

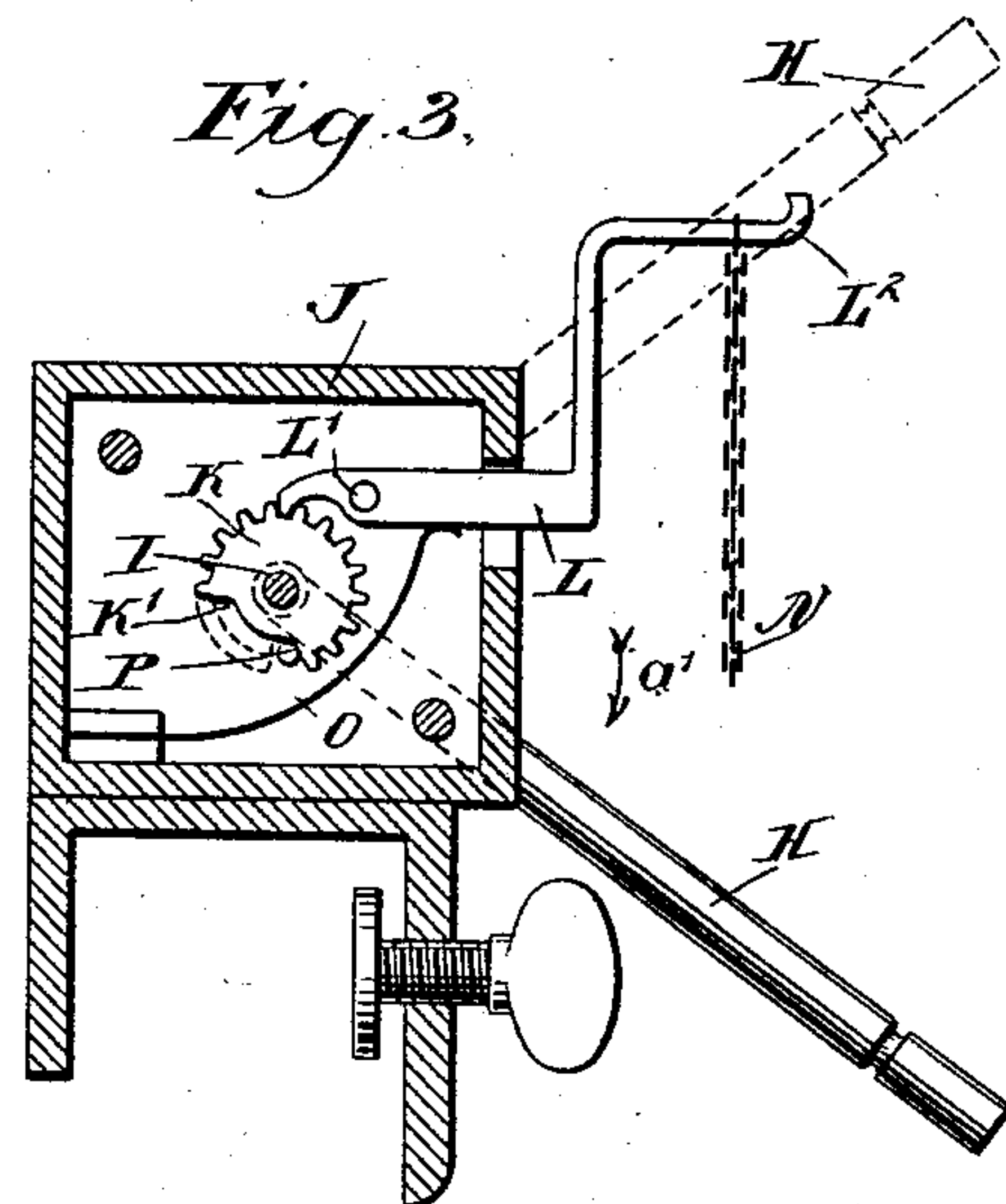
