(No Model.)

M. Z. FARRINGTON.

TAP AND FAUCET.

No. 496,301. Patented Apr. 25, 1893.

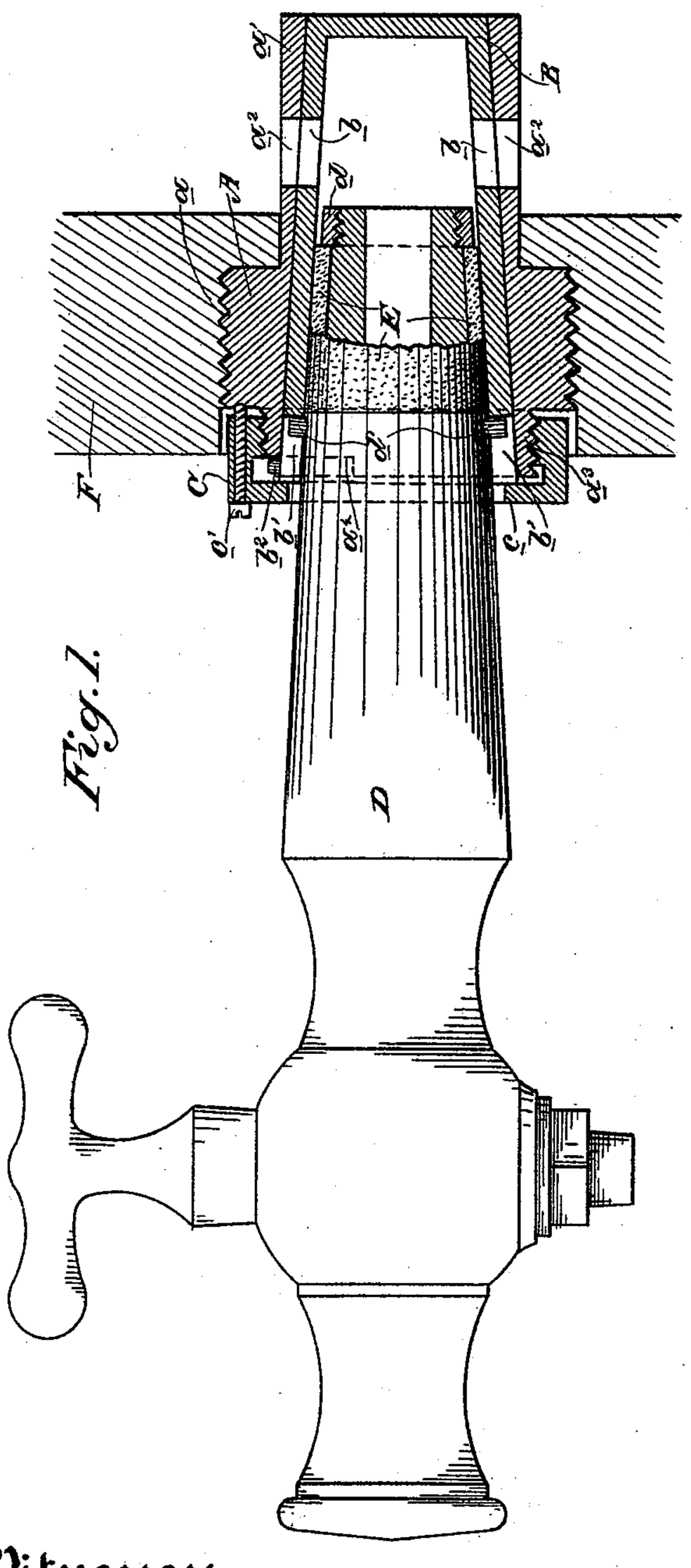

Fig. 1.

