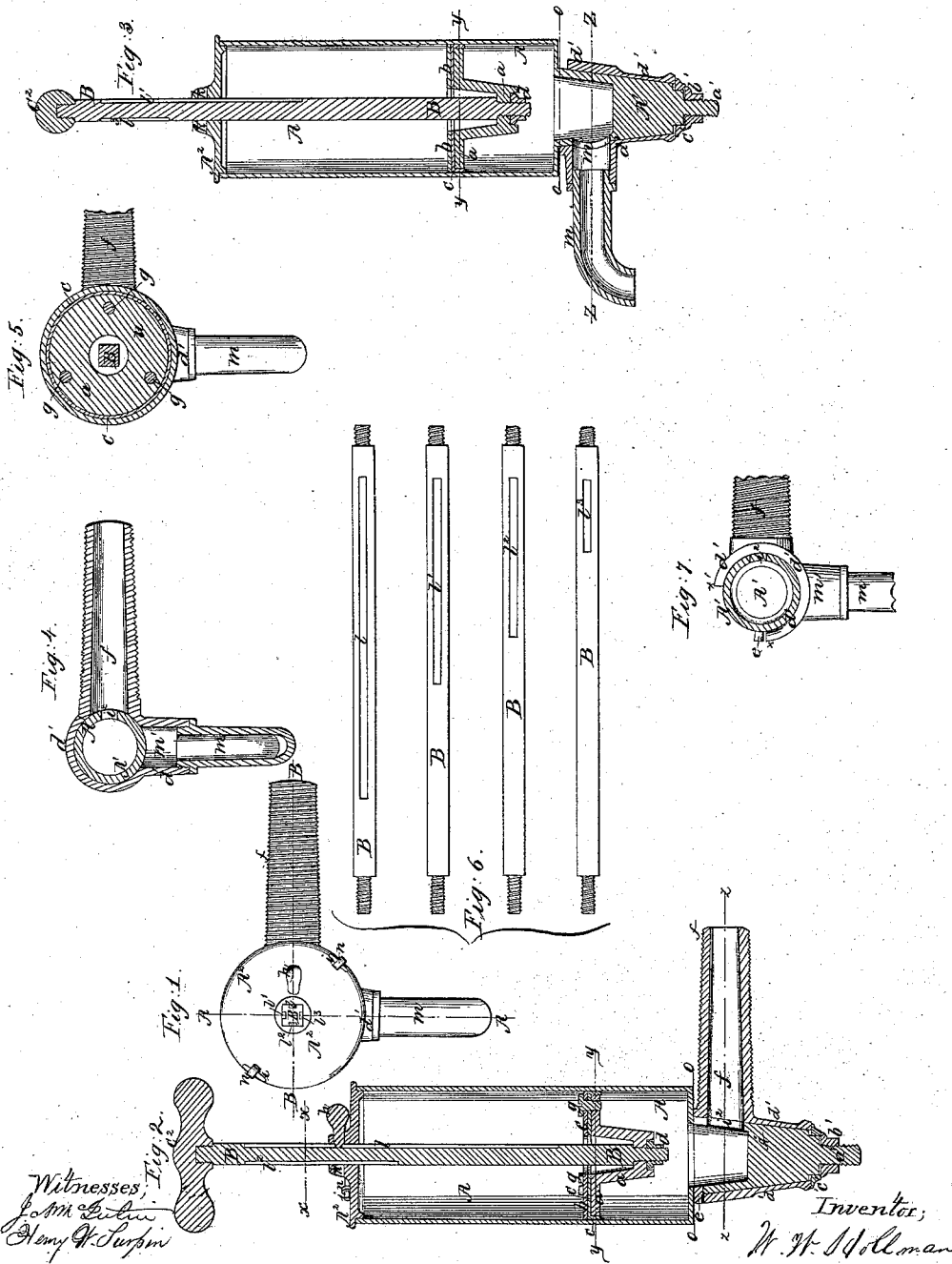


W. W. HOLLMAN.

Measuring Faucet.

No. 23,143.

Patented March 1, 1859.



# UNITED STATES PATENT OFFICE.

W. W. HOLLMAN, OF EDDYVILLE, KENTUCKY.

## MEASURING-FAUCET.

Specification of Letters Patent No. 23,143, dated March 1, 1859.

