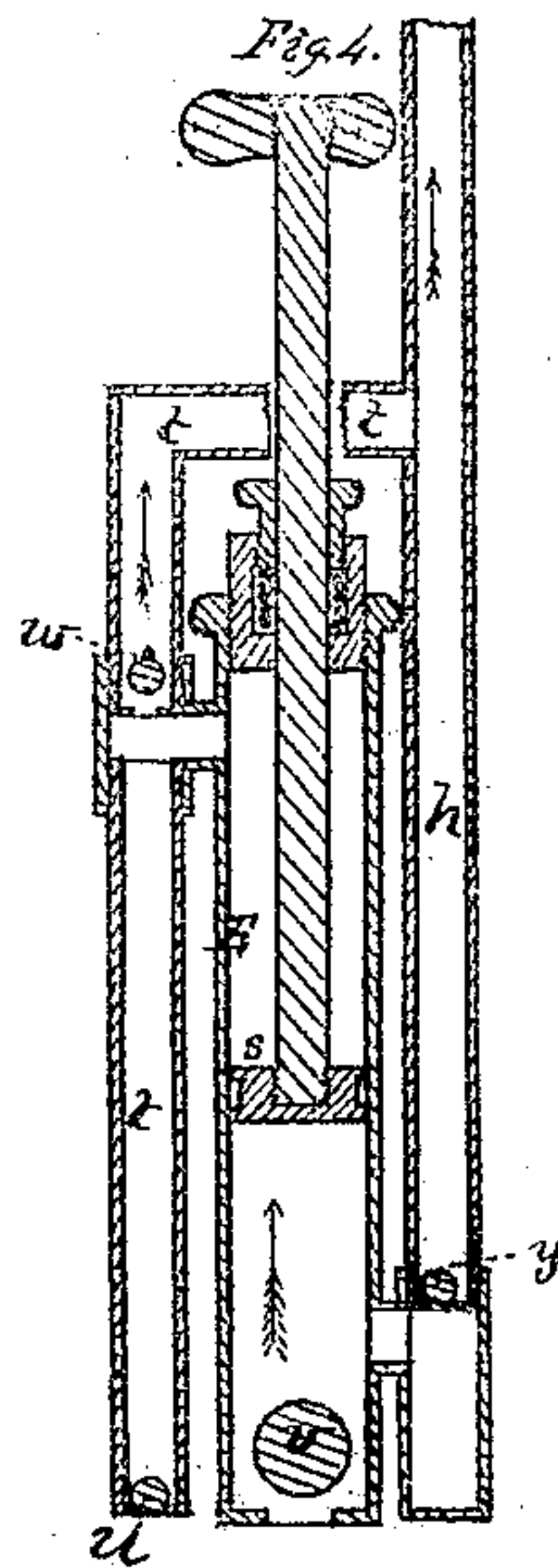
