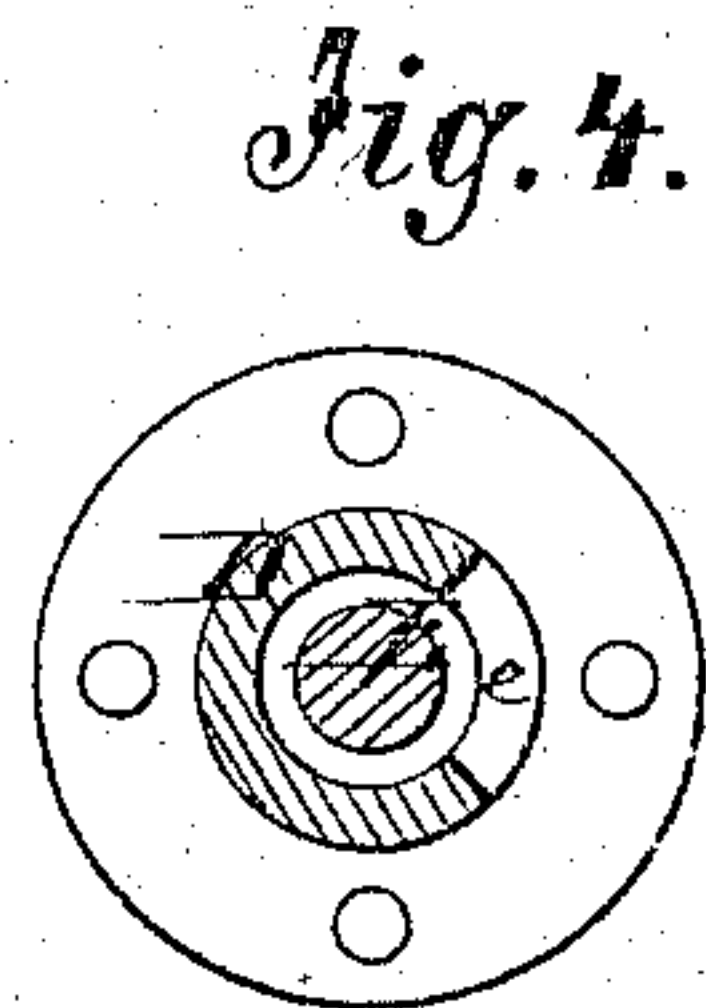
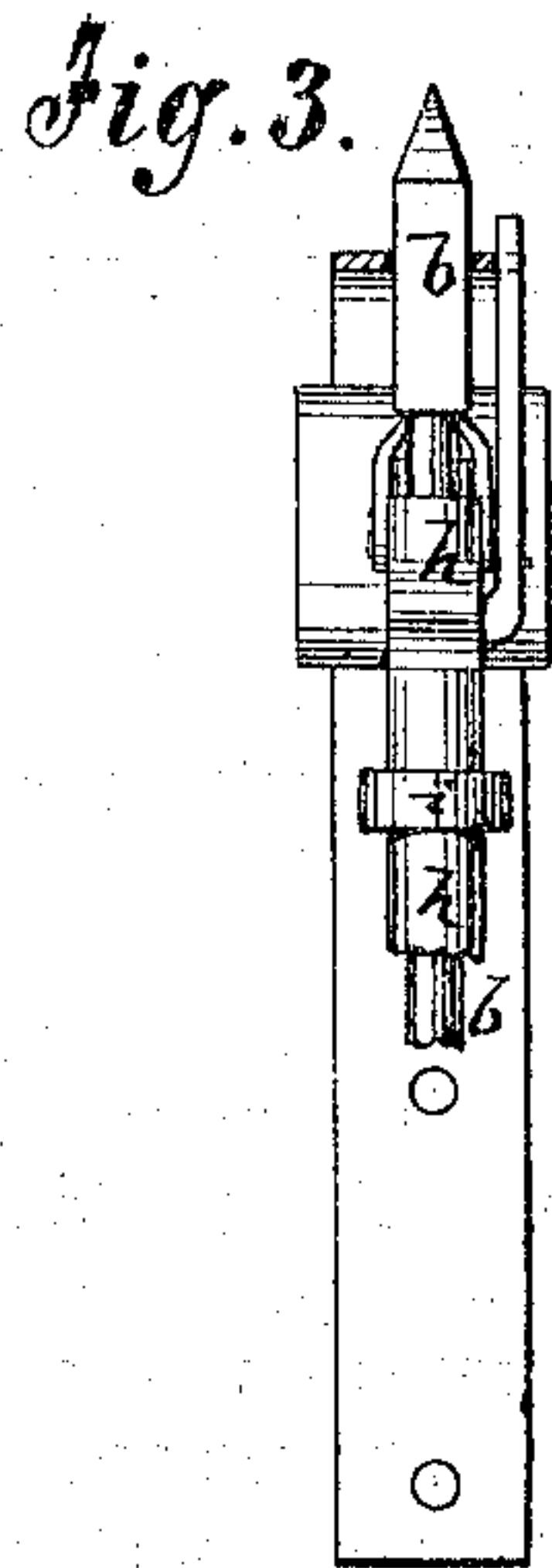