*To all whom it may concern:*

Be it known that I, W. W. HOLLMAN, of Eddyville, county of Lyon, in the State of Kentucky, have invented certain new and useful Improvements in Measuring-Faucets; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in certain improvements in "measuring faucets" as hereinafter fully described.

In the accompanying drawings forming part of this specification, Figure 1, represents a top view of my improved faucet (the plunger handle being cut off at the line  $x, x$ , Fig. 2). Fig. 2, represents a vertical section on the line, B, B, Fig. 1. Fig. 3, represents a vertical section at the line, A, A, Fig. 1. Fig. 4, represents a horizontal section at the line  $z, z$ , Figs. 2 and 3. Fig. 5, represents a horizontal section at the line  $y, y$ , Figs. 2 and 3. Fig. 6, represents side views of the piston rod, and, Fig. 7, represents a horizontal section at the line  $o, o$ , Figs. 2 and 3.

Similar letters denoting the same parts in the different views, A, represents a cylindrical receiver, and measuring chamber, which is furnished with a removable top plate  $A^2$ , secured by pins  $i$ , passing through ears,  $n$ , and having a central hub, through which passes up and down, the polygonal piston rod B, (as will be presently more fully explained).

$h$ , are a series of holes, in the hub of the top plate  $A^2$ , into any one, of which holes, fits a removable stop pin,  $h$ , the inner end of which protruding through the said hub, passes into one of the longitudinal grooves,  $l$ , of the piston rod B, for a purpose which will be presently described.

The piston rod B, is (as before mentioned polygonal), represented as being square, but it may be made five, six, or more, sided according to the number of grooves, which may be desired upon it. In each side, of said piston rod B, (see Fig. 6,) is cut a groove (lettered respectively  $l, l', l^2, l^3$ ); each groove, varying in length, from any of the others, and constituting, in combination with the adjustable stop pin  $h$ , an effective and simple device for regulating the quantity of liquid, which shall be allowed to enter the receiver A; on the lower end of the rod B is secured by the nut,  $d$ , a plunger,

or piston, C, (see Fig. 2,) which is formed of a suitable hubbed plate,  $a$ , having over its upper surface, and perimeter, a suitable packing, of rubber (or other material) secured by a top plate,  $b$ , fastened to the main piston piece,  $a$ , by means of screws or bolts  $g, g$ .

$C^2$ , is the handle of piston rod, by which it is moved up and down and also partially rotated (as and for the purpose directly to be described).

The chamber A, at its lower end, is formed into a hollow conical teat  $A'$ , having on its extremity a threaded stud  $a'$ , to accommodate a nut  $b'$ , this conical extension  $A'$  of the chamber A, has cut through it one opening, or port at  $d^2$ , (see Figs. 2 and 4) which forms, alternately a receiving and discharging, connection, with the receiving and discharging limbs of the faucet piece, which latter consists, of a shell,  $d'$ , with a receiving tube  $f$ , and discharge teat piece  $m'$ , (see Figs. 2, 3, 4, and 7,) into which latter is secured a suitable exit pipe, or spout  $m$ . The receiving tube, or stem  $f$ , has cut externally upon it, a screw thread in order that it may be readily and properly inserted in a cask, or other reservoir (as an ordinary faucet) from which it is desired to draw off, and measure the contents; into this shell  $d'$ , of the faucet piece, fits closely (making a "taper bearing") the conical teat, or lower portion  $A'$ , of the receiving and measuring chamber A, which is secured therein, (so as to turn freely) by means of the retaining nut  $b'$  and collar  $c'$ .

The relative arrangement of the chamber with the faucet piece, will be clearly understood by reference to the drawings (Figs. 2 and 3). As before remarked, the lower portion  $A'$  of the chamber, is capable of turning (on its vertical axis) in the shell  $d'$ . This motion, is only partially rotary, being limited by a device, which I will now describe, viz: the upper edge of the shell  $d'$ , is cut away, around a part of its circumference from " $x$ " to " $x'$ ", (see Fig. 7) to accommodate a pin,  $e$ , which projects from the teat  $A'$ , near its junction, with the chamber A, and runs around over the cut portion, of the shells ( $d'$ ) edge, from  $x$ , to  $x'$ , at which points it strikes, forming a stop. It will be seen that the chamber A is capable of turning around, in the faucet piece a part of a revolution; and it will be understood that this motion of said chamber in

said faucet piece, is just such, as to cause the port  $i^2$ , in the lower portion of the former to come alternately, adjacent to, or coincident with, the receiving tube  $f$  and discharge, or exit  $m$ , of the latter.