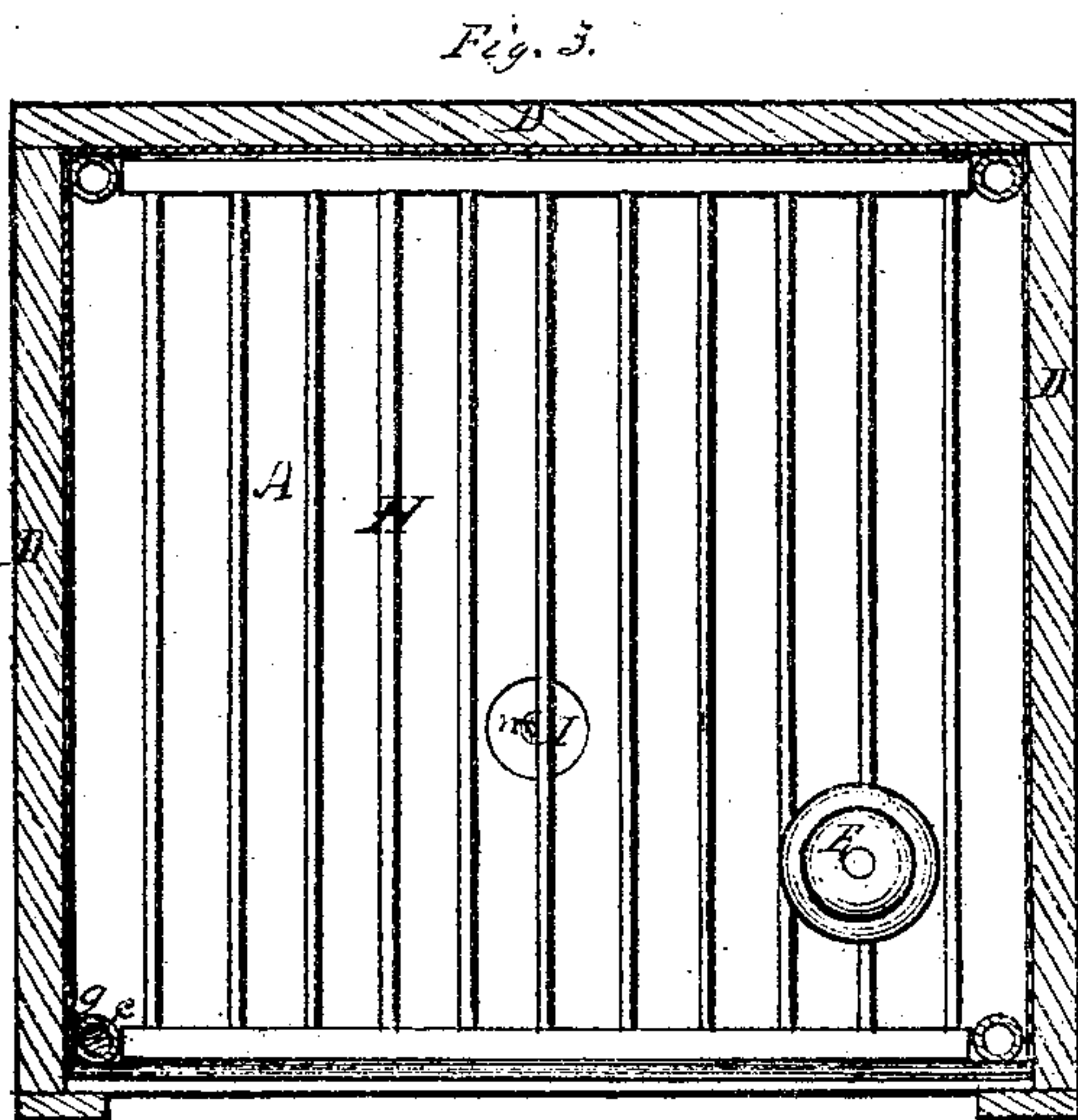
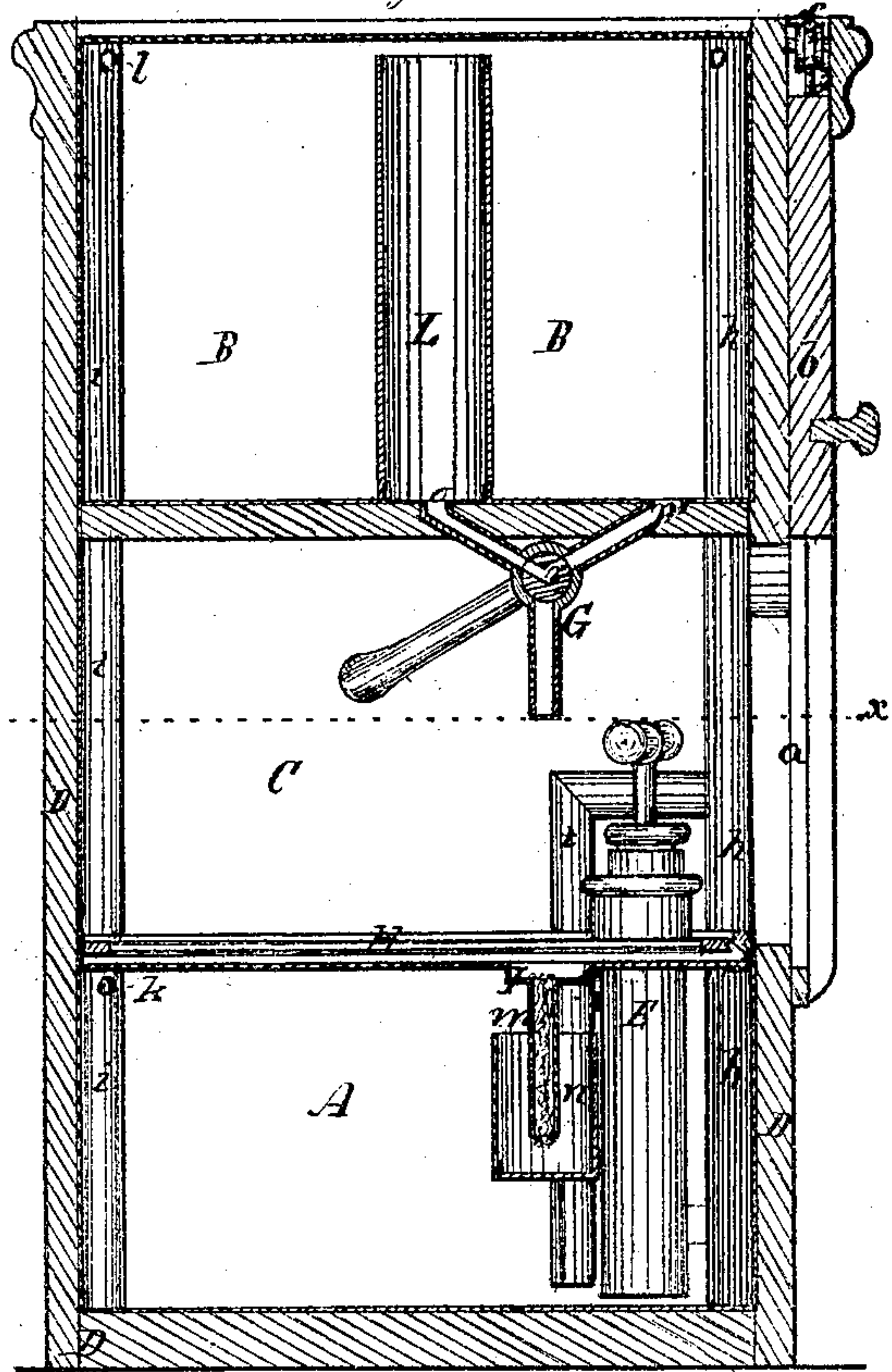
