

H. J. Walters,

Liquid Measure.

No. 87,745,

Patented Mar. 9, 1869.

Fig. 3.

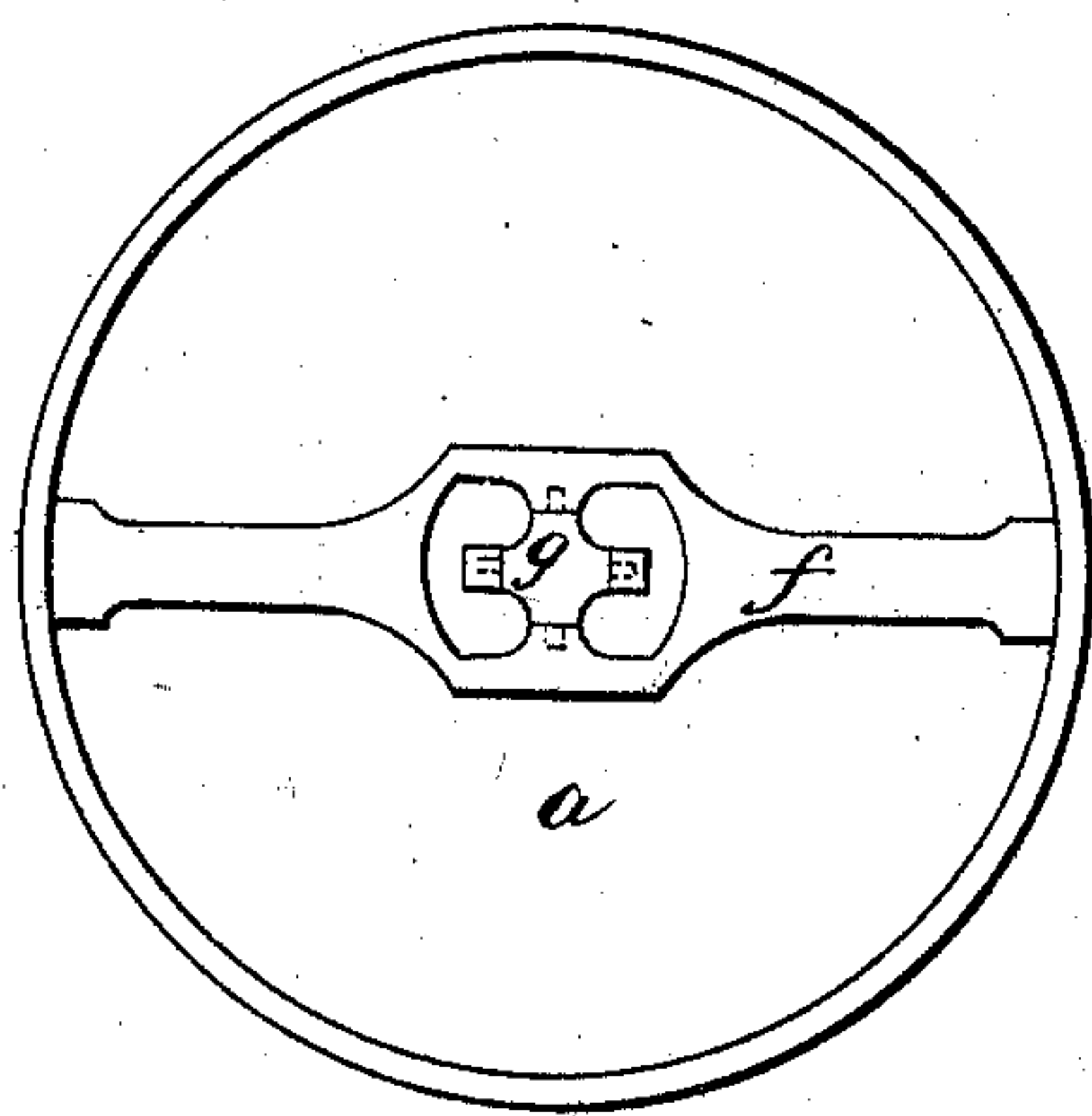


Fig. 1.

