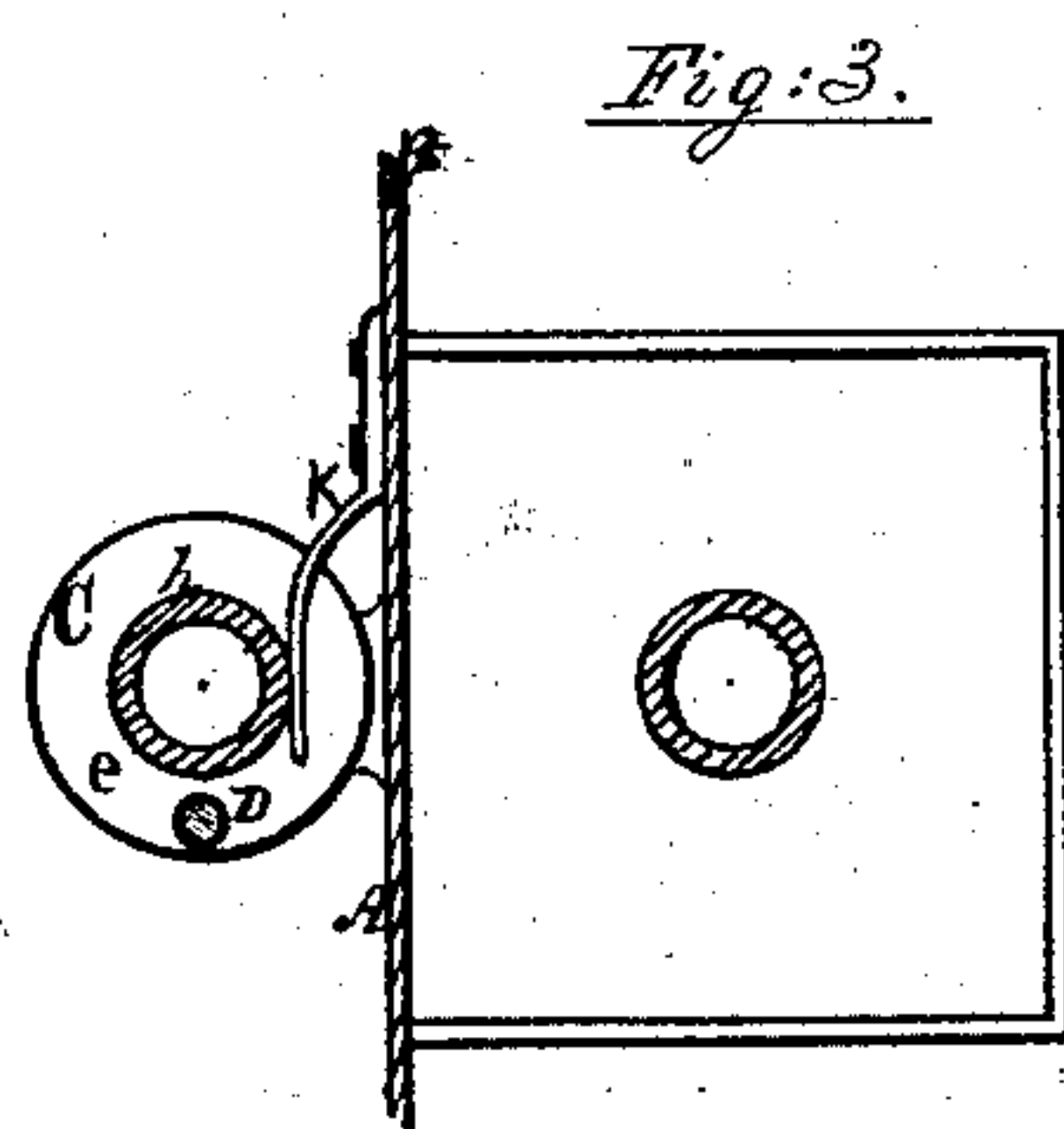
