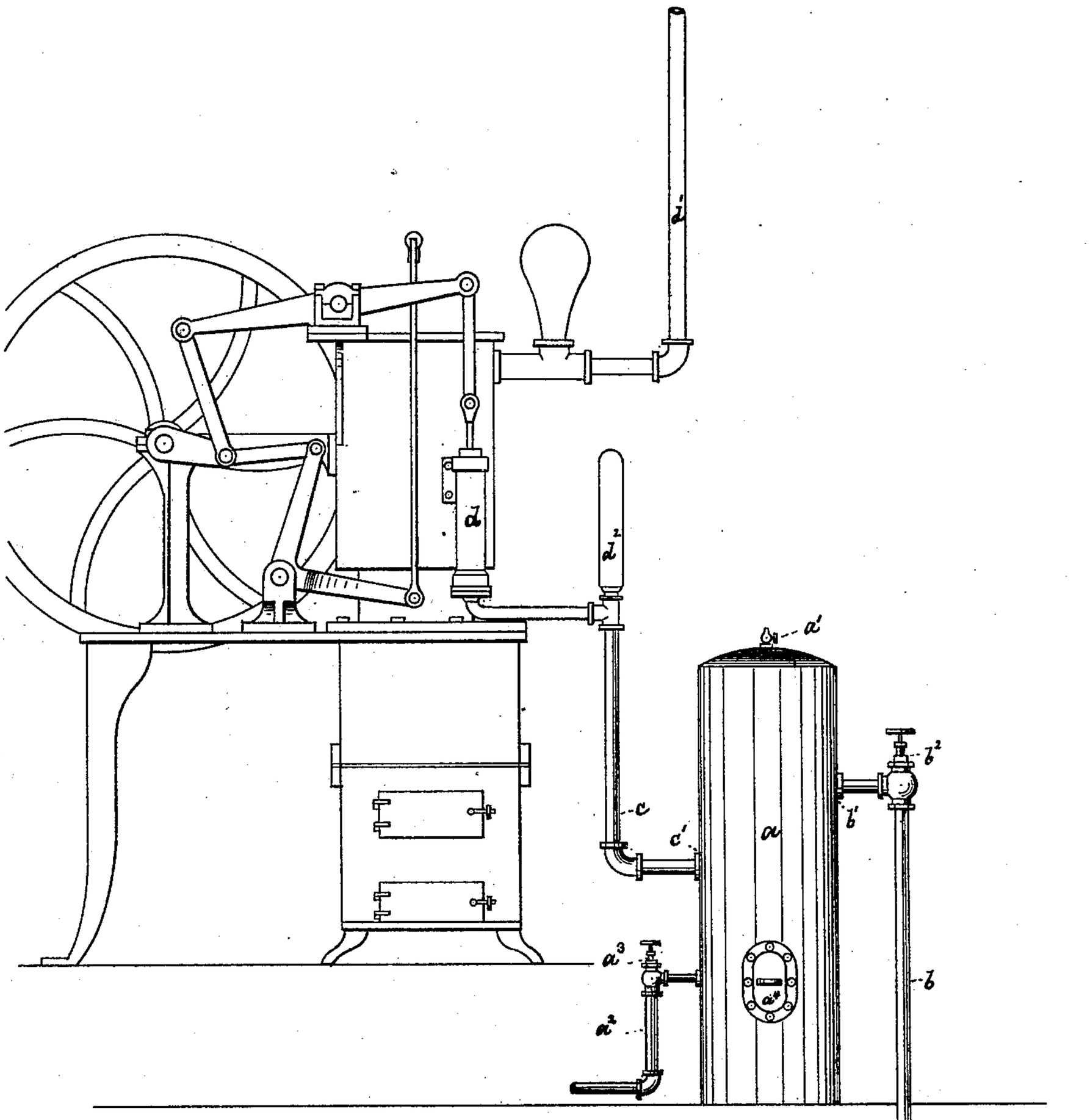

FIG. 1

WITNESSES
Wm. H. Love
Wm. Wagner

INVENTOR
E. D. Bertine
by his attorneys
Roeder & Briesen

(No Model.) 2 Sheets—Sheet 2.