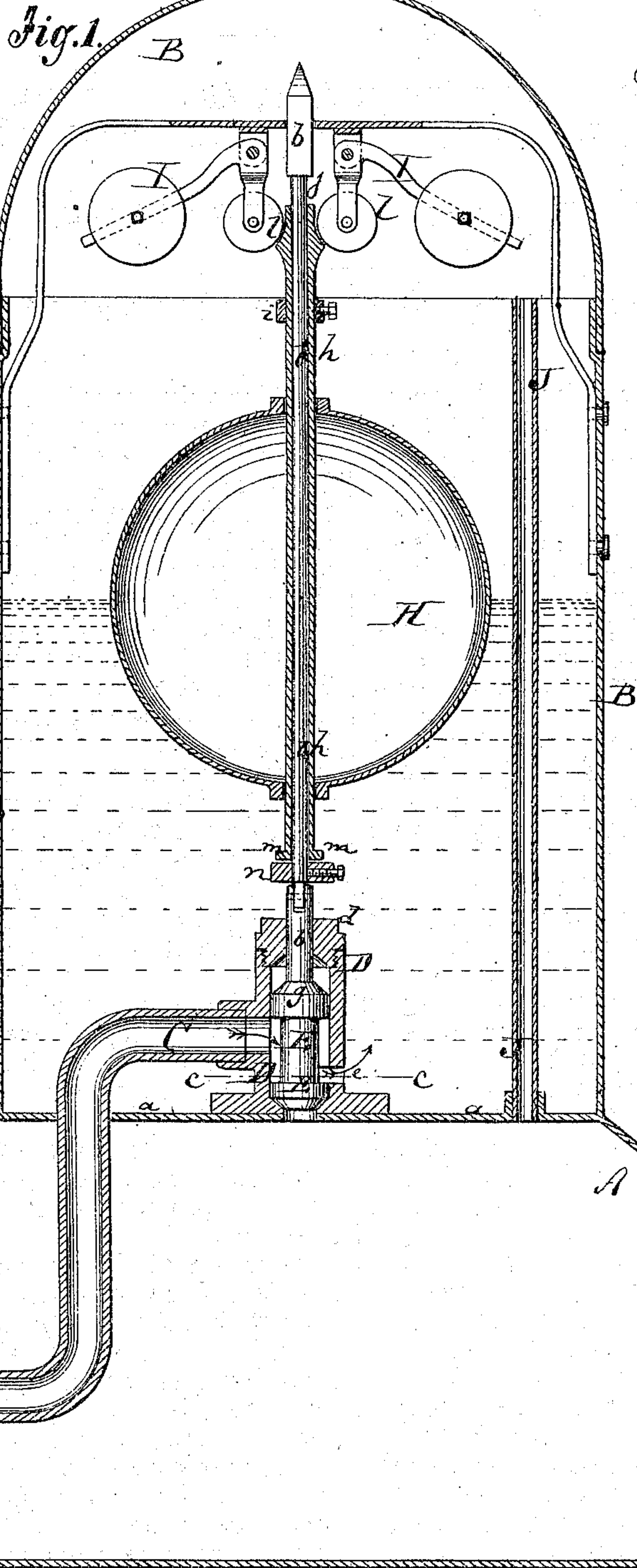
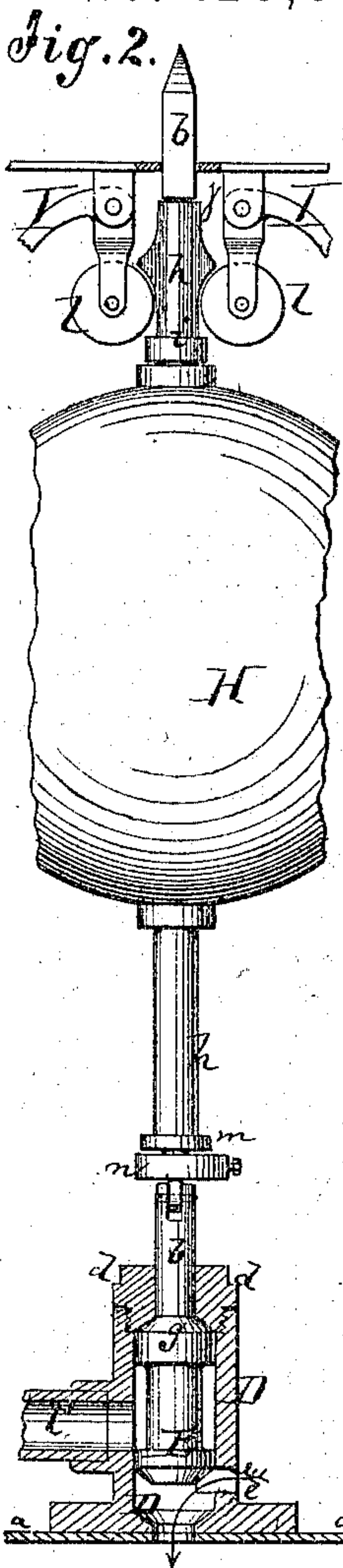