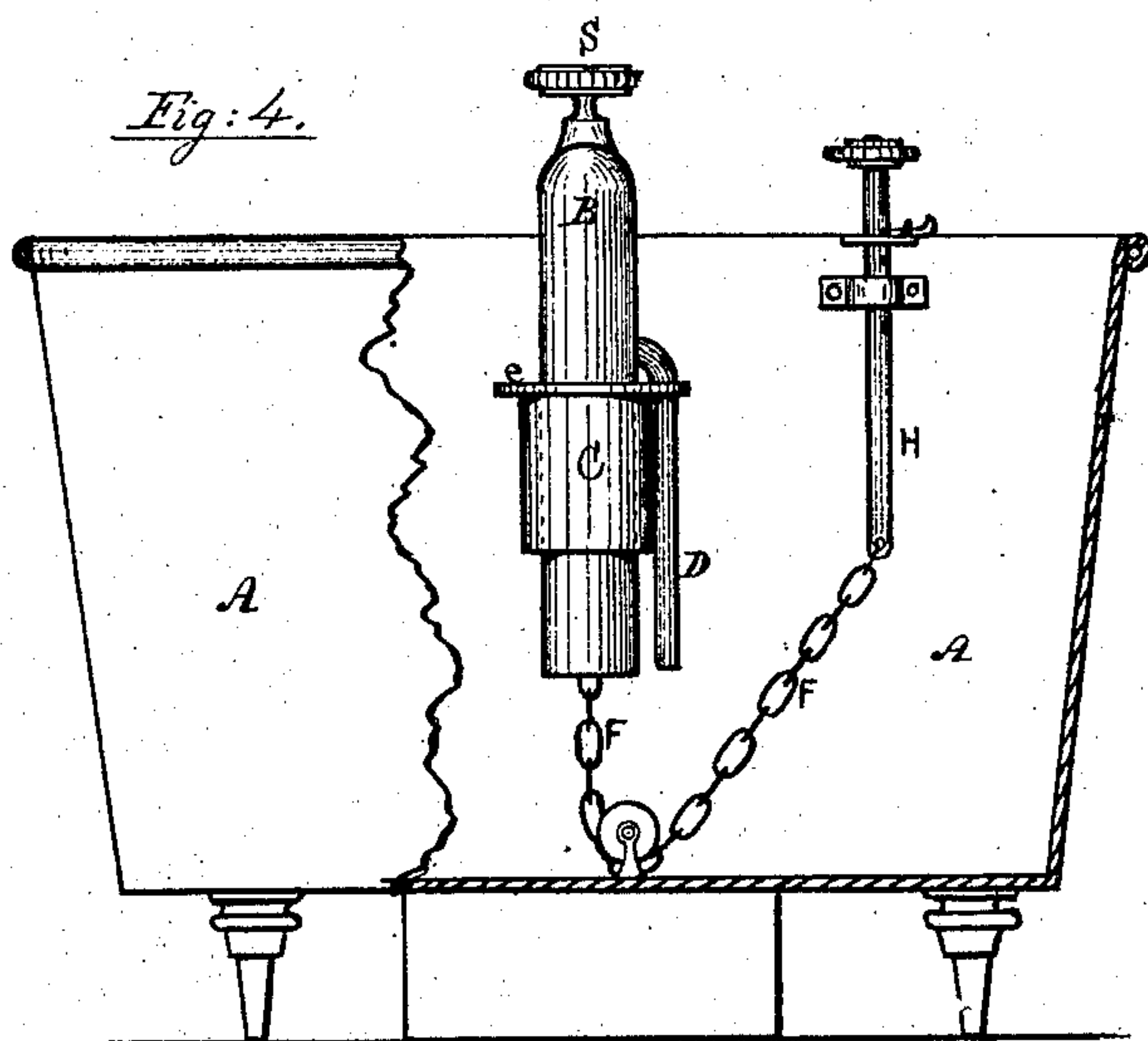