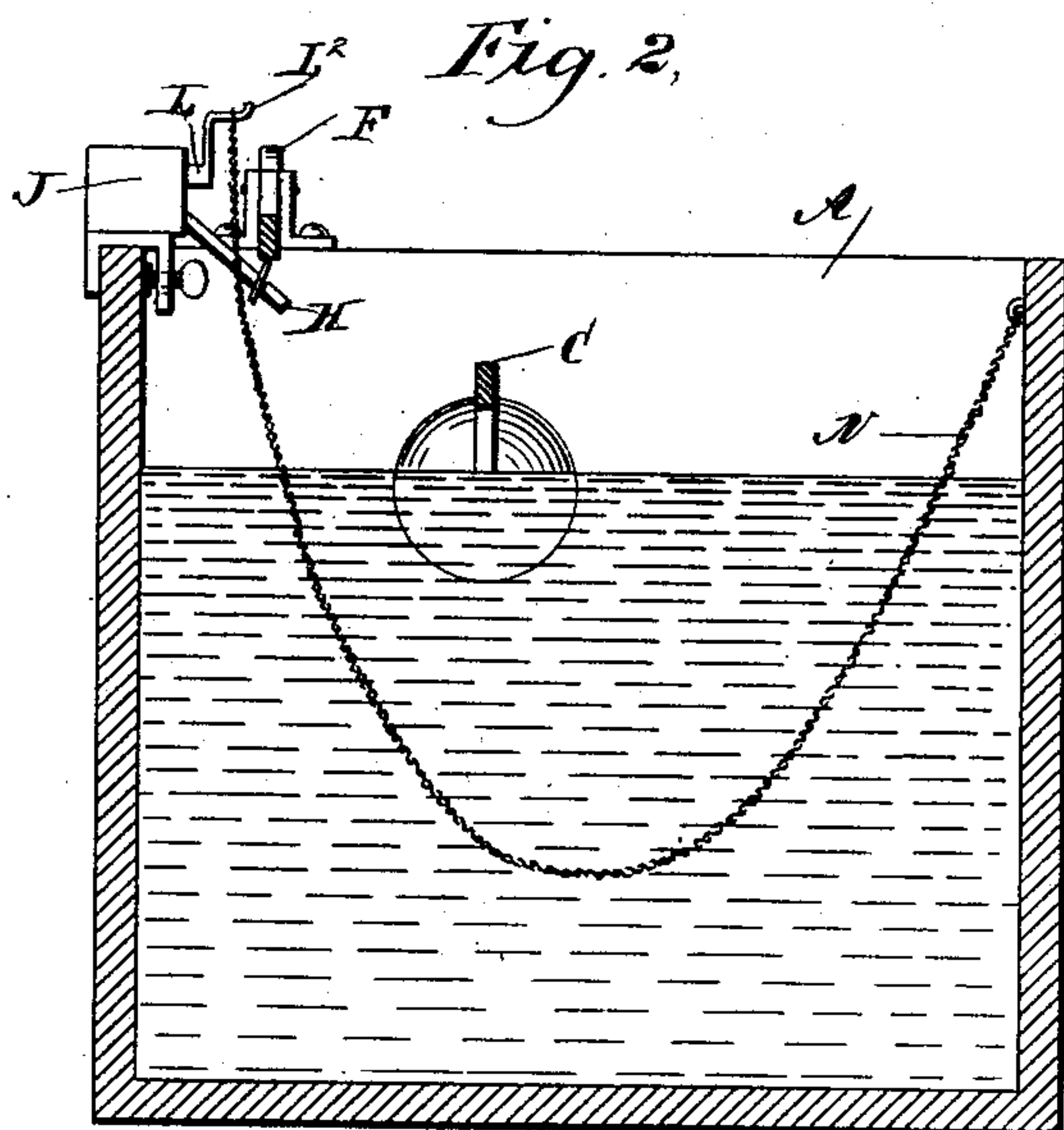
