

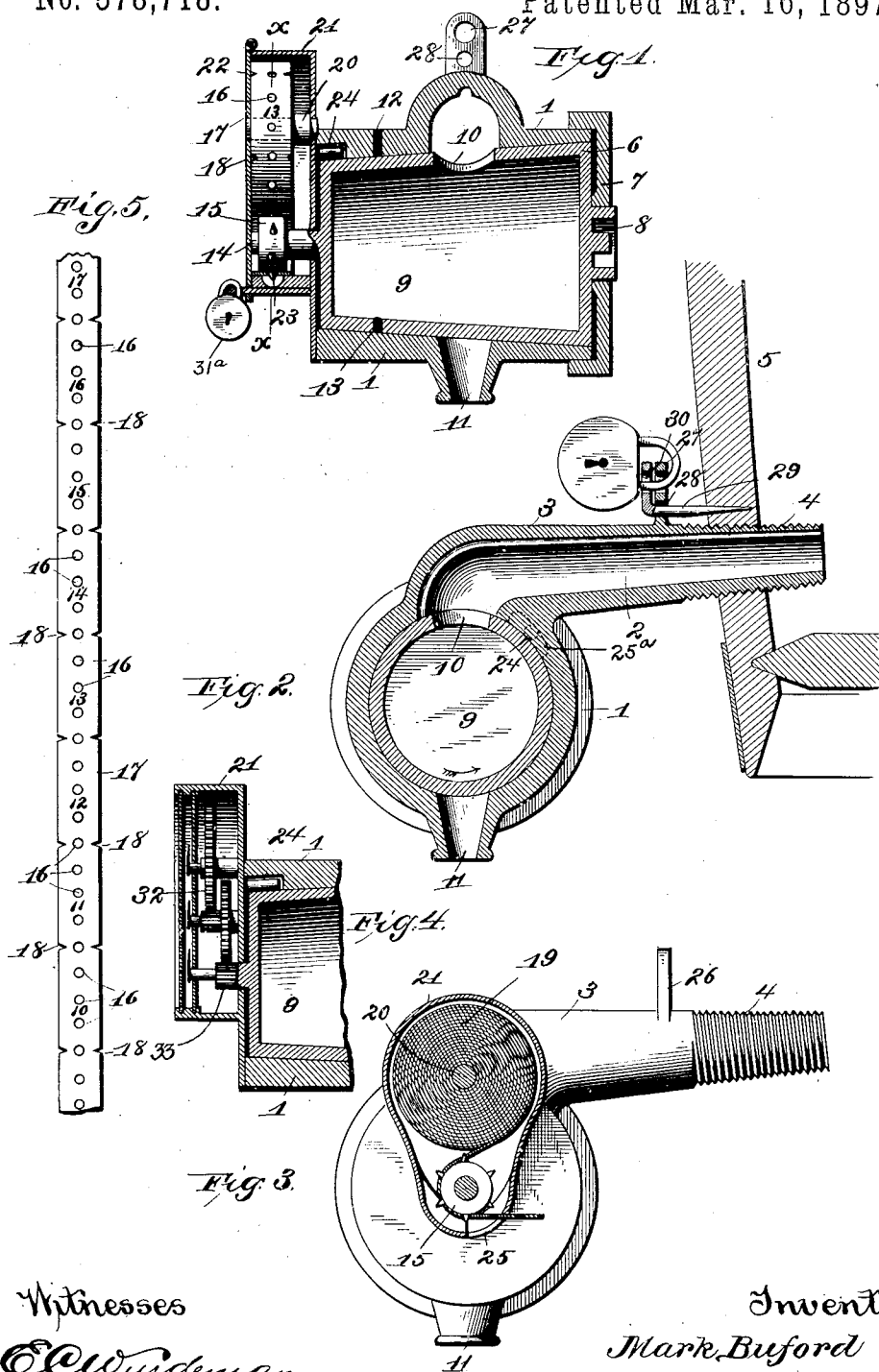
(No Model.)

M. BUFORD.

AUTOMATIC MEASURING, REGISTERING, AND RECORDING FAUCET.

No. 578,718.

Patented Mar. 16, 1897.



Witnesses
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MARK BUFORD, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE
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AUTOMATIC MEASURING, REGISTERING, AND RECORDING FAUCET.

