(No Model.)

E. W. KELLEY & R. B. SEETON.

FAUCET FOR BEER OR OTHER CASKS.

No. 557,395. Patented Mar. 31, 1896.

Fig: 4.

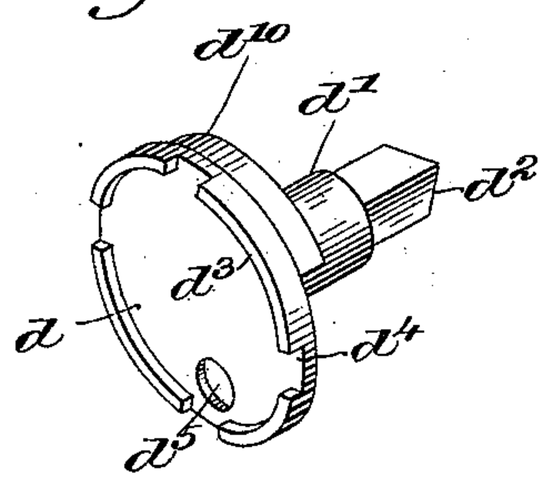


Fig: 1.

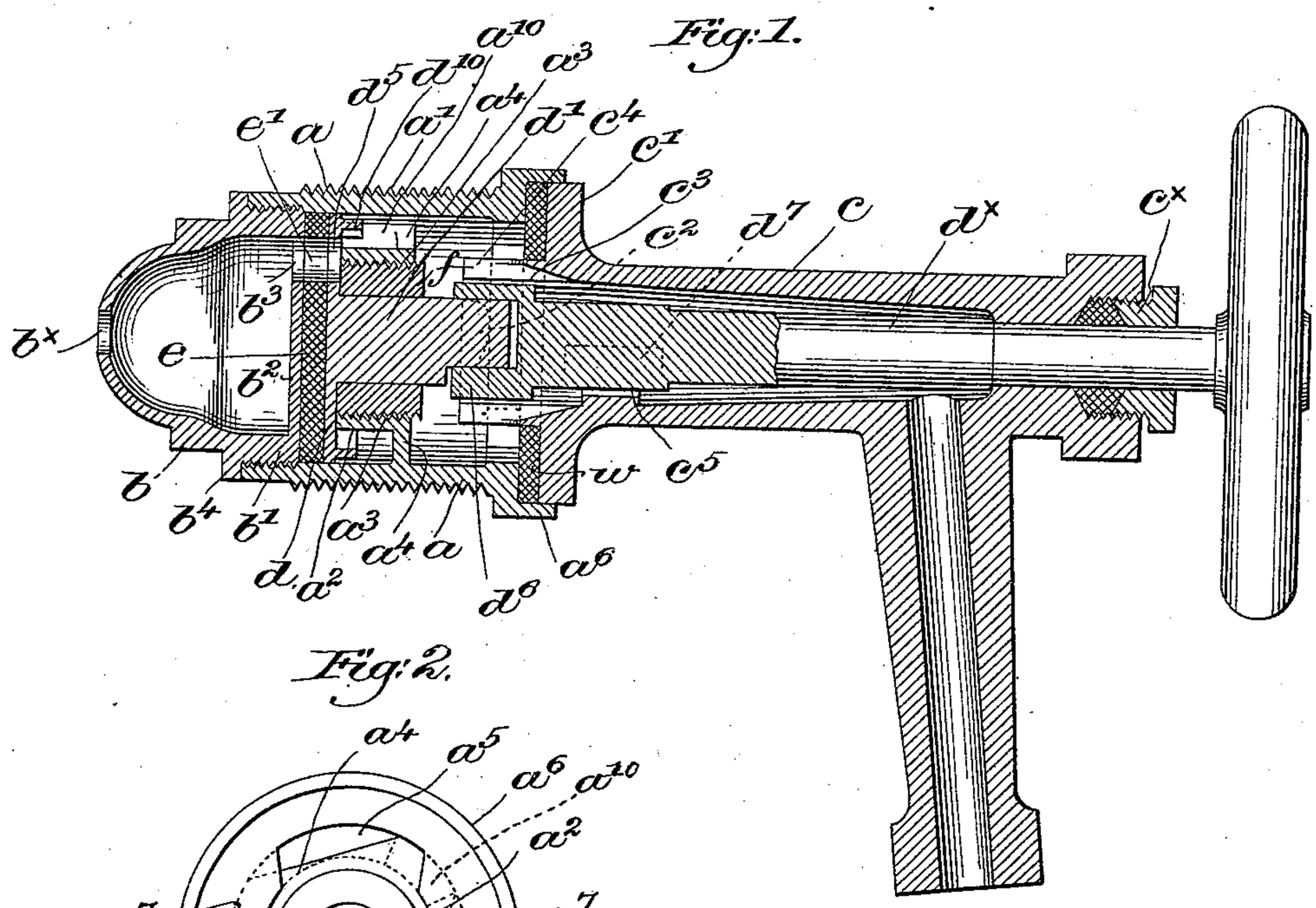


Fig: 2.