It will now be understood that if the chamber A, be so relatively placed with the shell  $d'$  as that the port  $i^2$  of the former, shall be coincident with the receiving tube  $f$  of the latter, (as seen at Figs. 2 and 4) the fluid, in the reservoir to which the tube  $f$  may be connected, will flow through, the said tube  $f$  and fill up in the chamber A, so far as, allowed by the position in which the piston, C, may be, in said chamber, and that if said chamber A, after thus receiving the liquid through the pipe  $f$ , be partially rotated in the shell  $d'$  until its stop pin,  $e$ , passes from  $x$ , to  $x'$  the connection between the chamber and the tube  $f$  will be cut off (the liquid remaining in said chamber) and the port  $i^2$ , coming around to the exit teat  $m'$ , will open into, it and the liquid in the chamber A, will flow out through the exit,  $m$ . As already mentioned the hub of the top plate A<sup>2</sup> is furnished with a series of holes  $k$ , corresponding in number and respectively opposite to the sides of the polygonal rod B; if then the stop pin,  $h$ , be set in one of these holes (for instance as seen at Fig. 2) the rod will be allowed to run up and down a given distance, determined by the length of the slot,  $l$ , which is made such, as to make the capacity of the chamber A, when the piston shall be elevated to its highest point, equal to a given standard measure and since the slots  $l$ ,  $l'$ ,  $l^2$ ,  $l^3$ , are all of variable lengths, each of such length as to allow the piston, C, (where the stop pin,  $h$ , is placed in such one of the holes,  $k$ , as to operate conjointly with it as described) to be elevated, to a given standard measure height; it is obvious that by simply shifting the pin,  $h$ , from one to another of the holes,  $k$ , the chambers A can be made to measure any one of the standard measures for which it is calculated.

The apparatus shown and described is limited to four measures, but it is obvious that by increasing the number of sides of the rod B, and number of holes,  $k$ , the measurements may be divided up into smaller fractional parts of the greatest one.

It will be seen that by making the rod B polygonal (its upper end being furnished

with a suitable handle C<sup>2</sup>) it is made to perform two distinct operations, viz: the moving up and down of the piston, and turning, or partial rotating of the chamber A.

The operation of my improved apparatus needs but little explanation after what has already been said. Suppose the apparatus to be connected by its receiving tube  $f$  to a cask, or other reservoir from which it is desired to drain and measure given quantities of the contents, and the chamber A, turned in the shell  $d'$ , so that its port,  $i^2$ , is coincident with the tube  $f$ , as seen at Figs. 2 and 4; then the pin,  $h$ , is placed in such one of the holes,  $k$ , as will allow the piston rod B to move the distance required to make the capacity of the chamber A such as is desired; the piston is then elevated, by pulling upward on the handle C<sup>2</sup>, when the liquid flows in and fills up to the bottom of said piston, without letting go, of the handle C<sup>2</sup>, the chamber is turned around, until its port,  $i^2$ , comes adjacent to the exit teat  $m'$ , when the liquid or contents of said chamber will run out through the tube  $m$ , from which it may be received in any desirable vessel.

Having fully described the construction and operation of my improved measure faucet what I claim therein as new and desire to secure by Letters Patent is—

1. In combination with a faucet piece having an induction and eduction pipe a receiving and variable measuring chamber so constructed and arranged that by partially rotating it within the said faucet piece the liquid will be alternately received and discharged through a port or ports substantially as hereinbefore described.

2. Making the rod B, polygonal when used in combination with the variable measuring chamber and its piston substantially as described for the purposes set forth.

3. The combination of the longitudinal slot,  $l$ , in the piston rod with the stop pin,  $h$ , or its equivalent as specified for the purpose described.

In testimony whereof I have hereunto set my hand this eleventh day of December 1858.

W. W. HOLLMAN.

Witnesses:

J. N. McINTIRE,  
HENRY W. TURPIN.