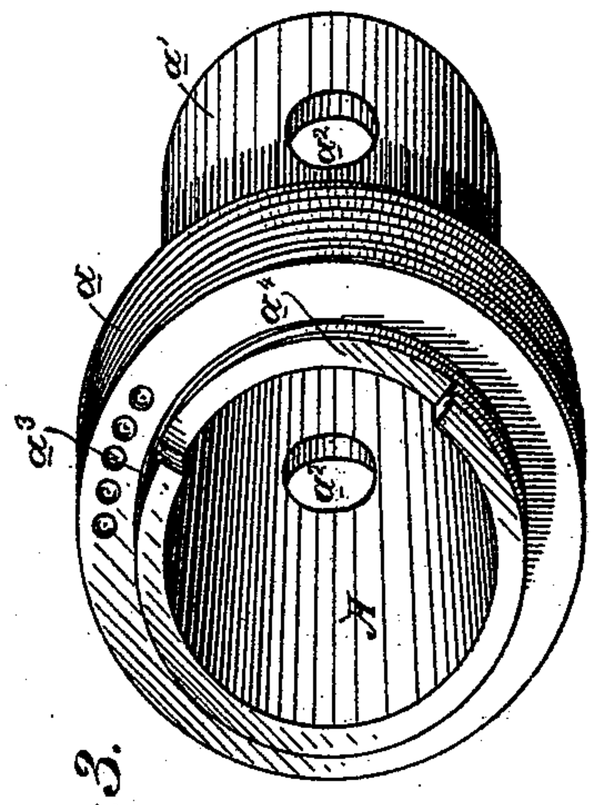

Fig. 3.

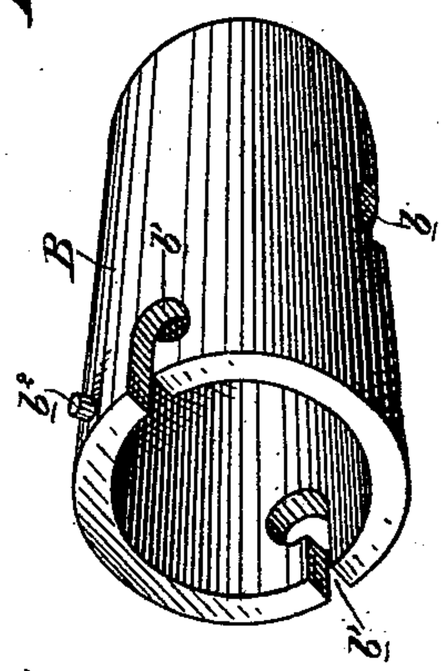

Fig. 2.

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UNITED STATES PATENT OFFICE.

MATTIE Z. FARRINGTON, OF SAN FRANCISCO, CALIFORNIA.

TAP AND FAUCET.

SPECIFICATION forming part of Letters Patent No. 496,301, dated April 25, 1893.

Application filed September 9, 1892. Serial No. 445,452. (No model.)

To all whom it may concern:

Be it known that I, MATTIE Z. FARRINGTON, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Taps and Faucets; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of taps and faucets in which the permanently seated bushing is controlled by a rotary plug which is operated by the faucet pipe removably engaging therewith.

My invention consists in the novel constructions, combinations and arrangements of the several parts which I shall hereinafter fully describe and specifically point out in the claims.

The object of my invention is to provide a simple, economical and effective tap and faucet adapted for use with any liquid containing vessel, but more especially applicable to beer kegs.

Referring to the accompanying drawings for a more complete explanation of my invention,—Figure 1 is a longitudinal section of my tap and plug the faucet pipe being in part elevation and part section. Fig. 2 is a perspective view of the plug. Fig. 3 is a perspective view of the bushing.

A is the hollow bushing. It has exterior threads a by which it is seated, a rearwardly extending portion a' provided with inlet ports a^2 in its sides, and a forwardly extending externally threaded flange a^3 of reduced diameter and provided with a long notch a^4 in its edge.

B is the hollow rotary plug. In its sides, near its rear end, are the inlet ports b. In its front edge are the notches b' made with a straight portion inwardly from the edge and joining a foot portion at an angle or curve, the whole being somewhat of a J shape. From one side, near its front edge, projects the limiting pin or stop b^2. The plug is seated and is adapted to be oscillated within the bushing. Its ports b by the axial movement of said plug are adapted to be moved into and out of alignment or coincidence with the ports a^2 of the bushing. When in alignment the liquid can pass into the plug. When out of alignment the liquid has no outlet. The stop b^2 of the plug plays in the notch a^4 of the bushing and by contact with its end walls determines the open and closed positions of the ports.