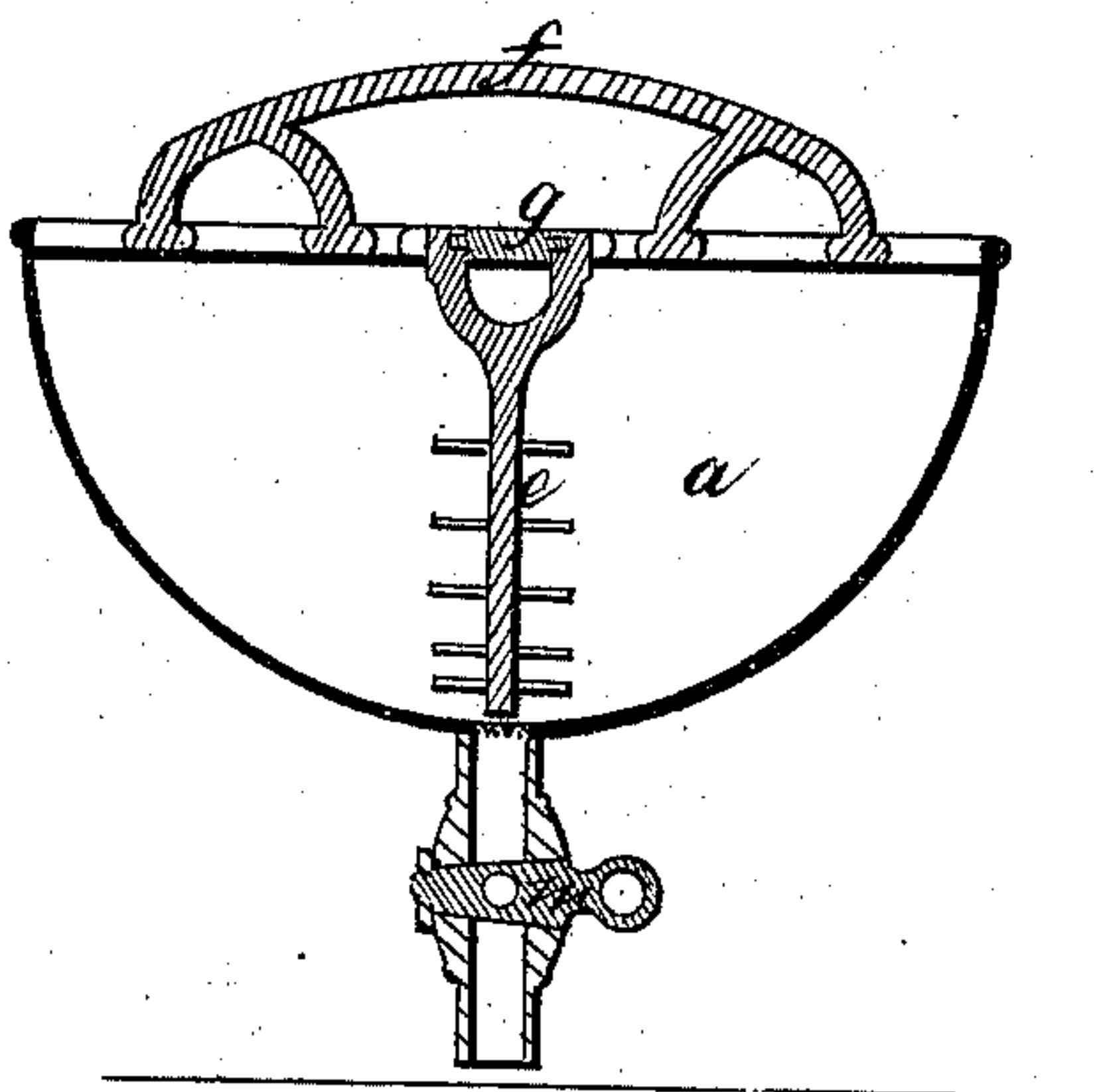
