No. 649,148. Patented May 8, 1900.

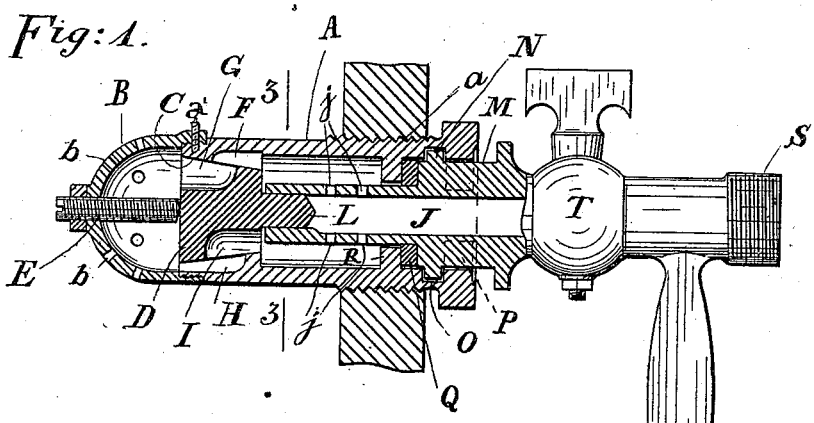
I. WASSERSTROM.

BARREL TAP.

(Application filed Aug. 30, 1899.)

(No Model.)

Fig: 1.



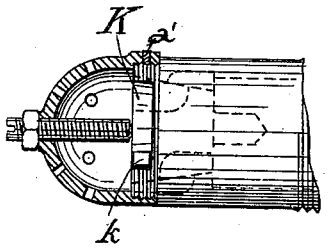


Fig: 2.

Fig: 3

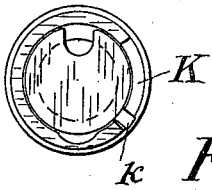


Fig: 4.

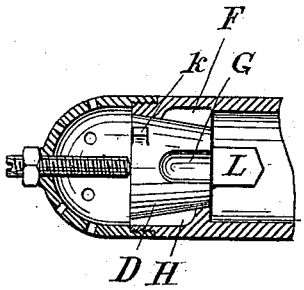


Fig: 5.

Witnesses:
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UNITED STATES PATENT OFFICE.

IGNATZ WASSERSTROM, OF NEW YORK, N. Y.

BARREL-TAP.

SPECIFICATION forming part of Letters Patent No. 649,148, dated May 8, 1900.

Application filed August 30, 1899. Serial No. 728,951. (No model.)

To all whom it may concern:

Be it known that I, IGNATZ WASSERSTROM, a citizen of the United States, residing at the borough of Manhattan, in the city and county of New York and State of New York, have invented new and useful Improvements in Barrel-Taps, of which the following is a specification.

This invention relates to tapping devices for barrels containing liquids under high pressure—such as beer, ale, and other fermented or distilled liquors—such as described and illustrated in my former patent, No. 579,354, dated March 23, 1897; and my present improvement consists in certain devices and arrangement of parts in conjunction with said former patent, rendering the article in question more positive and convenient in operation.

With these objects in view I will proceed to describe my invention, reference being had to the accompanying drawings, wherein—

Figure 1 is a longitudinal section of a tap embodying my invention. Fig. 2 is a partial view thereof, partly in section. Fig. 3 is a transverse sectional view taken on the line 3 3 of Fig. 1. Fig. 4 is an end view with the cap-piece removed, and Fig. 5 is a partial view more clearly showing the plug-valve.

In said figures, A indicates a bushing having an exterior screw-thread *a*, by which it may be securely fastened in the bung-hole of the barrel. Removably attached to the inner end of the bushing is a cap-piece B, having a series of ports *b* for percolation of liquid. A beveled valve-seat C is provided within the bushing near its inner end, and within said valve-seat is rotatably mounted a correspondingly plug-shaped valve D. The smaller end of this tapered plug-valve, it will be seen, lies toward the outer end of the bushing. Therefore the pressure of liquid on the outer end of said plug-valve will tend to force the valve tightly into its seat.