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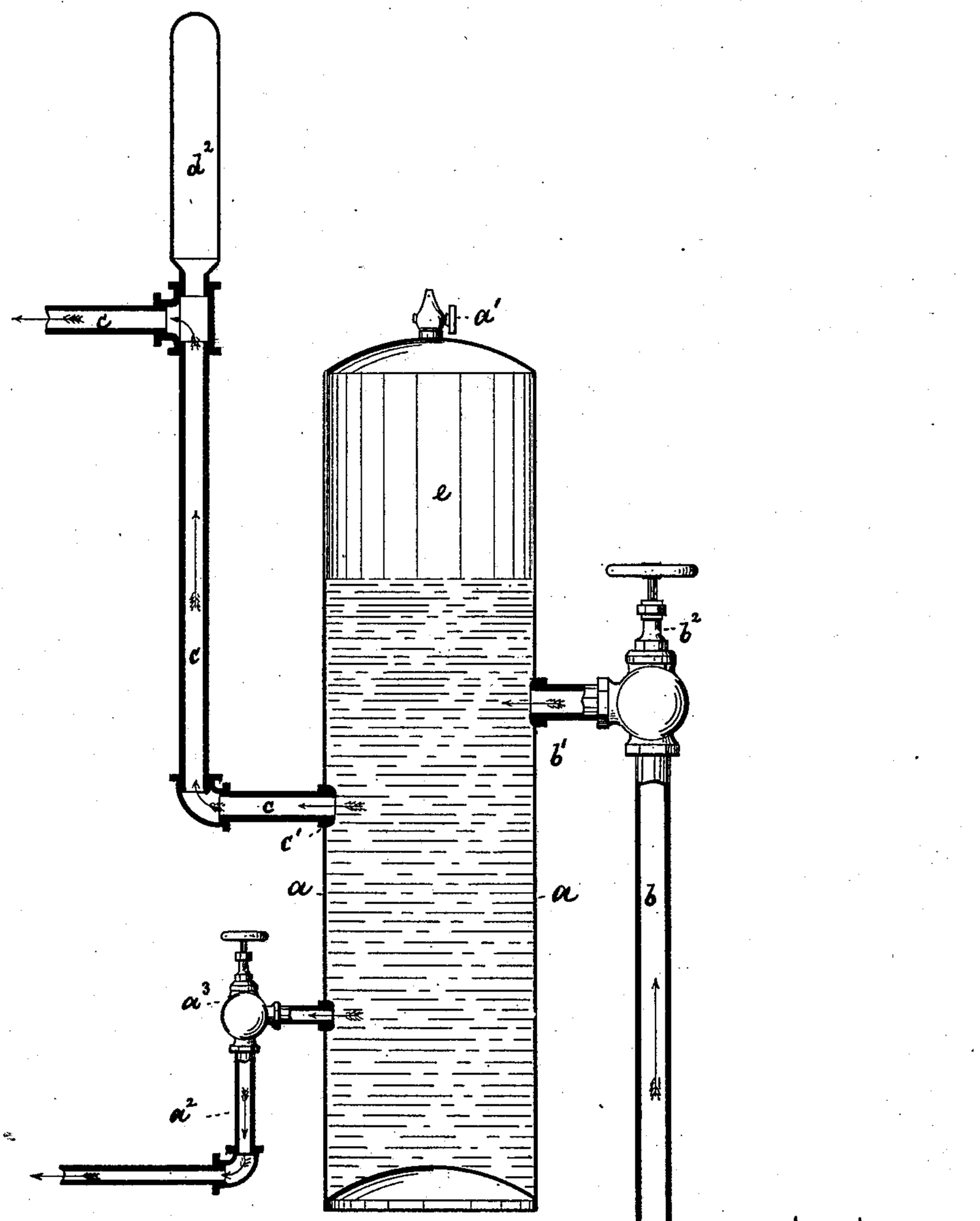

FIG. 2

WITNESSES

Wm. A. Lowe

Wm. Wagner

INVENTOR

E. D. Bertine

by his attorneys

Roeder & Briesen

UNITED STATES PATENT OFFICE.