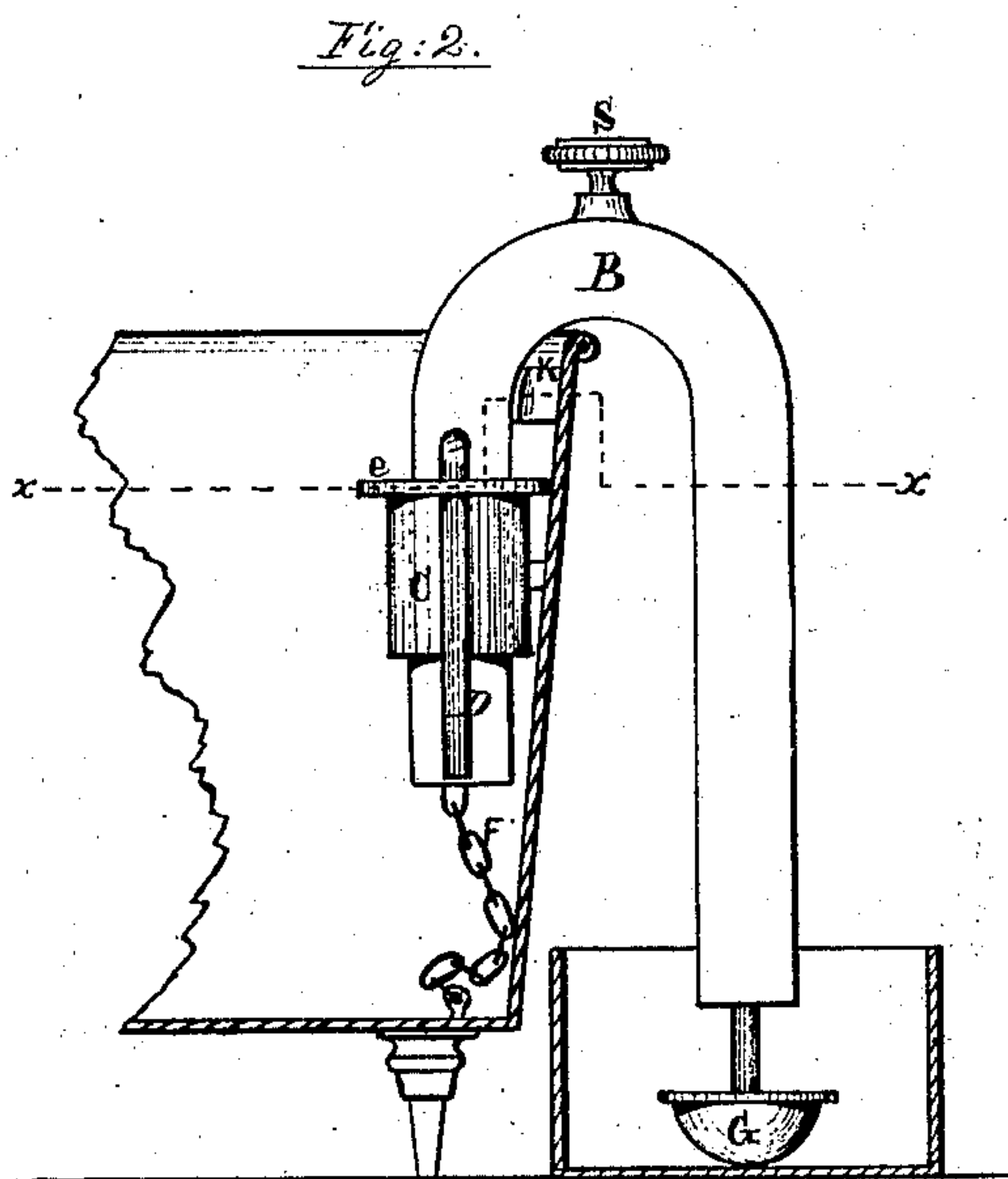
