

J. C. GUERRANT.

FLUID-METER.

No. 174,671.

Patented March 14, 1876.

Fig. 1.

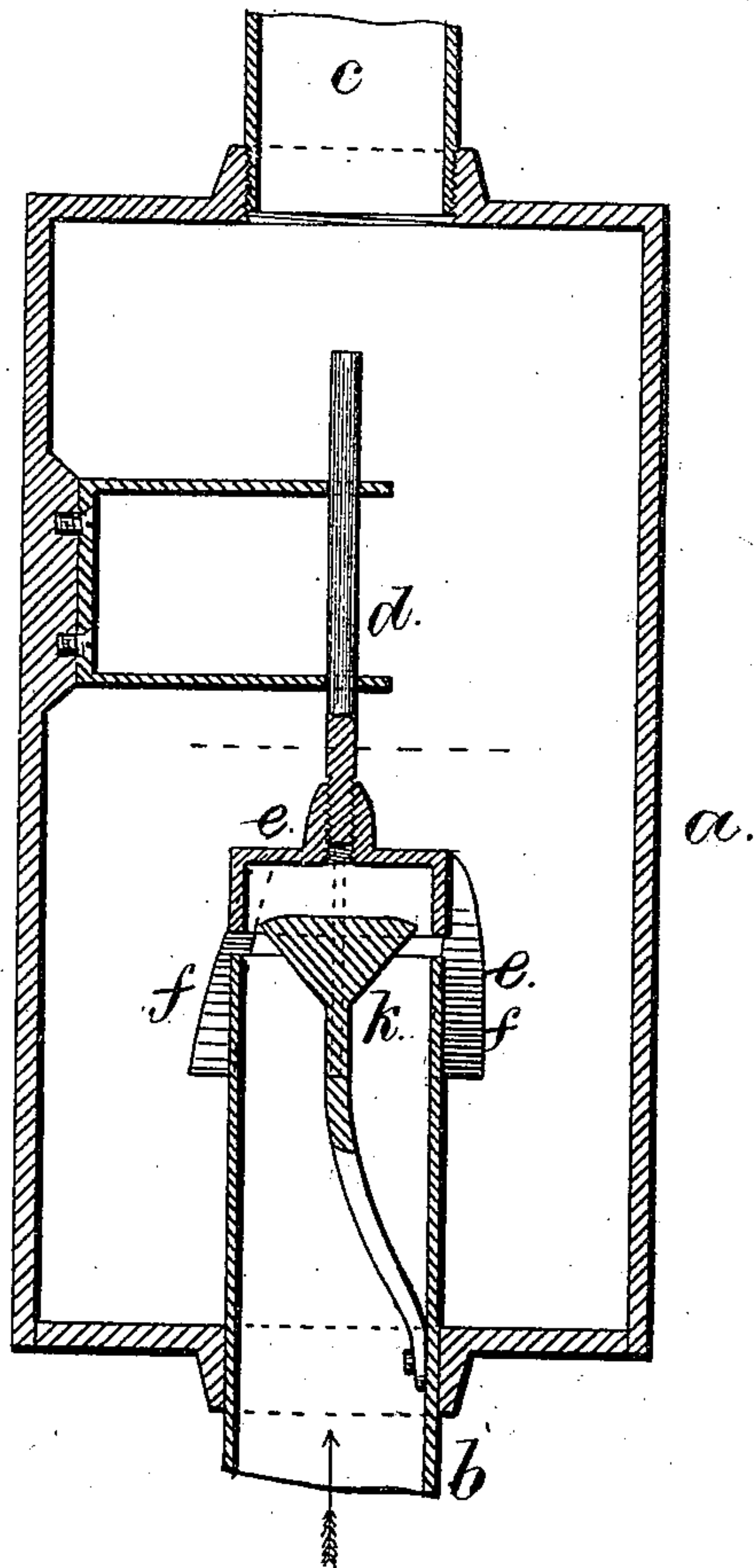
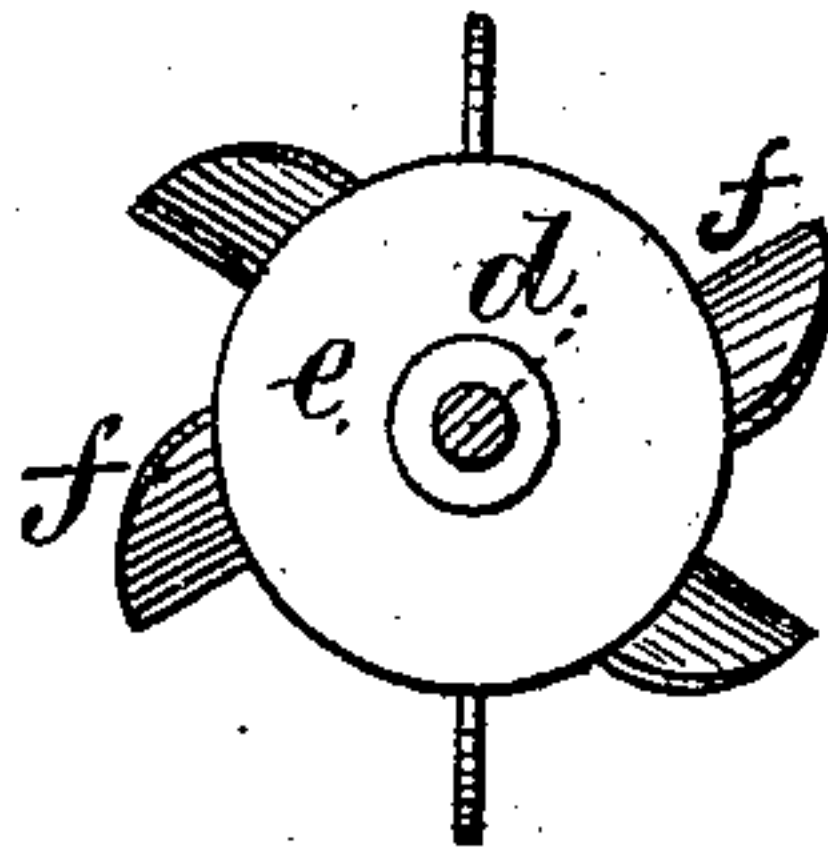


