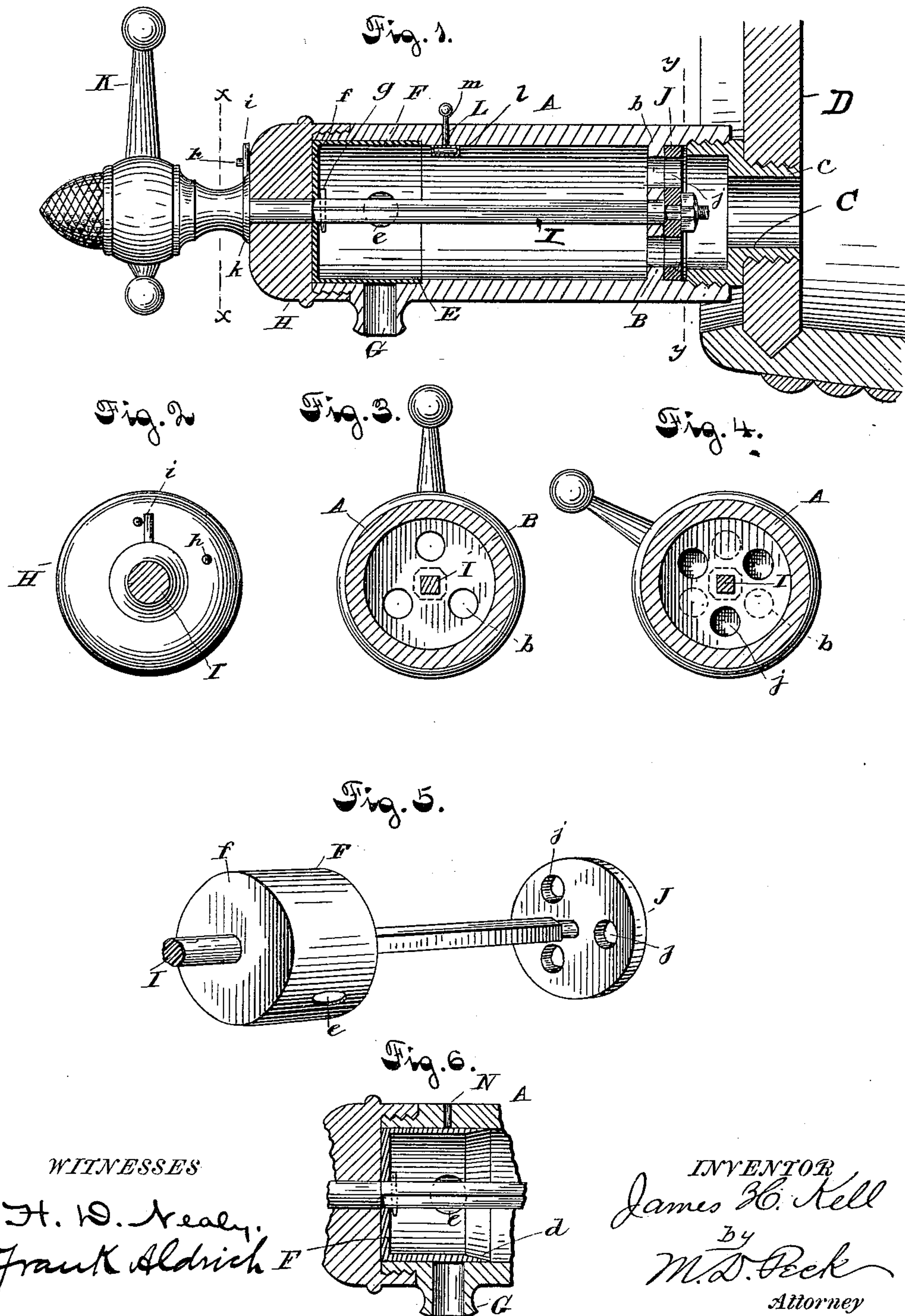


(No Model.)

J. H. KELL.  
MEASURING FAUCET.

No. 405,891.

Patented June 25, 1889.





# UNITED STATES PATENT OFFICE.

JAMES H. KELL, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR OF  
ONE-HALF TO FRANK ALDRICH, OF SAME PLACE.