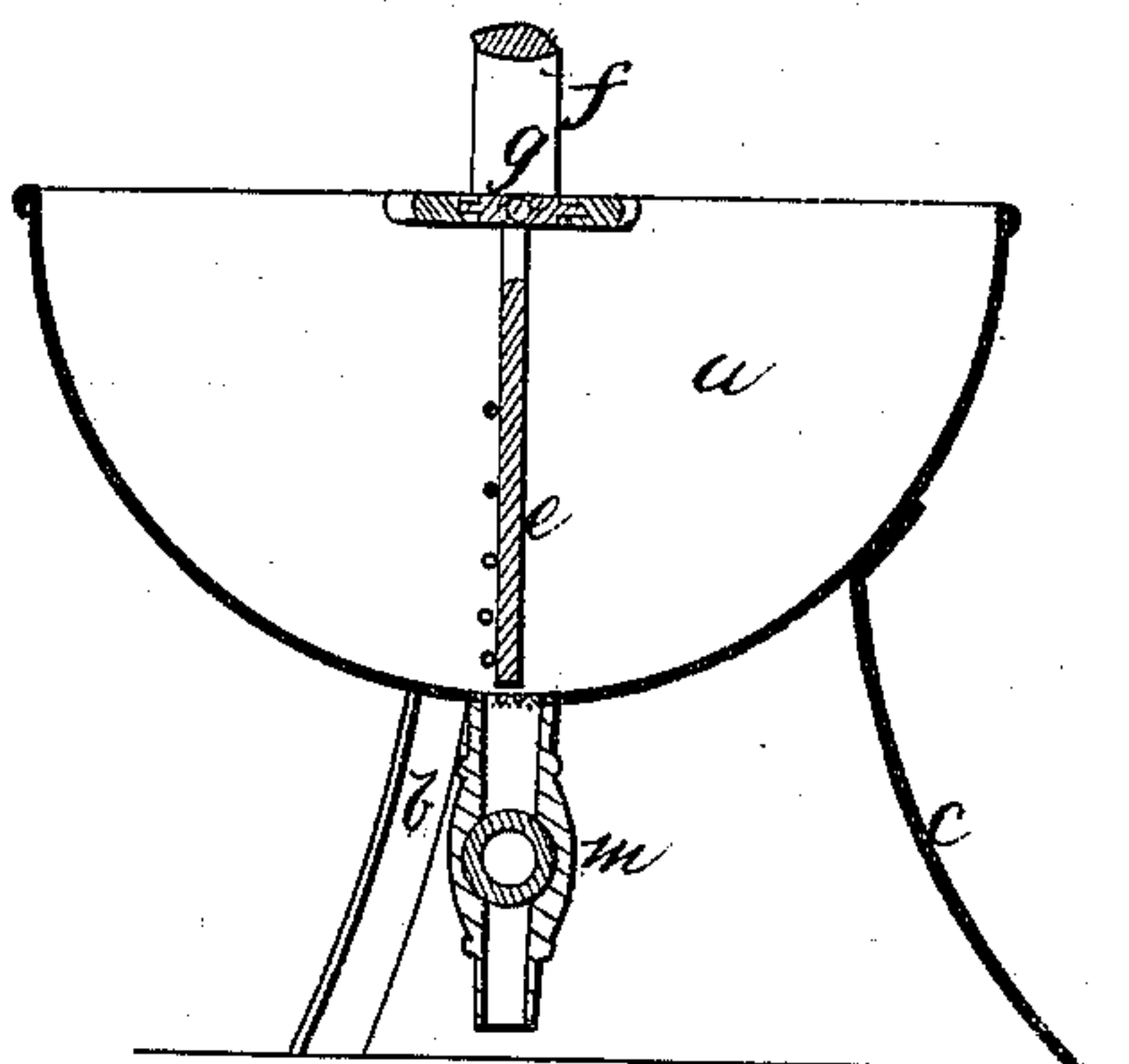