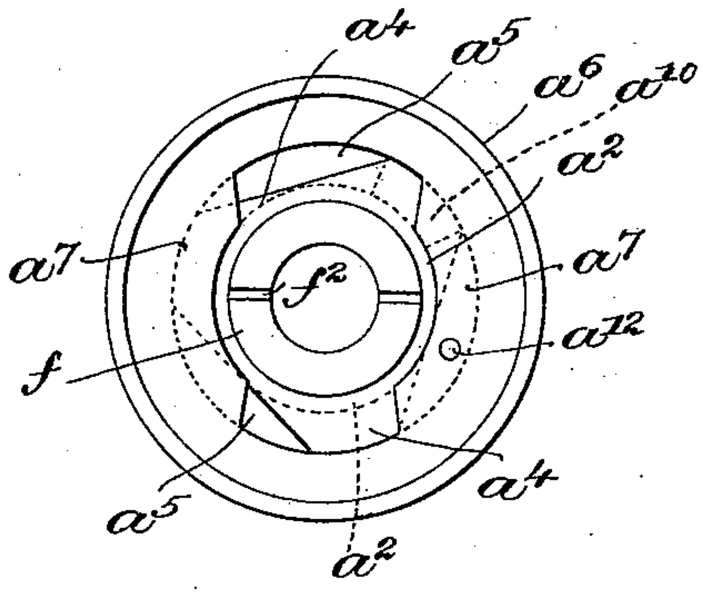
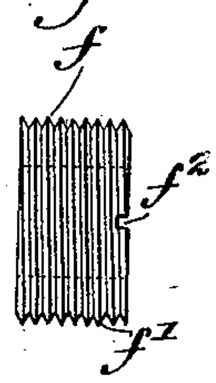


Fig: 3.



Witnesses.
Edward F. Allen.
Thomas J. Summond.

Inventors.
Edward W. Kelley
by Robert B. Seeton.
Crosby Gregory Attys.

UNITED STATES PATENT OFFICE.

EDWARD W. KELLEY AND ROBERT B. SEETON, OF LOWELL, MASSACHUSETTS, ASSIGNORS OF ONE-THIRD TO ANDREW LIVINGSTON, OF SAME PLACE.

FAUCET FOR BEER OR OTHER CASKS.

SPECIFICATION forming part of Letters Patent No. 557,395, dated March 31, 1896.

Application filed June 27, 1895. Serial No. 554,200. (No model.)

To all whom it may concern:

Be it known that we, EDWARD W. KELLEY and ROBERT B. SEETON, of Lowell, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Faucets for Beer or other Casks, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the improvement of that class of faucets wherein the shell is adapted to be screwed permanently into the cask or barrel, the valve being closed completely before the detachment of the removable nozzle.

In this class of faucets a perforated cap is usually threaded into the inner end of the shell, the valve, suitably packed, being rotatively movable between diaphragms on the cap and shell, respectively, a passage in the valve registering with similar openings in the diaphragms when the valve is opened. Usage of such faucets wears the valve and the diaphragms until there is leakage, and to take up such wear it is necessary, so far as we are aware, to remove the faucet from the cask and then tighten the cap on the inner end of the shell. We have overcome this very objectionable feature by providing in the shell a bearing for the valve, which bearing can be adjusted in the shell while the latter is in the cask, to take up wear caused by operation of the valve.

In accordance therewith our invention consists in a faucet constructed and to operate as will be hereinafter described, and particularly pointed out in the claims.

Figure 1 is a longitudinal sectional view of a faucet embodying our invention, showing the valve open and the nozzle and valve-actuator in operative position. Fig. 2 is a face view of the outer end of the shell or casing with the nozzle detached. Fig. 3 is a detached view in elevation of the adjustable valve-bearing, and Fig. 4 is a perspective view of the valve and its stem with the packing omitted.

The shell or casing a, forming the body of the faucet, is externally threaded at a' to screw into the cask or barrel in usual manner, the inner end of the body being interiorly threaded to engage the threaded portion b' of a cap b having a diaphragm or end b^2 perforated at b^3, Fig. 1, the outer end of the cap having one or more openings, as $b^\times$, therein, to permit the contents of the cask or barrel to enter the cap.

Preferably the cap is provided with an annular flange b^4 to rest against the inner end of the body a. A hub or boss a^2 is formed within the body a, having a central opening threaded at a^3 and secured to the inner wall of the body by a web a^4, the said web having openings, as a^5, therein to establish communication between the two ends of the body a. Into the threaded opening of the boss a^2 we insert a sleeve or bushing f, threaded exteriorly at f' and having in its outer end a nick f^2, whereby it may be rotated by means of a screw-driver, or any other suitable device may be used to rotate the bushing. This bushing forms a bearing for the spindle d' of a valve d, the latter resting against the innermost end of the bushing, while the extremity of the spindle is made polygonal in cross-section, as at d^2, Figs. 1 and 2, for a purpose to be described.

Referring to Fig. 4, the face of the valve is provided with an annular flange d^3, notched at d^4 and forming a seat for a suitable packing-disk e, having an opening e' therein to register with a hole d^5 in the valve, and in Fig. 1 the valve is shown in position to afford a free passage for the liquid from the cap b into the body a of the faucet.