EDWARD D. BERTINE, OF NEW YORK, N. Y.

FEED-TANK FOR WATER-PIPES.

SPECIFICATION forming part of Letters Patent No. 428,823, dated May 27, 1890.

Application filed December 20, 1889. Serial No. 334,389. (No model.)

To all whom it may concern:

Be it known that I, EDWARD D. BERTINE, of New York city, New York, have invented an Improved Feed-Tank for Water-Pipes, of which the following is a specification.

This invention relates to an improved feed-tank that receives the water from the main and delivers it to the distributing-pipes or to the pump to insure a uniform pressure.

The invention consists in the various features of improvement more fully pointed out in the claim.

In the accompanying drawings, Figure 1 is an elevation of the tank, showing it connected to the pump. Fig. 2 is a detail vertical central section of the tank.

The letter *a* represents a tank made of metal, and preferably of cylindrical form. This tank is connected both with the water-supply and the water-discharge pipes. These pipes enter the tanks from opposite sides, and the mouth *b'* of the water-supply pipe *b* is located a considerable distance above the mouth *c'* of the discharge-pipe *c*. The pipe *b* receives the water from the main and delivers it to the tank *a*. It should be provided with a valve b^2 to stop or check the supply of water to the tank. From the pipe *b* there extend upwardly two (more or less) rising pipes b^3 b^4, that deliver water directly to the lower stories of a building. The discharge-pipe *c* communicates with a pump *d*, which pumps the water into a rising pipe *d'*, that delivers it to the roof-tank; or the pipe *c* may be directly connected to the rising pipe or pipes. At a bend of pipe *c* there should be placed the air-chamber d^2 to collect the air from the water.

At the upper part of tank *a* there is placed an air-cock *a'*, and into the lower part of tank *a* there enters an emptying-pipe a^2, having cock a^3. In order to properly clean the tank it should be provided with a hand-hole a^4.

The operation of the device is as follows: The water from the supply-pipe flows into tank *a* and forces the air contained in said tank into the upper part of the same, as shown at *e*. The pressure of this air-cushion will in time be sufficient to check the water-supply unless an equal amount of water is drawn out. As the mouth *c'* is located beneath the mouth *b'*, the air will not be drawn up the pipe *c*, but the water will be taken up by the pump in such quantities as the pump can conveniently handle. In this way the pump will not choke up by filling with air, but will work uniformly and without thumping. If no pump is used, the pressure in all the rising pipes connected with pipe *c* will be uniform.

Any sediments contained in the water will collect in the lower part of the tank *a* and may be removed by the hand-hole.

The outside pipes b^3 b^4 are used only in case a pump is also used. When the pump has completed its work, the valve b^2 is closed and the cocks *a'* a^3 are opened. This will permit the air and waste water to escape.

What I claim is—

The improved apparatus described, comprising the tank *a*, having the inlet-opening *b'* and the discharge-opening *c'* a considerable distance below the inlet, and the valve *a'* in the top of the tank, the emptying-pipe a^2, carrying the valve a^3 and leading from the tank below the discharge-opening *c'*, the discharge-pipe *c*, the air-chamber d^2 on the upper end thereof, the pump *d*, connecting with the upper end of the discharge-pipe, the engine, the rising pipe *d'*, leading therefrom, the supply-pipe *b*, carrying the valve b^2, and the pipes b^3 b^4, communicating with the supply-pipe, all adapted to operate substantially as and for the purpose specified.

EDWARD D. BERTINE.

Witnesses:

F. V. BRIESEN,

A. JONGHMANS.