SPECIFICATION forming part of Letters Patent No. 578,718, dated March 16, 1897.

Application filed December 7, 1895. Serial No. 571,418. (No model.)

To all whom it may concern:

Be it known that I, MARK BUFORD, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Measuring, Registering, and Recording Faucets, of which the following is a specification.

My invention relates to a new and useful improvement in automatic measuring and registering faucets, and has for its object to provide such a device which when applied to a barrel or other receptacle containing liquid will prevent the withdrawal of said liquid from said receptacle except when properly measured, indicated, and recorded, and also has for its object to provide a check system by means of which a tally may be kept upon both the person drawing the contents of a liquid-receptacle, the customer purchasing said liquid, and the cashier to whom the money is paid.

With these ends in view my invention consists in the details of construction and combination of elements hereinafter set forth, and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction and operation in detail, referring by number to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a central vertical section of the measuring mechanism, showing the registering mechanism in elevation; Fig. 2, a vertical longitudinal section of the device, representing it as secured in place in connection with a barrel; Fig. 3, a section at the line *xx* of Fig. 1; Fig. 4, a modification of the registering mechanism; and Fig. 5 represents a portion of the registering-tape.

Similar numbers denote like parts in all the views of the drawings.

It is well known that a large loss is occasioned to the owners of certain classes of stores in which liquids, and especially whiskies, are sold on account of the attendants appropriating to their own use the proceeds of many of the sales which are made, and as there is no way of determining the amount of liquid drawn from a large receptacle, such as a barrel, by the usual methods, it is impos-

sible to detect said attendants' misuse of the proceeds of the business; but this difficulty is entirely overcome by the use of my improved faucet, the construction of which is as follows:

1 represents the casing from which leads the passage-way 2, formed in the shank 3, which latter is threaded at 4 for the purpose of insertion in a suitable hole in a barrel 5 or other liquid-receptacle. This casing is made hollow, and the cavity therein is formed upon a taper in order that the taper plug-valve 6 may fit therein in such manner as to prevent leakage, as is the case with water and gas plug valves. The plug-valve 6 is retained within the casing and in proper relative position thereto by means of the cap 7, secured upon said casing by threading, bracing, pinning, or otherwise.

8 is a wrench-hold projecting from one end of the plug-valve through a suitable opening in the cap, so that said valve may be operated by the application of a suitable key or wrench. The valve is hollow and the capacity of its cavity 9 is sufficient to hold the predetermined amount of liquid to be measured at each operation of the valve—say one-half pint—and leading from this cavity is an opening 10, so arranged as to register with the passage 2 when upon the upper side of the valve and with the outlet 11 when upon the lower side of said valve, which outlet is arranged in the shape of a spout for convenience in conveying the measuring liquid to a funnel, bottle, or other receiver. Formed through the upper side of the casing is a small hole 12, and 13 is a similar hole formed through the wall of the valve and in such position as to register with the hole 12 when the opening 10 registers with the outlet 11. The object of this registration of the holes 12 and 13 is to connect the cavity of the valve with the atmosphere to facilitate the outflow of the liquid from said cavity.

To avoid the requirement of accuracy in the registration of the holes 12 and 13, the hole 13 may connect with the groove upon the outside of the valve, which may extend through a sufficient arc to register with the hole 12 within the limits of registration of the opening 10 and outlet 11.

Projecting from the small end of the plug-

valve is a spindle 14, carrying a sprocket-wheel 15, having suitable teeth projecting from its periphery, adapted to engage the holes 16 formed in the registering-strip 17 at predetermined intervals. This registering-strip is preferably a support of paper having the holes 16 punched therein and notches 18 cut opposite of one in every four of said holes and wound into a coil 19, adapted to be placed upon the pin 20, projecting from the casing or part carried thereby.

21 is a housing so formed as to inclose the coil and the sprocket-wheel, and 22 is a cover hinged to said housing and adapted to be secured into place by a suitable lock, so as to preclude access to the coil and the sprocket-wheel. The teeth of the sprocket pass through a groove 23, formed in the lower wall of the housing in order that when the registering-strip has been engaged with said teeth, as shown in Fig. 3, it may not be withdrawn therefrom.