To prevent displacement of the plug-valve D, I employ a screw E, which engages in a tapped hole in the cap B and impinges against the inner end of the plug-valve. At one side the valve D is provided with a port G, which extends from communication within the interior of the cap B and is adapted for communication with a port F, formed in the wall of the valve-seat and having communication with the interior of the bushing. The opposite side of the valve D is provided with a port I, which extends from the interior of the bushing and is adapted for connection with a port H, formed in the wall of the valve-seat and having communication with the interior of the cap B.

It will be seen that the ports F and G extend, respectively, from opposite sides of the plug-valve and terminate intermediate the ends of the valve and that the ports H and I extend from opposite ends of the valve-seat and terminate intermediate the ends thereof. By turning the plug-valve to the position shown in Fig. 1 the liquid may flow out through the ports F and G and H and I and enter a tubular key J, which latter has ports *j* through its wall, forming a passage-way between its interior and the bushing.

A recess K is formed near the peripheral edge of the valve-seat, and a lug or abutment *k*, which projects laterally from the plug-valve at its outer end, is arranged to lie within said recess, whereby the rotary movement of the plug-valve within its seat is limited in both directions by said lug *k* coming in contact with the shoulders formed at each end of the said recess K. The recess K is so located with relation to the ports F and G and the lug *k* is also so situated upon the plug-valve with relation to the ports H and I that when said lug *k* lies against one of the shoulders of recess K the ports F and G and H and I are in registration with each other, and an open passage-way is thus afforded for the liquid, and when the lug *k* has been moved through the recess and is in contact with the opposite shoulder of the recess then the ports F and H have been turned away from the ports G and I and the passage-ways for liquor are closed.

From the inner end of the plug-valve D a lug L extends inward. This lug L is made angular in cross-section to be engaged by the correspondingly-shaped end of the tubular key J. This key J has an enlarged portion M designed to engage in the outer end of the bushing, and it is provided with opposite

wings N, which may pass through opposite recesses O, and when the key is turned may engage against the interior flange portions P of the bushing, and thus secure the key in place.

Mounted on the tubular key J and bearing against the inner end of the enlarged portion M is a washer Q of yielding material—such, for instance, as rubber—and designed to engage against an annular flange R within the bushing. The outer end of the key J is provided with a screw-thread S to be engaged with a coupling for a pipe leading to a discharge-faucet. An auxiliary faucet T is also provided upon the tubular key J. I further provide a set-screw a', which passes through the flange of the cap B and into the bushing A to secure the former upon the latter and prevent its coming loose.

In operation when the key is inserted and its inner end engaged with the lug L upon turning the key in one direction the ports in the plug-valve will be brought into registration with the ports in the bushing and the passage-ways opened for the flow of liquid. By this operation and the turning movement of the key having been limited by contact of the lug k with one of the shoulders of the recess K the opening operation is rendered positive and the key is prevented from withdrawal by engagement of its wings N within recesses O. In order to withdraw the key, it is positively necessary to again shut off the passages for the flow of liquid by turning the key until the lug k is in contact with the opposite shoulder in the recess K, whereby the wings N of the key are freed from the recess O, and then the said key may be withdrawn after having positively closed the passage-ways.

In my former patent, No. 579,354, no means were shown for positively setting the plug-valve upon withdrawal of the key, and hence it happened frequently that said plug-valve remained partly open when the key was withdrawn, leading to inconvenience and the loss of liquid and also rendering it a difficult matter to again register the key therewith upon reinsertion. Therefore I have devised a means remedying this deficiency and perfecting my invention in the manner herein shown and described.

I claim—

A barrel-tap comprising a bushing to be engaged in the bung-hole of a barrel, a tapered valve-seat in the inner end of said bushing, having ports in its opposite sides extended respectively from opposite ends of said valve-seat to a point intermediate its ends, and a recess in said valve-seat, together with a plug-valve mounted to rotate in said valve-seat and having ports in its opposite sides extended respectively from opposite ends to points intermediate of the ends, a lug upon said valve arranged to lie within the recess in the valve-seat and to limit the rotation of said valve by the extent of the recess, and a key for turning the valve, substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

IGNATZ WASSERSTROM.

Witnesses:
L. T. SULLIVAN,
C. A. PETTIE.