The packing e, which may be of leather, rubber, or other suitable material, is peripherally shaped to present ears to enter the notches d^4 and prevent rotative movement of the packing relative to the valve, thereby retaining the openings e' and d^5 always in alinement.

The bushing f is first screwed into the hub or boss a^2, and then the valve is put in place with its spindle extended through the bushing, and the cap b is screwed onto the inner end of the body a until it bears with sufficient force upon the packing to make the valve tight, while permitting rotative movement thereof. The faucet is then screwed into the cask or barrel and is ready for use. Constant use wears down the packing, and it must be either renewed or such wear compensated for,

and we accomplish this compensation without removing the faucet from the barrel by removing the nozzle, and with a suitable screw-driver or other device we rotate the bushing in the threaded boss a^2 until the valve is moved toward the end b^2 of the cap with sufficient force to stop any leakage. This can be done from time to time, as necessary, until the packing is worn down too thin for further use.

It will be obvious that rotation of the valve about its longitudinal axis will move the openings e' and d^5 out of alinement with the opening b^3 in the end of the cap, so closing the valve, reverse movement opening the latter.

The outer end of the body a is provided with an annular lip a^6 and has two undercut segmental flanges a^7, (see Fig. 2,) forming one part of the nozzle-coupling.

The nozzle c is annularly flanged at its inner end at c' and has a reduced portion to enter the central opening formed by the flanges a^7 of the body, ears c^2 (see dotted lines, Fig. 1) on the reduced portion entering the cut-away portions between the flanges, so that partial rotation of the nozzle c into the position shown in Fig. 1 will carry the ears underneath the flange to rigidly couple or hold the nozzle in place.

A suitable washer w is closely pressed against the body within the flange a^6 by the flange c' on the nozzle to prevent leakage at such point.

The polygonal portion d^2 of the valve-stem is adapted to enter a correspondingly-shaped recess in the inner end d^6 of the valve-actuator $d^\times$, (shown in Fig. 1 as extended through the nozzle c and a suitable stuffing-box $c^\times$,) the part c^3 of the nozzle forming a bearing for the inner end of the valve-actuator and being slotted at c^4 to permit the passage of the fluid when the valve is open. A shoulder c^5 on the interior of the nozzle is adapted to engage at times with a projection or lug d^7 on the valve-actuator, the shoulder and lug being so located relatively that when the nozzle is coupled to the body a the actuator may be rotated sufficiently to open the valve, as shown and described in another application, Serial No. 526,912, filed by Edward W. Kelley.

When the nozzle is detached, it is given about a quarter of a turn, or until the ears c^2 can be withdrawn, and if the valve has not previously been closed by rotation of the actuator the shoulder c^5 will engage the lug d^7 on the actuator and turn the latter therewith until the valve is closed.

We have not herein claimed the nozzle and actuator broadly, nor the method of connecting the same to the body of the faucet, as the same is made the subject-matter of our other said application referred to.

The rotative movement of the valve is limited by means of a segmental lip or flange d^{10} (see Figs. 1 and 4) on the outer side of the valve, the space between the ends of said lip being entered by an extended part a^{10} of the web.

If desired, a pin a^{12} (see dotted lines, Fig. 2) may be inserted in one of the segment flanges a^7 to project beneath it and limit the movement of the nozzle when the same is coupled to the body of the faucet.

While we have herein shown only one opening in the valve and packing to coöperate with a single opening in the end of the cap, it is obvious that we may provide both the valve and the cap with a plurality of openings, provided a sufficient space be left between them to close the valve by partial rotation of the latter.

We claim—

1. In a faucet, a shell or body, an adjustable bearing therein, a rotatable valve having an opening in it and supported by the bearing, and a removable cap having a perforated end to contact with the valve, longitudinal adjustment of the bearing pressing the valve against the cap, combined with a valve-actuator, and a detachable nozzle, substantially as described.

2. In a faucet, a shell or body, an adjustable bearing therein, a rotatable valve having a fluid-opening and supported by said bearing, means to limit the rotation of the valve, and a removable cap having a perforated end to contact with the valve, longitudinal adjustment of the bearing pressing the valve against the cap, combined with a detachable nozzle, and an actuator for the valve, substantially as described.

3. In a faucet, a shell or body, a boss therein, a longitudinally-adjustable tubular bearing threaded into the boss, a rotatable perforated valve having a spindle extended through the bearing, and a removable cap having a perforated inner end contiguous to the valve, combined with a valve-actuator, and a detachable nozzle, adjustment of the bearing pressing the valve against the end of the cap, substantially as described.

4. In a faucet, a shell or body, an adjustable tubular bearing therein, a rotatable perforated valve having a spindle extended through the bearing, a seat on the face of the valve, and a packing retained in the seat and perforated to register with the valve, combined with a removable cap having a perforated end contiguous to the packing, adjustment of the bearing pressing the packing against the end of the cap, a detachable nozzle, and an actuator for the valve, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

EDWARD W. KELLEY.
ROBERT B. SEETON.

Witnesses:
JOHN W. STOTT,
JOHN E. BASSETT.