Fig. 2.



Witnesses

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HERMAN J. WOLTERS, OF SALEM, MASSACHUSETTS.

Letters Patent No. 87,745, dated March 9, 1869.

IMPROVEMENT IN MEASURING-FUNNEL.

The Schedule referred to in these Letters Patent and making part of the same.

To all to whom these presents shall come:

Be it known that I, HERMAN J. WOLTERS, of Salem, in the county of Essex, and State of Massachusetts, have made an invention of a new and useful Implement, Combining in itself a Tunnel and Measure; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the accompanying drawings, making part of this specification, and in which—

Figures 1 and 2 are vertical and transverse sections, and

Figure 3, a plan of the said invention.

This invention relates to means for combining, with a tunnel for guiding the flow of liquids, a device for measuring accurately the amount of liquid to be passed through such tunnel, and consists in the employment of a semispherical bowl or vessel, provided with a discharging-faucet, and with a pendulous measuring-rod, suspended by a universal joint within it, from a cross-bar or handle, so arranged that the point of suspension of such rod shall be the centre of the sphere of which the bowl forms a part, in manner and for the purpose as hereinafter explained.

In the drawings above mentioned as illustrating my invention—

a denotes a bowl or vessel, made of sheet-metal, or other suitable material, supported preferably upon a tripod, or legs, *b c d*, in order to maintain it at some altitude above the floor or table upon which it may rest, although, if desirable, these legs may be dispensed with.

The bowl *a* is a portion of a sphere in form, preferably about semispherical, and has at its bottom a discharging-faucet or valve, *m*, for regulating the flow of liquid contained in it, this faucet supplying the place of the nose of an ordinary tunnel, and used substantially in the same manner.

A pendulous rod, *e*, is suspended within the bowl, and from a cross-bar or handle, *f*, extended across the top of the same, by means of a universal joint, *g*, by which free pendulous motions of the rod *e* in any direction are permitted.

The disposition of the cross-bar *f* and joint *g* is such that the point of suspension of the rod *e*, by means of such joint, shall be the centre of the sphere of which

the bowl is a portion, in order that the lower extremity of the said rod shall always remain at the same distance from the interior circumference of the bowl; by which means a given height of liquid within it shall always indicate the same mark or measure upon the rod, at whatever angle the bowl may be disposed.

The rod *e* is to be provided with a suitable measure, or scale, for indicating different quantities of liquid, and should be of metal, in order to stand perpendicularly within the bowl, which it would not do, were it of less gravity than the liquid.

The outlet or discharging-orifice *h* of the bowl should be covered perfectly with a screen of wire gauze, or other suitable material.

When not in actual use as a tunnel, the faucet of the implement should be closed.

It will, of course, be obvious to intelligent persons, that when a quantity of liquids is poured into the bowl, the amount of such liquid will be accurately determined by the scale upon the pendulous rod, the implement thus serving simply the purpose of a measure.

When required to perform the functions of a tunnel, the lower extremity of the faucet is to be inserted within the desired receptacle, and the faucet opened.

In place of the faucet made as shown in the present instance, a valve should be so constructed as to close the discharging-orifice of the bowl, immediately at the bottom thereof, in order to prevent any amount of liquid from standing within the body of such faucet. Otherwise, if a very small quantity of liquid is to be measured, the bowl must be so disposed, previous to opening the faucet, that liquid shall not have access thereto.

I claim as my invention, and desire to secure by Letters Patent of the United States, as follows:

I claim, as a combined tunnel and measure, the semispherical bowl *a*, with the discharging-faucet *m*, and the pendulous measuring-rod *e*, applied and suspended within the bowl, as explained, the whole operating in manner and for the purpose as herein shown and described.

HERMAN J. WOLTERS.

Witnesses:

TIMOTHY C. CAREY,
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