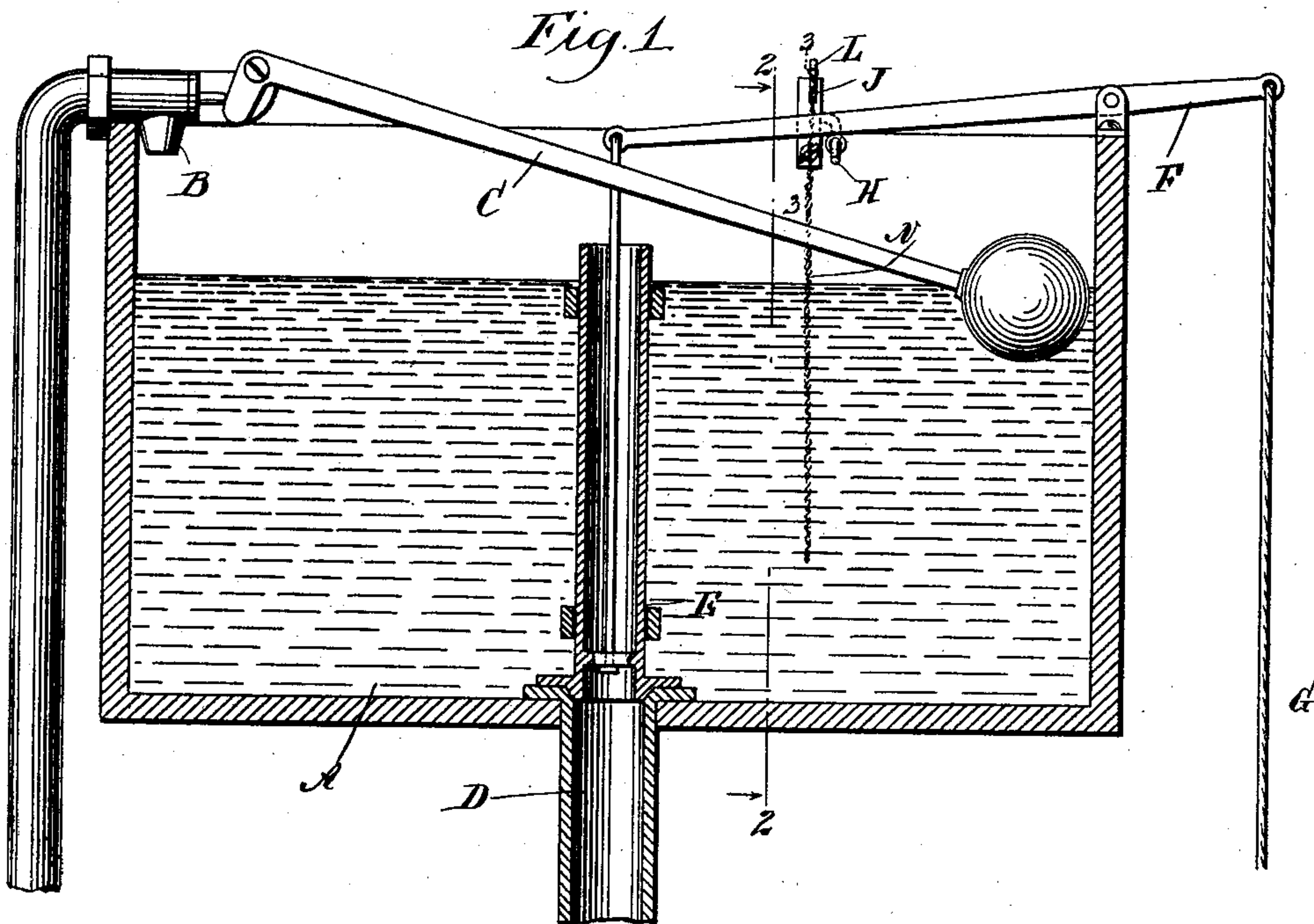
No. 608,485.