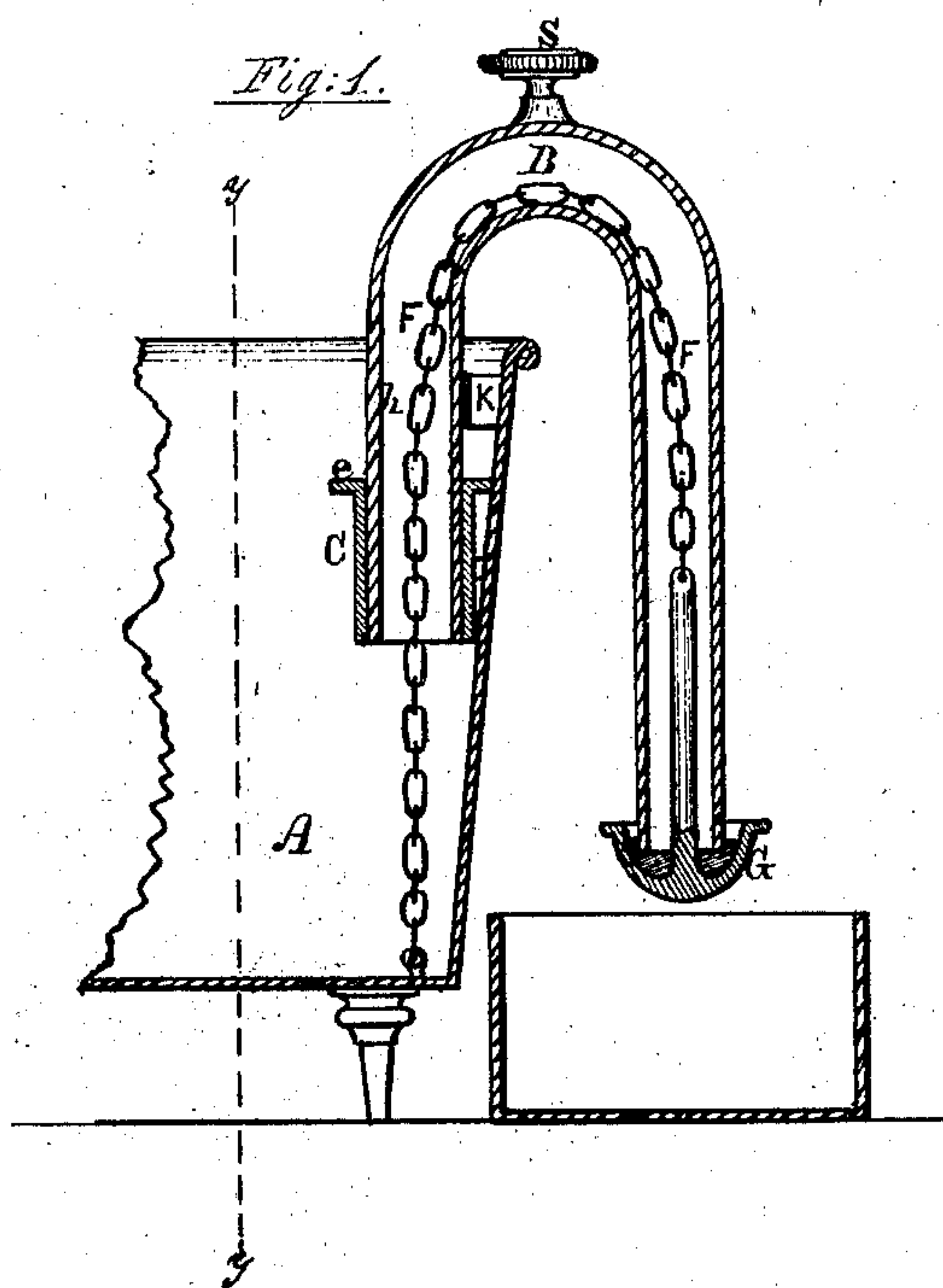