## MEASURING-FAUCET.

SPECIFICATION forming part of Letters Patent No. 405,891, dated June 25, 1889.

Application filed August 6, 1888. Serial No. 282,077. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES H. KELL, a citizen of the United States, residing at Washington, in the District of Columbia, 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, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to a liquid-measure, and has for its object to provide a faucet so constructed that it will hold a definite quantity of fluid to be measured in drawing it from the cask or reservoir by a certain series of openings and stops, by which, when the measure is full, the flow from the supply can be cut off and an opening provided by which the contents of the faucet are emptied into a receiving-vessel; and it consists in the construction hereinafter described, and more particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a part longitudinal sectional view of my improved measuring-faucet. Fig. 2 is a cross-sectional view on the line  $x x$  of Fig. 1, showing the stop lugs or pins by which the opening and closing of the faucet are governed. Fig. 3 is a cross-sectional view on the line  $y y$  of Fig. 1, showing the holes in the valves of the faucets registering with each other. Fig. 4 is a cross-sectional view on the line  $y y$  of Fig. 1, showing the holes of the valve closed which admit the fluid to the measure. Fig. 5 is a perspective view of the rod or bar removed from the faucet, together with the valve which it operates within the faucet. Fig. 6 is a detail sectional view showing a slightly-modified form of the exit-valve and vent with a part of the rod and cylinder of the faucet.

Like letters of reference refer to corresponding parts in each figure of the drawings.

A represents the cylindrical shell of my measuring spigot or faucet, which may be of uniform diameter from end to end, or be of bulging or other desired shape, and made to contain any ordinary given quantity of liquid,

such as is desired to be measured in drawing from a cask or barrel. This shell is preferably made of cast metal, though it may be of sheet or other metal, or be formed of hard rubber or other suitable material. Near one end of the shell there is an internal disk or diaphragm B, cast or otherwise formed integral with the shell, extending across its chamber, which has a series of perforations or openings  $b$  around its central portion, that are made to register with openings in a movable valve, hereinafter described.

The end of the shell provided with the disk B is screw-threaded, and is adapted to be screwed onto a nipple C, having its small end  $c$  inserted into the end or side of a barrel or cask D. The opposite end of the shell A is recessed on its inner side at E from the end to a distance inward equal to the length of a hollow key-plug F, which is adapted to fit therein, so that its inner wall will come flush with the unrecessed inner walls of the shell, and is provided on its outer end with a head  $f$  of the same diameter as the plug. By thus inserting the plug into the recess any obstruction to the free flow of liquid into and through the faucet is prevented. I do not, however, confine myself to this particular form of key-plug F, as it may be constructed, as shown in Fig. 6, with its inner internal edge  $d$  beveled down to the inner surface of the shell. In the use of this form of key-plug the shell remains of a uniform diameter throughout its entire inner length, and the liquid freely passes over the beveled edge of the plug in its course in passing into and out of the measuring-spigot. The hollow key-plug F has a hole  $e$  in one side that registers with an exit-port G in the side of the shell A. On the outer end of the shell there is a screw-cap H, fitting over the shell, while its inner surface fits up to and comes in contact with the head of the hollow key-plug F. The outer end of the cap has lugs or pins  $h$ , standing substantially at right angles to each other from the center of the end of the cap, which serve as stops to an indicating-arm showing the position of the valves.

An operating-rod I passes through the centers of the head H and disk B, which form



the bearings for its round journal at these points. Between the bearings of the head and disk the rod is formed square and passes through a square opening in the head *f* of the key-plug *F*, and is secured therein by a pin *g*, with the head *f* in contact with the round shoulder of the journal of the screw-cap, and is adapted to be turned with the journal. Part of the rod *I* extending beyond the disk *B* is also square, and is of smaller diameter than the round journal in the disk, and is provided with a check-valve *J*, of substantially the same size and form of the disk *B*, which also has a series of openings *j*, that register with those in disk *B*. This check-valve rests against the round shoulder of the journal in disk *B*, on one side, and is held thereon by a nut or other suitable means secured to the end of the rod upon the other side and revolves upon the side of the disk as the rod is turned.

