F. Saunders

Faucet

No. 74605 Patented Feb. 18. 1868.

Fig. 1.

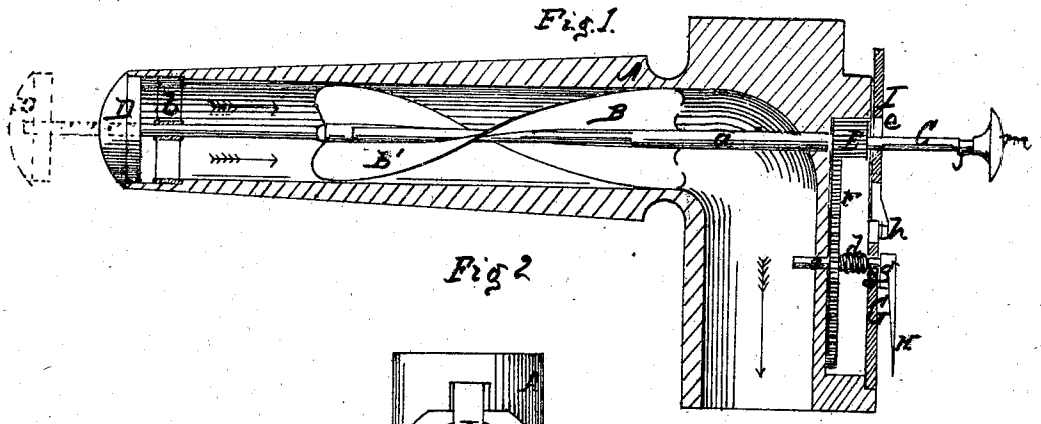
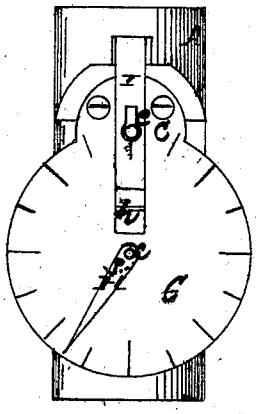


Fig 2



Witnesses:

A. Hellers

D. Brennan

Frank Saunders
by his attorneys
Brown Combs & Co

United States Patent Office.

FRANK SAUNDERS, OF ABERDEEN, MISSISSIPPI.

Letters Patent No. 74,605, *dated February* 18, 1868.

IMPROVEMENT IN MEASURING-FAUCETS.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, FRANK SAUNDERS, of Aberdeen, county of Monroe, and State of Mississippi, have invented a new and useful Improvement on Measuring-Faucets, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing forming part of this specification, and in which—

Figure 1 represents a longitudinal section of a faucet constructed according to my improvement, and

Figure 2 a front view of the same.

Similar letters of reference indicate corresponding parts.

My improvement relates to faucets for running off liquids of various kinds, and which are of an automatic or self-measuring character, adjustable at pleasure as regards the quantity they are or may be set to discharge.

My invention consists in a novel combination of means for regulating the discharge to a fixed quantity within the range of a single revolution of the index; also, for determining larger quantities, in which the index is made to move more than once round the dial; likewise, in the device for driving the index, and whereby a self-regulating character to suit different pressures is given to the faucet.

Referring to the accompanying drawing, A represents the body or stock of the faucet, the spigot or taper end of which may have a screw-thread cut upon it, for connection of the faucet with the cask or other vessel. B B′ is a spiral flutter-wheel or twisted vane-propeller, arranged within the spigot-end of the faucet, and connected with a sleeve, *a*, hung to turn upon a loose rod, C, that is free to slide longitudinally, carries the plug or stopper, D, at its inner end, near which it may be supported by a brace, *b*, and is or may be provided with a button, *m*, at its outer end. E is a pinion on the outer end of the sleeve *a*, gearing into an index operating-wheel, F, the spindle, *c*, of which has a screw-thread, *d*, cut upon it, fitting, say, through the dial G, and so that on turning the index H backwards the latter may be set closer to or further from the dial, for a purpose hereinafter explained. I is a vertical slide, provided with an aperture, *e*, of inverted key-hole or other suitable shape, and so that, on the rod C being forced inward by pressing on the button to open the plug D, the slide locks with a reduced portion, *f*, of the rod C, to hold the plug open. Attached to the index is a cam or lifter, *g*, which, as the index comes round, acts against or under a projection, *h*, on the slide I, to lift the latter.

The general action is as follows: Having set the index H on the dial G to the quantity the faucet is required to measure, the thumb is pressed upon the button *m*, forcing inwards the rod C, so as to open the plug D, and causing the slide I to drop into the neck *f*, and lock open the plug, till the liquid, in its flow through the faucet, and by its action on the twisted vanes B B′, which rotates the pinion E and wheel F, causes the index, as it comes round, to release by its lifter, *g*, acting on the projection *h*, the slide I from lock of the rod C, when the pressure of the fluid on the back of the plug D, assisted, it may be, by a spring-attachment, closes the latter and shoots out the rod. In this way it will be easy to measure or run off any quantity within the range of the dial or entire circle of the index-travel thereon. To measure or run off larger quantities, involving, say, two or more complete rotations of the index, the latter should first be turned back, and simultaneously drawn outwards, so as to cause the screw *d*, upon its spindle, to enter and be worked through a female-threaded orifice, *s*, in the dial a sufficient distance to cause, in one or more subsequent forward rotations of the index, the lifter *g* to clear the projection *h* of the slide I, and so that not until or during a further or continued rotation of the index, is the latter, by the screw *d*, being drawn inwards toward the dial, and out of the orifice *s*, again caused, by its lifter *g*, to trip the slide I and release the rod C, when the plug D is automatically closed as before, which occurs when the required quantity has been measured or run off from the faucet.

The twisted vane B B′ it is preferred to make thin and flexible, so that when the pressure of fluid is great it yields at B′ more than at B, thereby increasing the twist, which has a tendency to retard the current and increase the motion of the mechanism which it serves to operate, thus giving a self-regulating character to the faucet.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The propeller B, sliding rod C, with its plug D and locking slide I, in combination with a faucet, substantially as and for the purpose set forth.

2. The combination of the lifter G, locking slide I, and screw *d*, arranged to operate essentially as specified.

3. The flexible, spiral, or twisted vanes B B′, arranged as described, in combination with the mechanism for operating the index or closing-devices, substantially as specified.

FRANK SAUNDERS.

Witnesses:

FELIX G. HENLEY,

J. R. GILLEYLEN.