J. A. Bostwick,

Syphon.

No. 99,526.

Patented Feb. 8. 1870.



Witnesses

Wm. H. Young
George Kaelthum

J. A. Bostwick Inventor
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United States Patent Office.

J A B E Z A . B O S T W I C K , O F N E W Y O R K , N . Y .

Letters Patent No. 99,526, dated February 8, 1870.

IMPROVEMENT IN SIPHONS

The Schedule referred to in these Letters Patent and making part of the same.

I, JABEZ A. BOSTWICK, of the city, county, and State of New York, have invented certain Improvements in Siphons, for discharging fluids from tanks and other receptacles or vessels, of which the following is a specification.

The nature of my invention consists—

First, in attaching a siphon to a tank or fluid-receptacle of any description, in such manner that it may slide or move and be adjusted vertically; and

Second, in passing a cord or chain through the siphon, one end of the chain being attached to a valve made to fit over and close one end of the siphon, and the other fastened to a weight or to a point outside, or independent of the tube, so that an elevation of the siphon will tighten the chain, and thus draw up and close the valve.

Figure 1 is a central vertical section of my improved siphon attached to a tank, and elevated, so that its outer end is closed by the valve;

Figure 2, an elevation, illustrating the siphon dropped, so as to loosen the valve and open the tube, to permit its operation in discharging the fluid contained in the tank;

Figure 3 a transverse section in line *x x* of fig. 2; and

Figure 4, an elevation illustrating a modification in the manner of securing the inner end of the chain, to permit an adjustment thereof.

A, in the accompanying drawings, represents a tank, or other vessel or receptacle to contain fluids; and

B, a siphon-tube of ordinary construction.

The inner shorter arm *h*, of the siphon, passes through a sleeve or collar, C, secured to the side of the tank, so that it may freely slide therein vertically.

A rod, D, is secured upon the side of the arm *h*, so as to extend parallel thereto, and pass through an aperture in a flange, *e*, formed around the upper end of the fixed sleeve C, to prevent the siphon from turning in its sleeve, without restricting its vertical movements.

F is a cord or chain passed through the siphon-tube B.

The inner end of the chain is fastened by a ring or hook to the bottom of the tank A.

To its outer end, projecting from the longer arm of the tube, a valve, G, is attached.

This valve G is cup-shaped, and properly packed, so that when drawn up by the cord closely against the end of the tube, as shown in fig. 2, it will form a water-tight joint therewith.

The length of the chain is so proportioned with reference to that of the siphon, and in the depth of the tank or vessel A, as that when the siphon is drawn up to a given height above the bottom of the tank, (to be determined in each case by the requirements of the operator,) the chain will be drawn perfectly tight, arresting a further upward movement of the closing-valve G against the outer end thereof.

Instead of fastening the inner end of the chain to the bottom of the tank by a ring or hook, as illustrated in figs. 1 and 2, I contemplate securing it to a ball or weight independent of the tank, also passing it through a ring or a pulley secured to the bottom of the tank or other vessel, and then attaching it to a vertical slide-rod, H, arranged upon the side of the vessel, as illustrated in fig. 4.

This rod H is provided with a rack and pinion, ratchet, or other form of catch, to secure it firmly in any desired position.

By a movement of the rod H, the length of the chain F, and the consequent height to which the siphon B may be elevated, is readily adjusted.

The siphon is held in any position to which it may be elevated, by means of the pressure of a spring, K, secured so as to bear against it, as fully illustrated in fig. 3.

A knob, S, is secured upon the bend of the siphon, to facilitate the movement thereof.

A transverse bar may be inserted in the outer end of the siphon, to guide and steady the movements of the valve or valve-stem in closing the same.

Instead of using a rod, D, passing through the flange *e* of the collar B, to prevent a rotation of the siphon, the side of the tube may be grooved, to receive a projection from the sleeve; or a pin, projecting from the tube, may be used to project into a groove or slot in the sleeve, and I contemplate such well-known equivalent devices for this purpose.

Although I ordinarily prefer to place the valve G at the outer end of the siphon, and to fix the opposite end of the chain, operating the same, within the tank containing the fluid to be discharged, I contemplate, in my invention, reversing this order, by placing the valve at the inner end of the siphon, and securing the opposite end of the chain attached thereto to a point outside of the tank.

I claim, as my invention—

1. The combination of a suitable valve with the end of a siphon-tube, and with a chain or cord passing through the tube, and secured to a weight, or to any suitable point of attachment independent thereof, substantially as herein described.

2. The combination of a siphon-tube, B, with a sleeve or collar, C, secured to a tank or other vessel, A, to permit a free vertical movement of the tube, and with a side-rod passing through a flange on said sleeve, to prevent a rotation thereof, all substantially as herein set forth.

3. The combination of a spring, K, with a sliding siphon-tube, B, arranged and operating substantially in the manner and for the purpose herein set forth.

J. A. BOSTWICK.

Witnesses:

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W. A. DUDLEY, Jr.