A. C. AUSTIN.
Oscillating Water-Meter.

No. 203,812. Patented May 21, 1878.

FIG. 1

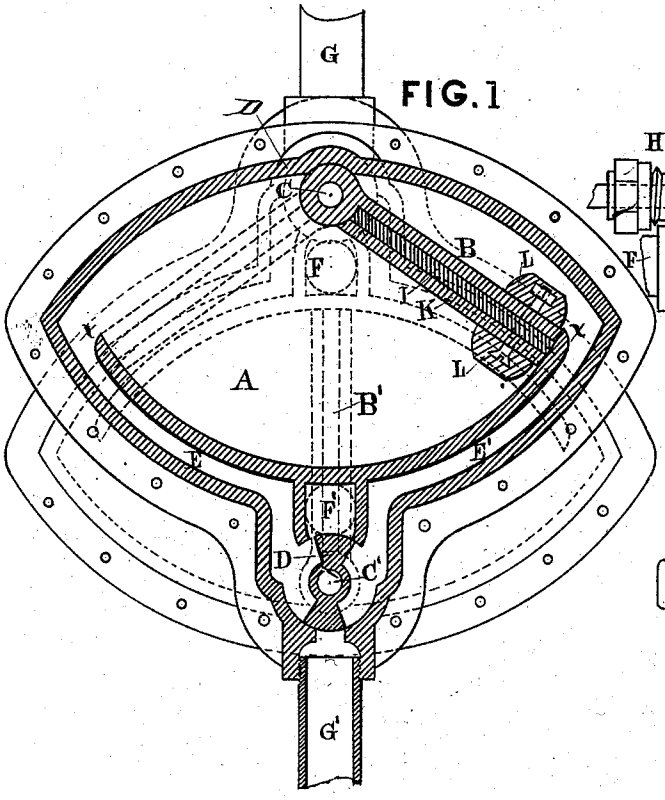
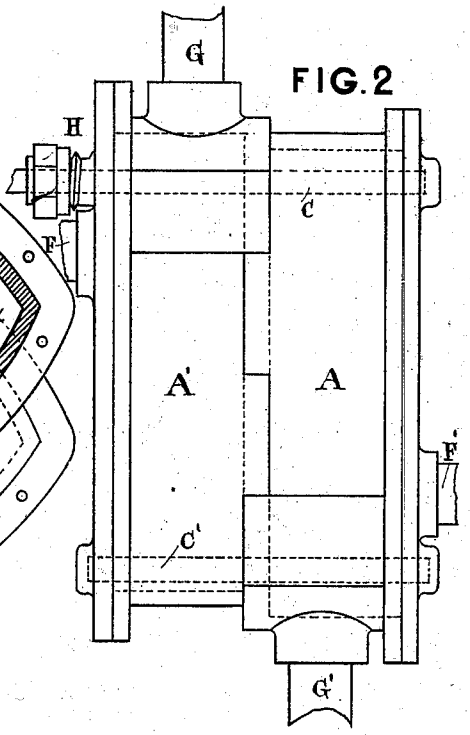


FIG. 2



WITNESSES

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ALVAH C. AUSTIN, OF OAKLAND, CALIFORNIA, ASSIGNOR TO ANTHONY CHABOT, OF SAME PLACE.

IMPROVEMENT IN OSCILLATING WATER-METERS.

Specification forming part of Letters Patent No. **203,812**, dated May 21, 1878; application filed November 14, 1877.

To all whom it may concern:

Be it known that I, ALVAH C. AUSTIN, of Oakland, Alameda county, State of California, have invented an Improved Water-Meter, of which the following is a specification:

This invention consists in the combination of two chambers fitted with close-fitting partitions, which are, with the spindles they are secured to, vibrated by the passage of water in and out of the chambers, as controlled by the movements of certain valves also secured upon the spindles mentioned, the vibration of the partition in one chamber serving to vibrate the valve which controls the admission and escape of the water from the other chamber. One of the spindles, being passed through the side of the chamber, connects with a suitable registering device, which, like ordinary meters, keeps a record of each double vibration, thereby registering the quantity of water passing through the meter.

In the accompanying drawings, Figure 1 is a sectional elevation of my device, fully illustrating the principle of the invention. The outlines of the forward flange and bolt-holes are added to this figure, though correctly they would not show in a sectional view. Fig. 2 is a side view.

In Fig. 1, A is the chamber in which the partition B vibrates, from *x* to *x* with the spindle C, to which it is secured, as the water is admitted to or escapes from one side to the other. D is the valve guiding the water to and from the chamber A. E E′ are passages, alternately serving to admit the water to, and exhaust it from, the chamber, as the position of the valve D shall connect them with the exhaust or escape pipes F F′ or supply-pipes G G′.

The spindle C, Fig. 2, will be seen to pass out of its chamber through a stuffing-box, H. Here it will connect, as before suggested, with any suitable registering device, which I need not describe, for it does not, in itself, form part of my invention, though necessarily combined therewith.

The parts described above are all duplicated, one set in each chamber. The partition B, in full lines, operates the valves controlling the water in the chamber A′ behind it, while the partition B itself answers to the movement of the valve D′, which is fast upon the spindle C′ of the partition B′. (Shown in dotted lines.)

It will be observed that the supply and escape pipes are shown separated in Fig. 2. They are, however, to be connected and flow into one common pipe—that is, there will be one pipe for the supply and one for the escape, each branching into two parts, where they connect with the separated compartments of the meter. It may, however, be arranged to provide a second set of passages parallel with the passages E E′, which may connect together, and in common supply and exhaust both compartments, as the pipes herein described do. The principle would be the same in both cases; but the meter would have a neater appearance with cored-out passages, from which one induction and one eduction connection would be made instead of the four connections, as shown.

I will not elaborately describe the manner of arranging these second passages, for any mechanic could arrange them to suit himself. The pipe-connections fully cover my idea, and it is sufficient that I have described them.

As a means of making the partitions B B′ fit closely in their respective chambers, so as to avoid leakage, I propose to fit them with leather or rubber packings; or suitable metallic packing may be devised. However, as there will be no pressure upon the wearing-surfaces, the packing may be dispensed with, if extreme accuracy of measurement is not required. The packing shown in Fig. 1 is simple and effective.

A piece of rubber or leather, I, is secured to the face of the partitions B B′, and a follower-plate, K, fastened by screw-bolts placed over it. By screwing up the bolts the edges of the packing will be pressed out against the sides of the chamber, and a comparatively tight joint made.

The cushions L may be attached to the partitions B to relieve any shock that might occur under heavy pressures. They are made of rubber.

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

The combination of the two vibrating partitions B B′, operating within the chambers A A′, each partition by its vibration giving motion to the valve controlling the vibration of the adjoining partition by admitting the water to and discharging it from their respective chambers on either side of the partitions alternately, a registering device being suitably applied, as and for the purpose herein described.

ALVAH C. AUSTIN.

Witnesses:
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