

D. P. WEIR.
Water-Meter.

No. 196,958.

Patented Nov. 6, 1877.

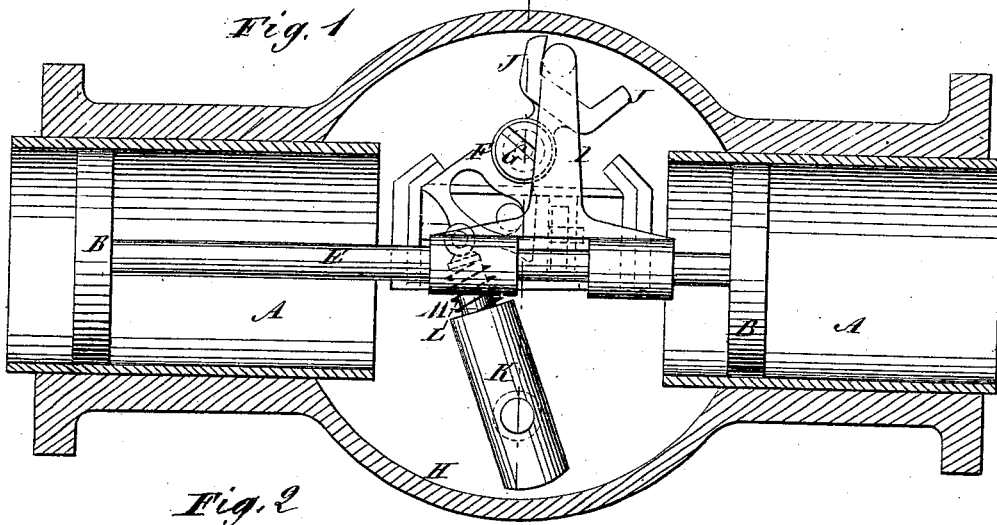


Fig. 1

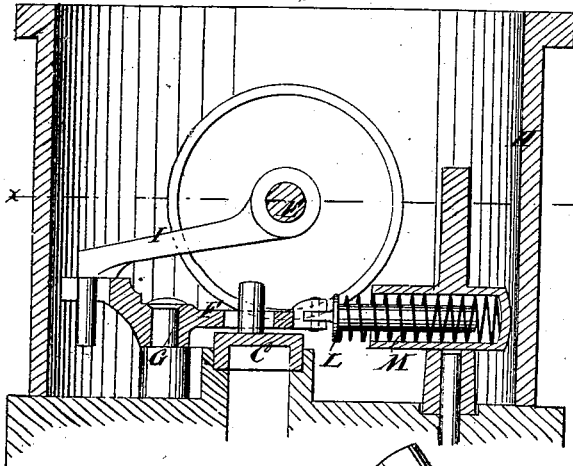


Fig. 2

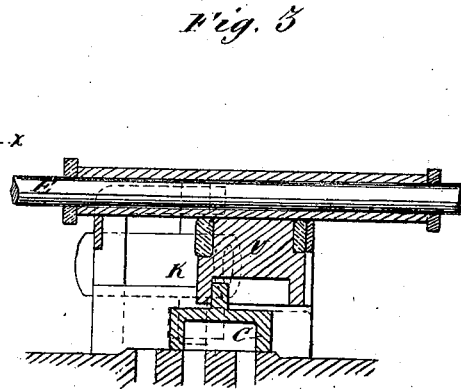


Fig. 3

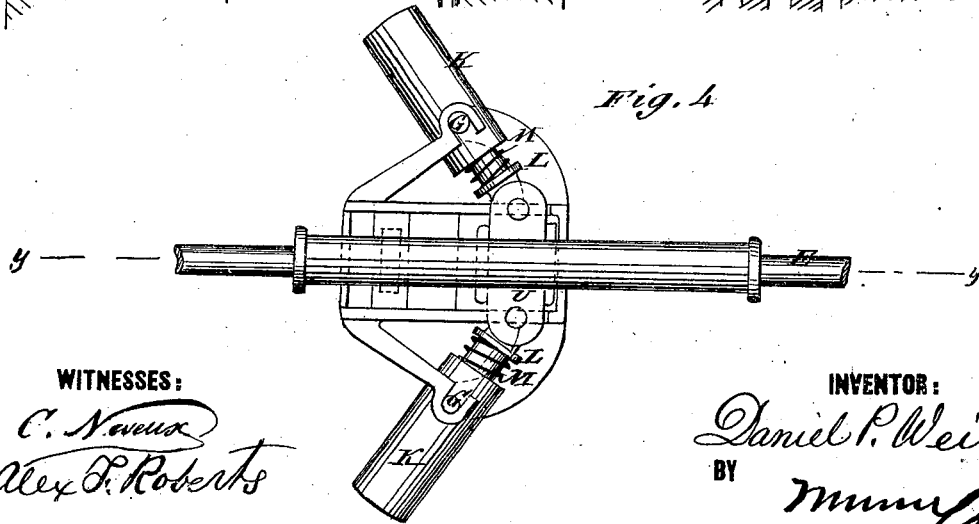


Fig. 4

WITNESSES:

C. Navon
Alex. S. Roberts

INVENTOR:

Daniel P. Weir
BY *Munn & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

DANIEL P. WEIR, OF SALEM, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND JOHN JACKSON, OF SAME PLACE.

IMPROVEMENT IN WATER-METERS.

Specification forming part of Letters Patent No. **196,958**, dated November 6, 1877; application filed December 11, 1875.

To all whom it may concern:

Be it known that I, DANIEL P. WEIR, of Salem, Essex county, Massachusetts, have invented a new and Improved Valve-Gear for Fluid-Meters, of which the following is a specification:

My invention relates to a toggle-jointed spring-lever for working the valve by the recoil of the spring, which is compressed by the piston of the engine in the fore part of its movement, and escapes after passing the center, and then acts on the valve; and the invention consists of a contrivance whereby the same is geared or connected with the valve more simply, cheaply, and effectively than heretofore.

Figure 1 is a horizontal section of a meter with my improved valve-gear, the section being taken on line *x x*, Fig. 2; and Fig. 3 is a longitudinal sectional elevation of Fig. 4 on line *y y*; and Fig. 4 is a plan of a contrivance for making both members of the toggle apparatus with springs.

Similar letters of reference indicate corresponding parts.

A represents the cylinder, B the pistons, and E the piston-rod, of a meter, of which C is the valve, which I propose to connect directly with the lever F by having the lever arranged to swing alongside or over the valve, the said lever being located and fixed on its pivot G in the valve-chamber H, in suitable re-

lation to the valve to be thus directly connected with it, whereby the connection is effected without having to work through a stuffing-box.

The lever F is worked by the arm I, which plays between the prongs J of its forked end. K is the piston-tube; L, the piston-rod, and M the spring forming the other member of the toggle contrivance, and being that portion by which the valve is shifted after the lever passes the center.

I also propose to have both members of the toggle constructed with the spring contrivance, which I accomplish by having a double joint formed with a block, O, which the piston-rod acts on, and which acts on the valve; but the relative arrangement with the valve will be the same, as the block will move along with the valve the same as the lever F does.

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

The combination of valve C, the end-forked lever F, pivoted at G in the valve-chamber, and operated by an arm, I, the pivoted tube K, rod L, and spring M, the whole movement being thus on the inside of meter, as and for the purpose specified.

DANIEL P. WEIR.

Witnesses:

LINA GOODELL,
CHARLES COUSINS.