(No Model.)

G. W. MILLER.

MEASURING FAUCET.

No. 451,129. Patented Apr. 28, 1891.

Fig. I.

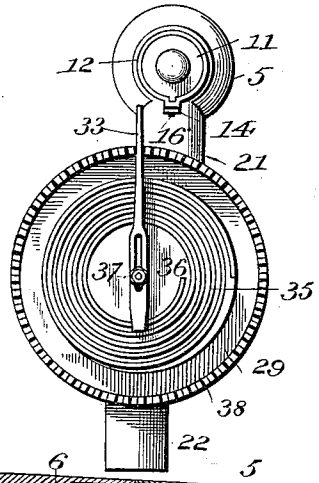


Fig. II.

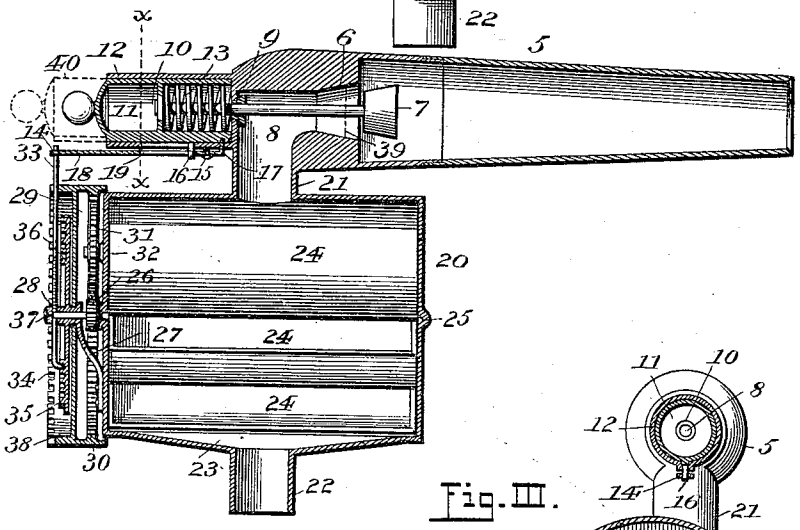


Fig. III.

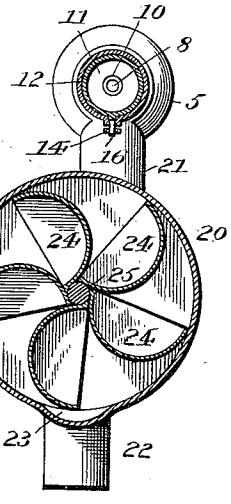
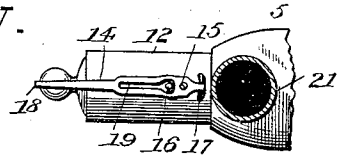


Fig. IV.



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UNITED STATES PATENT OFFICE.

GEORGE W. MILLER, OF LEXINGTON, NEBRASKA.

MEASURING-FAUCET.

SPECIFICATION forming part of Letters Patent No. 451,129, dated April 28, 1891.

Application filed January 13, 1891. Serial No. 377,644. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. MILLER, a citizen of the United States, residing at Lexington, in the county of Dawson and State of Nebraska, have invented certain new and useful Improvements in Measuring-Faucets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to measuring-faucets which are adapted to be driven or screwed into a barrel or tank to draw any kind of fluid therefrom, and its object is to provide means whereby large quantities of fluid—such, for example, as kerosene-oil—may be rapidly drawn through the faucet and measured thereby to any prearranged amount required and the delivery be stopped automatically when the required amount is discharged, whether the operator be present or not.

To this end my invention consists in the construction and combination of parts forming a measuring-faucet hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure I is a front end view of a faucet according to my invention, a portion being broken away to expose to view parts beneath. Fig. II is a central longitudinal vertical section of the same. Fig. III is a transverse vertical section at the line *x* of Fig. II. Fig. IV is an under side view of the telescoping tube.

No. 5 represents the body of the faucet, made in a tapering form and adapted to be either screwed or driven into a barrel or tank. This body portion is provided with a valve-seat 6, into which a valve 7 is fitted. A valve-rod 8 passes out through a stuffing-box 9, and is secured at 10 to a tube 11, which is fitted to telescope within a tube 12, which is rigidly secured to or made a part of the body 5.

13 is a spring acting between the telescoping tube 11 and the head of the faucet to push the said tube outward and to draw the valve 7 into its seat 6 to hold it closed.

14 is a trigger pivoted to the outer tube 12 at 15 and provided with a catch 17, adapted to engage a corresponding catch on the telescoping tube 11 when the latter is pushed in, as shown in Fig. II, and adapted to disengage the said telescoping tube and permit it to be sprung outward to draw the valve to its seat when its opposite end 18 is moved to one side.

16 is a pin or stud projecting from the tube 11 through a slot in the outer tube to engage a slot 19 in the trigger 14.

20 is a cylinder attached a little to one side of the center of its own top to the delivery end 21 of the faucet, and having an opposite outlet 22, to which an internal longitudinal groove 23 leads.

24 represents a series of buckets fixed upon a shaft 25, which is mounted to revolve in bearings in the cylinder 20 and fitted to bear neatly within the cylinder to form a revolving contact therewith sufficiently close to prevent leakage of fluid. The spaces between these buckets may be such as to contain any unit of measure—such, for example, as one gallon.

26 is a spur-wheel fixed upon the shaft 25 to revolve therewith.

27 is a bracket fixed to the outer end of the cylinder 20 as an outer bearing for the shaft 25 and shaped with a concentric sleeve 28 to serve as a bearing for a dial 29. This dial has an internally-toothed flange 30, which is connected with the pinion 26 by means of an intermediate wheel 31, which is journaled upon a stud 32, fixed to the end of the cylinder.