The plug-valve is adapted to move in one direction only and prevented from any retrograde movement by the roll 24, placed in a V-shaped slot 25^a, by means of which it will be wedged between the upper wall of said groove and valve, should the latter be moved in a reversed direction, as will be readily understood.

From this description the operation of my improvement will be, obviously, as follows: To draw liquid from a receptacle, such as a barrel, to which the faucet is attached, a suitable wrench is applied to the wrench-hold 8 and the valve revolved in the direction of the arrow, so as to bring the opening 10 in alinement with the outlet 11, when, as before described, the holes 12 and 13 will also come into alinement, thus supplying atmospheric pressure above the liquid which has previously run into the cavity 9 through the passage-way 2 and permit said liquid to flow through the outlet into a suitable receptacle, and as the flow of liquid from the barrel to the cavity will be cut off when the opening 10 is moved out of alinement with the passage-way 2 it will be seen that the amount of liquid delivered will only be equal to the capacity of the cavity 9, and should this be one-half pint the smallest amount of liquid to be drawn from a barrel at one time will be half a pint, but any quantity, consisting of half-pints, may be drawn by the repetition of the operation just described. In practice it is preferable to return the plug-valve to the position which brings the opening 10 in alinement with the passage-way 2, so that the cavity 9 will be full and ready for delivering. Since the valve cannot move in the reversed direction, it will be seen that at every revolution thereof in delivering its contents a given length of the registering-strip will be fed by the sprocket-wheel through the opening 25 in the housing, and this protruding portion of the strip may be torn off and delivered to the customer for delivery to the

cashier when payment is made. In order to facilitate the severing of the protruding length of the registering-strip, notches 18 are formed in the strip opposite one of the predetermined holes 16, and in placing the strip upon the teeth of the sprocket it is so arranged that the hole which registers with the notches will have been fed past the teeth of the sprocket when the valve is in its normal position. Thus this protruding length may be severed without injury to the strip back of the notches.

The strip is preferably numbered consecutively between each notch throughout its inner length, so that the quantity of liquid drawn from the barrel may be readily determined by reading the number upon the last severed length or by observing the last number upon the end of the coil, which may be done through a suitable opening formed in the housing. By this arrangement the total amount of liquid drawn from a barrel may be at once determined, a check had upon the attendant and upon the customer, as well as upon the cashier, since the last number upon the end of the strip in the housing should be the next in numerical order to the number upon the last severed length received by the cashier, thus affording a triple cash-register system.

To prevent tampering with the connection between the faucet and barrel, a lug 26 projects from the shank 3, through which two holes 27 and 28 are formed, the latter for the reception of a spike 29, through which is also formed a hole 30, adapted to register with the hole 27, by means of which the lug and spike are secured together by a suitable lock 31^a, so that the faucet cannot be revolved to withdraw it from the barrel without the removal of the spike 29, and this cannot be done without the removal of the lock. In the modification shown in Fig. 4 I substitute for the sprocket-wheel and registering-strip a train of registering-wheels 32, which are actuated from the valve by a suitable gear 33, so that at every revolution of said valve in delivering the contents of the barrel the registering-train will indicate this movement, thus registering the quantity of liquid so delivered; and while this answers the purposes in many instances, yet the registering mechanism first described is preferable in that it not only indicates the total quantity of liquid drawn from the barrel, but constitutes a cash system by which the sales in any given time can be determined and a check had upon every one engaged in such sales.

Having thus fully described my invention, what I claim as new and useful is—

1. In combination, a faucet having a housing, a sprocket-wheel receiving motion from the faucet-valve said valve having a roller working in a slot of the faucet, said sprocket-wheel actuating a strip of paper or other suitable material arranged within the housing said strip having apertures to receive the

teeth of the sprocket-wheel, as and for the purpose described.

2. In combination with a measuring-faucet, a housing secured to the casing of said faucet and provided with a cover which may be secured in position by locking, a sprocket-wheel receiving its motion from the valve of said faucet, and actuating a strip of paper or other suitable material arranged in a coil within said housing, said strip having holes formed therein at predetermined intervals, adapted to be engaged by the teeth of said sprocket,

notches cut in said paper opposite certain of said holes, and consecutive numbers printed upon said strip, as and for the purposes set forth.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

MARK BUFORD.

Witnesses:

GEORGE MCCURDY,
S. S. WILLIAMSON.