The rod *I* is extended outward beyond the cap *H*, and is provided with a lever-arm *K*, which is formed integral with the rod, and upon the shoulder *k* of the rod, adjacent to the screw-cap *H*, there is an indicating-arm *i*, which points in the same direction as the lever-arm *K* and works between the stop lugs or pins *h* on the cap. These lugs are of such a distance apart as to enable the holes of the disk *B* and check-valve *J* to register when the indicating-arm *i* is upright against the lug and the lever-arm is in a vertical position, as shown in Figs. 1 and 3, enabling the liquid to pour directly through the disk and valve at various points around their center and in direct line with the opening of the nipple into the barrel, quickly filling the measure of the faucet. The measure being filled, when it is desired to draw the quantity off into a vessel, the lever-arm *K* is turned until the indicator strikes the opposite lug or pin *h*, which revolves the valve *J* upon the disk *B*, closing the openings to the reservoir, as shown in Fig. 4, and revolving the key-plug *E* within the shell, so that its opening *e* registers with the exit-port *G*.

An air-vent *L* is provided in the upper side of the faucet to enable a free flow of liquid into or out of the measuring-chamber when it is being filled or emptied. A shell *l* is placed on the inside of the faucet-chamber, forming a float, which has a rod *m* attached to its upper side, extending up through the opening of the vent, and having a ball or other enlargement on its upper end to hold it from dropping into the chamber. As the liquid rises, the shell-float *l* is carried up thereby, when the measure is filled and closely seals the enlarged opening in the shell of the faucet through which the rod passes. By this form of seal-vent the measure can be quickly filled, when it is desired to measure out a quantity at any one time, much sooner than by requiring the air in the faucet to be forced back through the openings into the reservoir as its place

is supplied by fluid in the spigot. I do not, however, confine this part of my invention to this form of vent, as one of more simple construction may be made by inserting a hole *N* through the shell of the faucet over the key-plug *F*, as shown in Fig. 6, that will register with one through the side of the key-plug when the plug is turned so that the hole *e* will register with the exit-port *G*. This construction of vent enables the air to pass into the chamber of the faucet during the time it is being emptied, and by turning the key-plug to again fill the faucet the vent is closed to prevent the escape of air except by way of the reservoir.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination, with a measuring-faucet having a perforated diaphragm near one end extending across its inner chamber, of a valve of the same size and form as the diaphragm, having openings registering with the perforations, said valve being adapted to turn to open and close the perforations, and a rod connected therewith and extending to the opposite end of the faucet and attached to a key-plug operating within the faucet and screw-cap for opening and closing an exit-port, as set forth.

2. The combination, with a diaphragm across one end of the chamber having holes or perforations around its center, of a valve of the same form as the diaphragm on a rod extending through the diaphragm, provided with openings registering with those in the diaphragm, and a hollow key-plug at the opposite end having a hole in its side secured to the rod and its inner surface smooth with the inner surface of the faucet, said rod being adapted to turn the valve on the diaphragm and the key-plug over an exit-opening in the shell of the faucet, as set forth.

3. The combination, with a measuring-faucet having means at one end of the shell for opening and closing its reservoir-orifices, and a recess in the inner opposite end of the shell, of a hollow key-plug within said recess having its inner wall flush with the unrecessed inner wall of the shell, said plug having a hole in its side adapted to alternately register with an exit-port as the reservoir-orifice is opened and closed, as set forth.

4. The combination, with a measuring-faucet having a perforated diaphragm across its chamber at one end integral with the shell, a turning-valve on the side of the diaphragm, and a hollow key-plug in a recess on the inner wall of the shell at the opposite end, of a screw-cap on the end of the shell in contact with the head of the key-plug, and a rod journaled in the screw-cap and diaphragm and passing through and having secured thereto the valve and hollow key-plug, as set forth.

5. The combination, with a shell having a perforated diaphragm in one end, with a



valve opening and closing the same, and a key-  
plug in a recess in the opposite end of the  
shell registering with an exit-port, of a screw-  
cap on the end of the shell having stop-lugs,  
5 and a rod journaled in the cap and diaphragm  
carrying the valve and key-plug and having  
an indicating-arm thereon working between  
the stop-lugs, as set forth.

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

JAMES H. KELL.

Witnesses:

FRANK ALDRICH,  
E. F. DREW.