33 is a hand or pointer having a slot midway to slide freely upon the shaft 25, and kept thereon by a screw nut or head 37, and further provided with a stud 34, projecting inward to engage a volute thread 35 on the face of a disk 36, which is rigidly fixed to the sleeve 28, whereby the hand 33 will be drawn toward the center when turned backward, and will be radially pushed away from the center while revolving forward. The dial 29 is formed as a crown-wheel, its teeth 38 projecting outward and numbered with a certain fixed relation to the measuring-buckets 24. The hand 33 is adapted to engage any of the teeth 38, and it normally stands sprung in between them and must be raised out by a person's fingers and revolved around to be set at any point desired as an index to the amount desired to be drawn through the faucet. The projecting end of this hand revolves in a path to engage and trip the trigger 14 at the moment when the amount of fluid indicated by

the location of the hand on the dial has been delivered.

The drum 20 may be adapted to contain any number of buckets 24, and if there are five buckets, as here shown, each capable of holding one gallon, every revolution of the shaft 25 will deliver five gallons, and the ratio between the pinion-wheel 26 and the inner circumference of the wheel or flange 30 upon the dial 29 may be arranged for the dial to register any desired number of revolutions or the parts of a revolution.

The operation is as follows: Set the hand 33 at that notch upon the dial which indicates the number of gallons desired. Then push in the tube 11 until it is caught by the hand 14, and the fluid will begin to run, filling the buckets and turning them forward, also carrying the dial and hand, and when the hand reaches the trigger 14 it will trip it and permit the tube 11 to be thrown out by the spring 13, thus closing the valve 7 and stopping the delivery. When the tube 11 is thus sprung out, the stud 16 attached to it, sliding in the slot 19 of the trigger 14, returns the trigger to its normal position, ready to engage the catch 17 whenever the tube 11 is again pushed in to open the valve. Should it be desired to draw at one time more than is indicated by one revolution of the hand upon the dial, the hand may be raised out of engagement with the teeth 38 and turned backward as many revolutions and parts of a revolution as will indicate the amount desired to be drawn. The hand in being turned backward is drawn inward at its point by the stud 34 traveling in the volute 35. After it has been drawn inward one revolution its point will pass under and not engage the trigger 14, and for a greater number of revolutions it is drawn still farther in, and it will not project enough to engage the said trigger until by delivering the amount of fluid required it is revolved forward and projects far enough to engage the trigger. This will be at the point indicating the amount delivered after the faucet has been once filled.

The dotted lines 39 show the position of the valve closed and the dotted lines 40 show the position of the telescoping tube 11 at the same time, the said tube serving as a handle for the valve. This faucet having been set to deliver the number of gallons required, the operator may go about other business and leave it to automatically stop itself at the proper moment, thus saving time. There is sufficient resistance to the buckets revolving to insure their being filled, and after once having been started a bucket full is always at the delivery ready to be discharged, the grooves 23 aiding it to deliver rapidly.

Having thus fully described my invention, what I believe to be new, and desire to secure by Letters Patent, is the following:

1. The combination of a faucet-body provided with a valve having a rod extending out through the end of the faucet and provided with a handle, a spring located to close the valve, a trigger pivoted upon a fixed portion of the valve and having a catch adapted to engage a catch in the handle of the valve when the valve is open, a cylinder connected with the delivery end of the faucet and containing buckets mounted on a shaft journaled to revolve therein, and an index-hand mounted to be revolved by the revolving buckets, the said hand being adapted to engage the said pivoted trigger, substantially as shown and described.

2. The combination of a faucet-body, a valve fitted therein, having a stem projecting through the end thereof, a spring actuating the valve to close it, a tube surrounding the said stem and fixed to the end of the faucet, another tube fitted to telescope within the first one and attached to the valve-stem as a handle therefor and provided with an outward-projecting stud 16 and with a catch, and a trigger pivoted to the outer tube and provided with a catch 17 to engage the aforesaid catch in the inner tube and further provided with a slot to be engaged by the stud 16, substantially as described.

3. The combination of a faucet-body having a valve with a projecting stem, a cylinder connected at one side of its top with the outlet of the faucet, a series of buckets fixed upon the shaft, journaled to revolve within the cylinder, and fitted neatly around their edges to revolve in contact with the interior of the cylinder, the bucket-shaft projecting through the end of the cylinder and having a pinion-wheel fixed upon it and a hand to slide upon its outer end, a bracket-bearing for the outer end of the shaft, having a sleeve portion concentric therewith, a plate fixed upon the sleeve with a volute thread upon its outer face, a dial mounted to revolve upon the said sleeve and provided with a flange having internal teeth, an intermediate wheel journaled upon a stud fixed to the end of the cylinder to engage both the aforesaid pinion and the teeth of the flange, the said dial being further provided with a crown-wheel of teeth projecting outward to be engaged by the aforesaid hand, which hand is provided with a stud to engage the said volute thread, and connection between the hand and a tripper for the valve, substantially as described.

4. The combination, in a measuring-faucet, of a dial mounted to revolve in connection with the measuring-buckets and provided with a crown-wheel of teeth, a fixed plate adjacent to the dial and having a volute thread on its face, a hand adapted to engage with the teeth of the dial and mounted upon the shaft thereof by means of a longitudinal slot in the hand, the said hand being provided with a stud to engage the said volute thread, and a valve-trigger located in the path of the hand when projected, substantially as described.

5. The combination of a hand mounted to

revolve and to slide lengthwise across its pivotal support and provided with a stud, and a disk having a volute thread upon its face to be engaged by the said stud, the hand being adapted to revolve with its stud free and independent of the said volute or within the threads thereof at the will of the operator, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. MILLER.

Witnesses:
J. H. LINDERMAR,
W. A. STEWART.