Fig. 2.



Witnesses

Chas. H. Smith

Geo. T. Pinckney

Inventor.

John C. Guerrant

per Lemuel W. Perrell

att'y.

# UNITED STATES PATENT OFFICE.

JOHN C. GUERRANT, OF DANVILLE, VIRGINIA, ASSIGNOR TO HIMSELF AND COLLETT LEVENTHORPE, OF RUTHERFORDTON, NORTH CAROLINA.

## IMPROVEMENT IN FLUID-METERS.

Specification forming part of Letters Patent No. **174,671**, dated March 14, 1876; application filed February 14, 1876.

*To all whom it may concern:*

Be it known that I, JOHN C. GUERRANT, of Danville, in the county of Pittsylvania and State of Virginia, have invented an Improvement in Fluid and Liquid Meters, of which the following is a specification:

Meter-wheels have been made in a variety of forms, to be operated by the water flowing through them; and in a liquid-meter patented by me January 4, 1876, No. 171,665, there is a valve at the end of the supply-pipe, and wings connected with such valve, and extending down and around the said supply-pipe or tubular valve-seat, such wings forming propelling-blades and resistances, the one acting to move the valve and the other to lessen the motion as the flow of water decreased.

My present invention is for dispensing with the valve, and for preventing the sudden rush of water, when it is allowed to flow, moving the meter-wheel too far, so that my improvement insures greater uniformity in the registering operation.

In the drawing, Figure 1 is a vertical section of the meter, and Fig. 2 is a plan of the meter-wheel.

The case *a*, supply-tube *b*, outlet *c*, spindle *d*, meter-wheel *e*, and blades *f* are similar to those in the aforesaid patent, only the meter-wheel is not made as a conical valve entering the end of the supply-pipe, but at the end of such supply-pipe there is a stationary deflector, *k*, that prevents the water striking against the face of the meter-wheel and moving it and its shaft suddenly endwise when the flow of water commences, because said deflector *k* directs the issuing water in a near-

ly horizontal plane across the top edges of the supply-pipe, and between the same and the edges of the meter-wheel. Said meter-wheel shaft is capable of end motion, either against a weight or spring, so that it will move more or less, according to the pressure resulting from the speed of water flowing through the meter.

The blades or wings *f* outside the wheel *e* surround the supply-tube *b*, and they are more or less inclined to the radial planes of the wheel, so as to act as propellers to turn such wheel by the issuing water, and the resisting portions of such wings in the quiescent water prevent too great rapidity of motion, and the propelling and resisting wings or portions of the wings are substantially the same as those described in the aforesaid patent, and act in the same manner.

I claim as my invention—

1. The combination, with the meter-wheel, having propelling and resisting wings around the supply-tube, of a stationary deflector within the meter-wheel at the end of the supply-tube, for the purposes set forth.

2. The combination, with a meter-wheel, having wings by which it is rotated, of a resistance acting in the quiescent portion of the water in the meter-case, substantially as set forth.

Signed by me this 9th day of February, A. D. 1876.

JOHN C. GUERRANT.

Witnesses:

GEO. T. PINCKNEY,  
CHAS. H. SMITH.