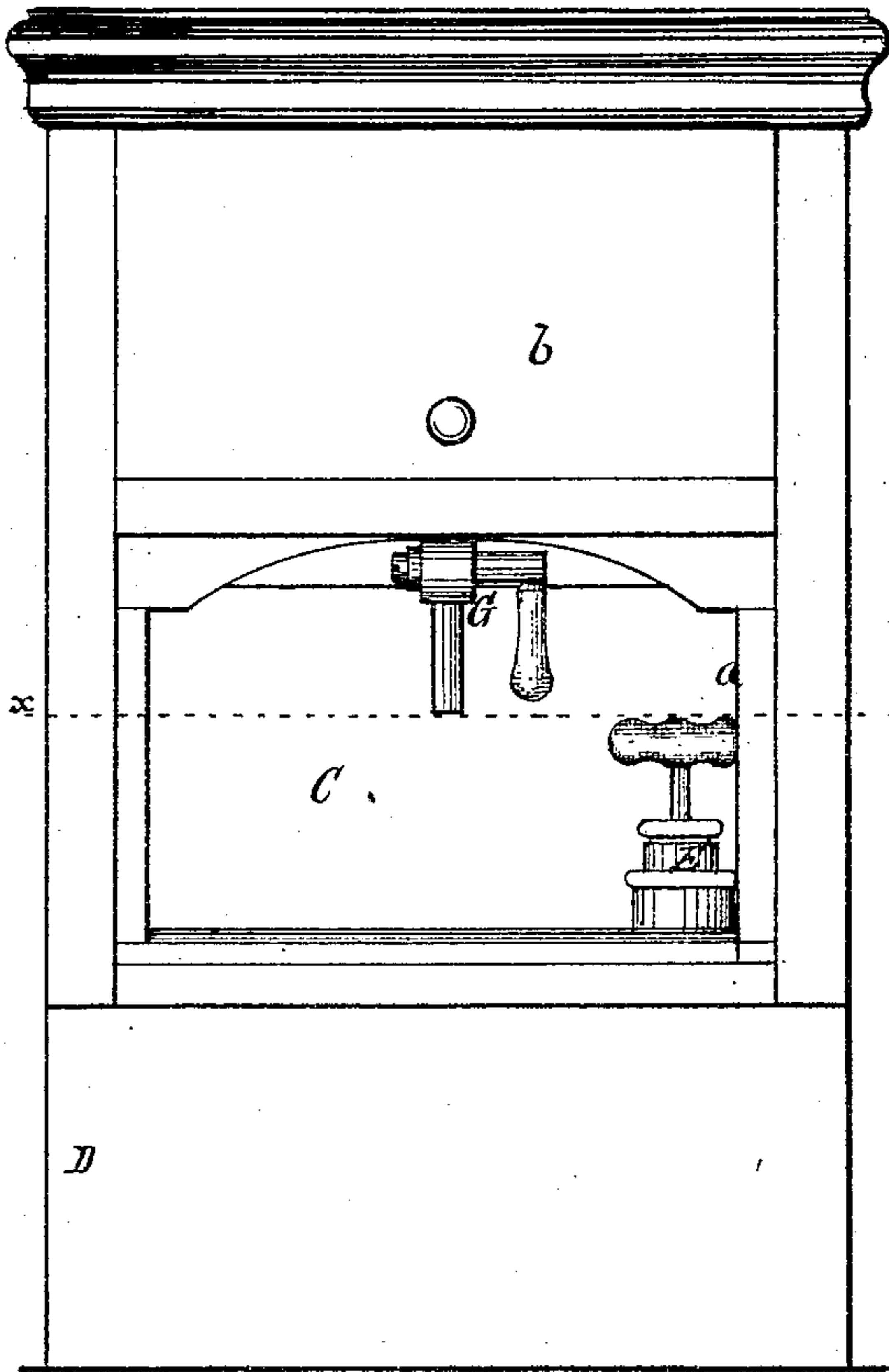