H. OLNEY.  
Improvement in Water-Meters.

No. 126,981.

Patented May 21, 1872.



Witnesses:

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# UNITED STATES PATENT OFFICE.

HEZEKIAH OLNEY, OF NEW YORK CITY, ASSIGNOR TO HIMSELF AND  
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## IMPROVEMENT IN WATER-METERS.

Specification forming part of Letters Patent No. 126,981, dated May 21, 1872.

Specification describing a new and Improved Water-Meter, invented by HEZEKIAH OLNEY, of New York city, in the county and State of New York.

Figure 1 represents a vertical central section of my improved water-meter. Fig. 2 is a detailed sectional side view of its inner parts. Fig. 3 is a detail side view of the upper part of the recording rod. Fig. 4 is a transverse section on the line *c c*, Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to a new water-meter which will operate under suitable pressure without reducing the power of flow, and correctly measure and record the quantity flowing through it in a continuous stream. The invention consists in making the meter in two compartments, one for receiving, the other for discharging the liquid, so that from the latter vessel the water may flow continuously.

A in the drawing represents the lower or discharging, B the upper or receiving, vessel of my improved meter. C is the supply-pipe leading from a suitable reservoir to a tube, D, that projects from a partition, *a*, into the upper vessel, *a* being the partition or wall between the two vessels A and B, which are of suitable style and shape. The pipe C which conveys the water to the tube D enters the latter at the side, as shown. A valve, E, is contained within the tube D and connected with a valve-stem or rod *b*, that reaches up to or through the top of the vessel B. The rod *b* passes through a suitable packing, *d*, with which the upper end of the tube D is closed. The lower end of the same tube is open to the vessel A. Above the partition *a* is an aperture, *e*, in the side of the tube D. When the valve E is down on its lower seat, as in Fig. 1, the aperture *e* is open, and water will flow from C directly into the vessel B, the communication between B and A being closed. When, however, the valve is raised, as in Fig. 2, the communication between B and C will be interrupted, while that between B and A is opened, so that water will flow into A, thence to be drawn through a suitable pipe or faucet,

F. The valve, it will be seen, is double; that is to say, it has an upper disk, *g*, equal in diameter to the main lower part. This is for the purpose of keeping it balanced, so that the water from C cannot force the valve down when in position of Fig. 2. Above the tube D is fitted around the rod *b* a loose tube, *h*, around which a float, H, is placed to slide loosely up and down. When the water has nearly filled the vessel B to the measuring height, the float H will be elevated against a collar, *i*, of the tube *h*, and raise said tube against a shoulder, *j*, of the rod *b*. Then the rod will be raised and with it the valve, to prevent further flow of water into B, but start the discharge into A. Friction rollers *l l*, hung in weighted or spring levers *I I*, bear against the tube to hold it elevated, as can be seen in Fig. 2. When the water has nearly all escaped from B the descending float will bear on a collar, *m*, of the tube *h*, and draw the same down, until finally the tube strikes a shoulder, *n*, of the rod *b*, and thereby carries down the rod and with it the valve into the position shown in Fig. 1. The same rollers *l* hold the tube down, as in Fig. 1.

The amount of water to be measured each time can be regulated by adjusting the collar *i* on the tube *h*, to which it is fastened by a set-screw.

By means of the tube *h* the power of the float is gathered or collected, to be finally applied with full effect for raising or lowering the rod *b* and valve, and absolute certainty of operation is obtained.

J is an air-tube projecting from the partition *a* to the upper part of the vessel B, above the highest water-line in the same. It serves to conduct the column of air contained in the apparatus to the upper or lower vessel, wherever it may be required, it being preferable to have the apparatus closed air-tight. In place of the tube J an annular air-space, may be formed next to the inclosure of the vessel B, by an upright continuous plate. The upper end of the rod *b* is connected with a suitable receiving mechanism for indicating the number of motions.

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

A water-meter provided with receiving and discharging vessels A B, having the intermediate partition *a*, in combination with valved tube D having a supply-pipe C and aperture

*e*, and the air-tube J, all constructed and arranged as and for the purpose described.

HEZEKIAH OLNEY.

Witnesses;

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