

No. 155,762.

Patented Oct. 6, 1874.

Fig.1.

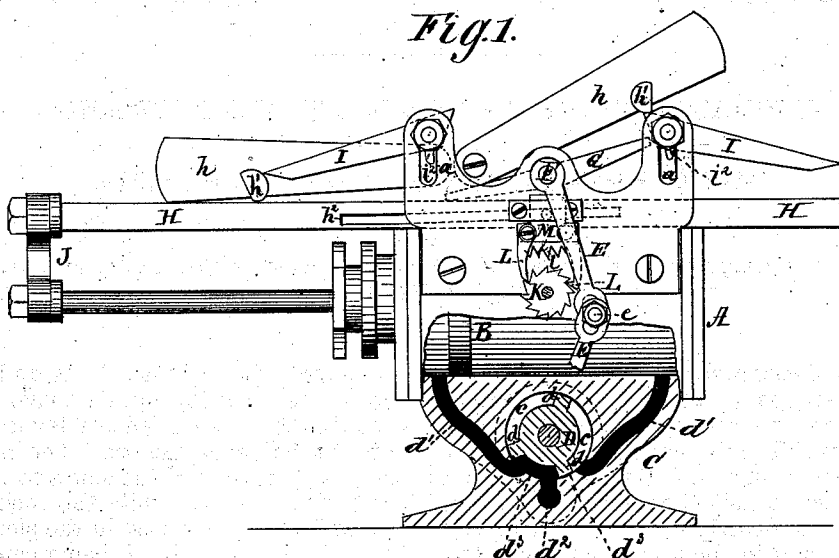
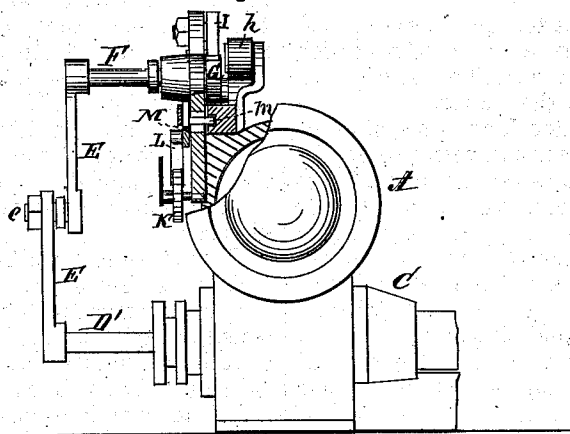


Fig. 2.



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IMPROVEMENT IN WATER AND GAS METERS.

Specification forming part of Letters Patent No. **155,762**, dated October 6, 1874; application filed September 2, 1874.

To all whom it may concern:

Be it known that I, THOMAS M. SHANK, of St. Albans, in the county of Kanawha and State of West Virginia, have invented a new and Improved Water and Gas Meter; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a side elevation, partly in section; Fig. 2, an end view, also partly in section.

The invention relates to liquid-meters; and consists in certain features of novelty, which will be hereinafter fully described, and subsequently pointed out in the claims.

A represents a cylinder, having a piston, B, and whose exact capacity has been previously measured, and is taken as the unit or half-unit of quantity. C represents a chest, in which is located the rocking valve D, having wings d d . The liquid is received and transmitted to cylinder through the channels d^1 and arc-spaces c between the wings d d , while it is discharged through channel d^2 and arc-space c . D' is the valve-shaft, that connects, by arms E E and pin e , with one end of a shaft, F, that has, at its other end, a lever, G. Alternate pressure upon the opposite arms of this lever reverses the valve and causes the liquid to enter and discharge first on one side of the piston and then on the other, the wings d covering a seat, d^3 , and channel d^1 , successively, and bringing channels d^1 d^1 alternately into communication with outlet or exhaust d^2 . H is a slide-bar, having the pivoted, weighted, and reversed arms h h , while on each of these arms

is a curved stud, h^1 , that slides up the incline I until it reaches the apex i above the pivot, when it falls upon one end of lever G and operates the valve mechanism. The incline I has a stop, i^2 , working in the slot a to prevent its being tilted too far, while the inclines' pivot may be lowered or raised in the slot to adjust the incline. The slide H, being connected by a cross-bar, J, with the piston, is operated by it, and cannot, therefore, fail to actuate the valve at precisely the proper moment. K is a ratchet, placed on the same shaft with a suitable dial-plate and pointer, while L L' are the pawls—one that operates it and the other that serves as a detent. These pawls are connected by a spring, l , and pivoted to a vertically-sliding plate, M. The latter has a pivot, m , that works in a double-inclined slot, h^2 , of the bar H, whereby the pawls move the pointer-shaft and indicate a point or additional unit of notation—one for every two measures discharged.

Having thus described my invention, what I claim as new is—

1. The means for rocking the valve-shaft D', consisting of the arms E E, connected by pivot e , and the shaft F, having vibratory lever G, substantially as shown and described.
2. The combination of elements for vibrating the lever G, consisting of the slide-bar H, having two reversed pivoted arms, h h^1 , and the inclines I I, arranged substantially as shown and described.

THOMAS M. SHANK.

Witnesses:

C. D. HEREFORD,
C. V. HANSFORD.