E. F. WILDER.

Apparatus for Containing and Measuring Oil.

No. 130,833.

Patented Aug. 27, 1872.



Witnesses,

S. W. Wood
R. D. Smith

Inventor,

Eli F. Wilder,
By his attorney,
J. S. Brown.

UNITED STATES PATENT OFFICE.

ELI F. WILDER, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN APPARATUS FOR CONTAINING AND MEASURING OILS.

Specification forming part of Letters Patent No. 130,833, dated August 27, 1872.

To all whom it may concern:

Be it known that I, ELI F. WILDER, of Lowell, in the county of Middlesex and State of Massachusetts, have invented an Improved Apparatus for Containing, Drawing, and Measuring Oils and other Liquids; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing making part of this specification—

Figure 1 being a front view of the apparatus; Fig. 2, a central vertical section thereof in a plane cutting from front to rear; Fig. 3, a horizontal section of the same in a plane indicated by the line *x x*, Figs. 1 and 2; Fig. 4, a section showing the construction of the pump used in the apparatus.

Like letters designate corresponding parts in all of the figures.

This invention is a tank, fountain, and closet combined, for holding, drawing, and measuring liquids, especially oils, from which to draw in small, measured quantities, as for filling oilers in factories and machine-shops; and there are several special features of improvement in the same, rendering it efficient, safe, and cleanly, and not liable to waste the liquid or fill it with impurities, all substantially as herein specified. The main part of the apparatus consists in a metallic vessel of suitable shape and of any required size, having three compartments, namely, a close tank, A, at the bottom, to contain the principal part of the oil or other liquid in store; a close-raised fountain, B, at the top in which a portion of the oil or other liquid is kept for immediate use, and from which it can be drawn by its own gravity; and an open space, C, between the said two reservoirs, in which the oil or liquid is drawn into cans or measures.

This principal vessel is inclosed in a case or closet, D, of wood, which may be finished in an ornamental style, but which serves more particularly to shield the metallic vessel, and to shut in the apparatus close when not in use. A special feature of this closet is an entrance, *a*, in front, opening into the open compartment C, and closed by a door, *b*, which slides up and down like a window-sash, and is counterbalanced by a weight connected with it at the top by a cord and pulleys. When this door is raised access is had into the compartment C,

in which is located a pump, E, for raising oil or liquid from the tank or reservoir A into the fountain B; and also a faucet, G, for drawing the oil from the fountain. There is also a grate or strainer, H, at the bottom of this compartment, on which the cans or vessels into which the oil is drawn may rest; and a drip-receiver, I, under the faucet, to catch and transmit to the tank below any oil that may drip from the faucet, or be spilled from the cans or measures filled thereby.