Patented Aug. 2, 1898.

C. H. SHEPHERD.
LOCK FOR FLUSHING VALVES.

(Application filed Feb. 12, 1898.)

(No Model.)



WITNESSES:

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LOCK FOR FLUSHING-VALVES.

SPECIFICATION forming part of Letters Patent No. 608,485, dated August 2, 1898.

Application filed February 12, 1898. Serial No. 670,127. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HORATIO SHEPHERD, of the city of New York, borough of Manhattan, in the county of New York and State of New York, have invented a new and Improved Lock for Flushing-Valves, of which the following is a full, clear, and exact description.

The invention relates to locks for flushing-valves such as shown and described in the Letters Patent of the United States No. 594,709, granted to me on November 30, 1897.

The object of the present invention is to provide certain new and useful improvements in flushing-valve locks whereby the lock can be readily applied to any kind of flushing-tank and set to lock the raised flushing-valve lever in position until the tank is empty and the lever is released by the float-lever unlocking the lock.

The invention consists of novel features and parts and combinations of the same, as will be described hereinafter and then pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of a flushing-tank provided with the improvement. Fig. 2 is a transverse section of the same on the line 2 2 of Fig. 1, and Fig. 3 is an enlarged cross-section of the improvement on the line 3 3 of Fig. 1.

The flushing-tank A is provided with the usual water-inlet valve B, controlled by a float-lever C, and at the bottom of the tank is an outlet-pipe D, normally closed by a flushing-valve E, connected to a lever F, provided with a pull cord or chain G under the control of the user of the closet for lifting the valve off its seat, so that the water can pass from the tank into the bowl and flush the same.

Now in order to hold the lever F in a raised position to insure a complete discharge of all the water in the tank in case the user releases the chain G quickly I provide a lock for the said lever F. The latter is for the purpose mentioned connected with an arm H, secured to the outer end of a shaft I,

mounted to turn in suitable bearings in a casing J, clamped or otherwise fastened to the upper edge of one of the sides of the tank, as shown.

On the shaft I within the casing is secured a toothed wheel K, engaged by a pawl L, fulcrumed at L' in the casing and having an extension L² projecting through an opening in one side of the casing J. The outer end of the extension L² is connected with one end of a chain or rope N, hanging in the tank A, the other end being fastened to the side of the tank opposite that on which the casing is clamped, so that the chain is in the path of the float-lever C, and the latter exerts a pressure on the chain when swinging into a lowermost position upon emptying the tank of its contents. A spring O presses on the pawl L to hold the same normally in mesh with the toothed wheel and keep the latter locked against rotation in the direction of the arrow a'. A portion K' of the wheel K is without teeth, and a fixed pin P extends into this portion to limit the turning motion of the wheel K and the swinging motion of the arm H.

When the several parts are in the position shown in the drawings and the user pulls the chain G to impart a swinging motion to the lever F, then the valve E is lifted off its seat and the water runs out of the tank through the pipe D to flush the bowl. The lever F in swinging upward at its inner end carries along the arm H, which turns the shaft I and wheel K in the inverse direction of the arrow a', so that the pawl L glides over the teeth. As soon as the swinging motion of the lever F ceases, the pawl L, by the action of the spring O, drops into a corresponding tooth of the wheel K to prevent the same from rotating in the direction of the arrow a', thus holding the wheel K, the arm H, and the lever F in a locked position no matter how much or how little the valve E is unseated by more or less pull on the lever F. Thus the valve E cannot return to its seat, and the water runs out of the tank even if the operator immediately releases the pull rope or chain G after having given but a short swinging motion to the lever F. As the tank empties the float-lever C swings downward and finally opens the valve at the time the lever in its downward

movement comes in contact with the chain N and pulls downward on the same to swing the pawl L out of mesh with the toothed wheel K. The latter is thus released or unlocked, and the arm II, with the overbalanced inner end of the lever F on the top of the arm, swing downward by their weight until the valve E is again seated and further outflow from the tank stopped. The turning of the wheel K is limited by its stop-pin P, as shown in Fig. 3. The tank now fills with water through the open valve B until the float on rising causes a shutting off of the supply. The several parts are then again in a normal position, the tank being filled with water and ready for a second flushing.

Now it is evident that no matter how slight a pull is given to the chain or rope G the lever is locked in place by the lock until a proper flushing has been accomplished. The lock is

then again unlocked by the action of the float-lever, as described.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

A lock for flushing-valves, comprising a lever-arm arranged to connection with a flushing-valve lever, a shaft carrying the said arm, a toothed wheel on the said shaft, and a spring-pressed lever-pawl for engaging the said wheel and locking the latter against rotation in one direction, the said lever-pawl being adapted to be actuated from the float-lever of the flushing-tank to unlock the wheel and the lever-arm, substantially as shown and described.

CHARLES HORATIO SHEPHERD.

Witnesses:

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