In the construction of the metallic vessel with its compartments and fixtures, tubular posts are secured in the corners, as shown, several of which posts serve double purposes: First, they all serve to stiffen and strengthen the vessel, which is generally to be made of sheet metal; and, in addition to this purpose, common to all, one tube, as *g*, at the left front corner, serves to contain the weight *c*, Fig. 3, which counterbalances the sliding door *b* of the closet, being connected therewith by a cord, *d*, Fig. 2, that passes over pulleys, one, at *f*, being shown in the same figure; another tube, as *h*, in the right front corner, serves as a pump-pipe through which oil or liquid is pumped from the tank A to the fountain B; and a third tube, as *i*, in the rear right corner, serves as an air-tube to transfer air from the fountain to the tank, when displaced by oil or liquid raised from the tank to the fountain, or vice versa, as the liquid is drawn from the fountain. For this use it is only necessary to have apertures *k l*, respectively opening from the tank and fountain into the tube, as indicated in Fig. 2; and, since air must be admitted into the tank and fountain as the oil is drawn therefrom, and these compartments are made perfectly close, so that no vapors may escape therefrom, an inward vent must be allowed. This is connected with the drip-receiver I, so that the drip-oil and the air enter the tank by the same means. My arrangement for this double purpose, as represented in Fig. 2, consists of a tube, *m*, leading downward from the drip-receiver, and filled with a fibrous filtering substance like a lamp-wick; and the bottom of the tube is surrounded by a cup, *n*, which contains always a little oil or liquid that closes and seals the lower end of the tube against the outward escape of air or vapor, but allows air to enter by atmospheric pressure when the fountain above be-

comes exhausted of liquid by drawing from the faucet G. An important feature of my invention consists in a safety-chamber, L, in the fountain B. This holds a small portion of oil—say, a gallon or two—separate from the rest of the fountain, from which no oil can flow into the chamber except through the outlet-passage *o* leading to the faucet G, through another passage, *p*, leading from the main fountain to the faucet, and through a two-way passage, *r*, in the spigot of the faucet. The spigot is so arranged that when it closes the mouth of the faucet it opens a communication between the fountain and safety-chamber through the passages *o p*, (as represented in Fig. 2,) whereby only can the oil flow into the chamber; and when the spigot is turned to draw oil from the chamber it cannot come direct from the fountain, nor can oil flow then from the fountain to the chamber. Hence, if the faucet should by accident be left open, only the small quantity of oil contained in the safety-chamber can run out, and this quantity can always flow through the drip-receiver I into the tank, which should never be filled too full to receive all that can run at one time from the safety-chamber without waste. The pump E is constructed, substantially as shown in the drawing, so as to raise oil or liquid at both the upward and downward stroke of its solid piston *s*. This is effected by means of a separate pipe or passage, *t*, with its inlet-valve *u* connecting with the pump-barrel above the piston to admit water alternately with the inlet-aperture and its valve *v* at the bottom of the pump-barrel, and of a valve, *w*, in a continuation of the pipe *t*, above the pump connection, and

leading into the elevating-pipe or hollow post *h*, the said valve alternating with another valve, *y*, above the passage from the lower part of the pump-barrel into the said elevating-pipe.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the tank A, elevated fountain B, and intermediate drawing compartment C, substantially as and for the purpose herein specified.

2. The combination of the tank A, elevated fountain B, open compartment C, pump E, faucet G, and drip-receiver I, substantially as and for the purpose herein specified.

3. The combination of the air-admitting tube *m*, sealing-cup *n*, and air-transmitting tube *i*, between the tank A and fountain B, substantially as and for the purpose herein specified.

4. The safety-chamber L, in combination with the fountain B and faucet G, substantially as and for the purpose herein specified.

5. The vessel composed of the compartments A B C, when constructed with the tubes or hollow posts in the corners, for the purposes herein specified.

6. The closet D, sliding door *b*, and counterweight *c*, in combination with the compartments A B C, comprising the tank, fountain, and drip-receiver, substantially as herein specified.

Specification signed by me this 28th day of October, 1871.

ELI F. WILDER.

In presence of—

WM. H. ANDERSON,
C. H. CONANT.