C is a gland nut for holding the plug in its seat. It consists of an internally threaded annular band or ring having an inwardly extending flange c. It screws over the externally threaded flange a^3 of the bushing, and its flange c partially covers and bears on the forward edge of the plug, thus confining said plug, but leaving exposed the entrances to its angular or curved notches b'. To hold the gland in place, a small set screw c' may be used, passing through its front and engaging suitable sockets in the tap.

The aperture or seat in the wood or other material F of the liquid containing vessel is made with a large front portion to receive the threaded portion a of the tap, and a reduced back portion to receive the back portion a' of said bushing, said back portion a' extending within the vessel sufficiently to expose its ports therein. The gland nut is partially or wholly let into the seat in the wood so that it is flush or nearly so with the outer surface. I prefer to have it project slightly so that it can be readily turned, and to insure its turning its exterior diameter is, as shown, appreciably smaller than the seat in the wood, whereby no impediment is presented to its turning. This turning is of advantage not only in providing for the entire removal of the gland and the plug when necessary, but, in connection with a feature which I shall now describe, is of importance.

Although the interior of the bushing and the exterior of the plug might be made perfectly cylindrical throughout their lengths, it is better that they should be made conical or tapering as I have shown them. This, not only insures a better fit, but also provides for compensating for the wear, by enabling the plug to be tightened into its seat when it becomes loose. This tightening is effected by setting up the gland which, bearing on the plug front, forces it back in its seat, to make a perfect fit at all times, thus taking up the wear.

D is the faucet pipe. Its rear end is reduced and its extremity is externally threaded. Upon the reduced portion is seated a tapering washer E of suitable material, which is

held and tightened to place by a nut d seated on the threaded end of the pipe. Upon each side of the faucet pipe, just in advance of the washer E, are the projecting lugs d'. The faucet end is inserted through the open center of gland C, and enters the open forward end of plug B, said plug being interiorly tapered. Its washer fits closely therein and makes a tight joint. The lugs d' enter the notches b' of the plug and when the faucet is first turned these lugs pass sidewise into the feet of the notches and thereby complete the engagement of the faucet with the plug. Continued movement of the faucet will now turn the plug, until the stop b^2 is limited by the end wall of notch a^4, at which time the ports a^2 of the bushing and the ports b of the plug are in alignment, and the liquid can flow through the bushing, plug and faucet to its discharge. In this position the faucet cannot be removed from the plug, for its lugs d' are in full engagement with the notches b' of the plug. Therefore, as long as the ports are open the faucet must remain and the discharge is wholly controlled by the faucet valve. To remove the faucet it must be turned back again. It fits so closely in the plug, and the engagement of its lugs d' with the foot portion of the notches b' is such that this backward movement of the faucet turns the plug back which movement continues until the stop b^2 is limited by contact with the other end wall of notch a^4, at which time the ports are closed. Then a further movement of the faucet will remove its lugs from their engagement with the foot portions of notches b' whereupon said faucet can be withdrawn. Thus the bushing can be opened only by the insertion and retention of the faucet, and the latter can be removed only upon the closing of the tap.

The interior of the plug is made conical or tapering as shown and the washer E is similarly tapered whereby a perfect fit is made and there is no leakage.

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

1. A tapping faucet consisting of an interiorly tapered hollow bushing with side ports in its inner portion, the exteriorly tapered oscillatory hollow plug seated in said bushing and having the side ports in its inner portion, said plug having the J-shaped notches in its outer end, the annular gland nut seated upon the outer end of the bushing and partially overlapping and bearing on the outer end of the plug, and the faucet pipe adapted to enter said plug and having lugs engaging the J-shaped notches thereof, substantially as herein described.

2. A tapping faucet consisting of an interiorly tapered hollow bushing with side ports in its inner portion, and the long notch a^4 in its outer end, the exteriorly tapered oscillatory hollow plug seated in said bushing and having the side ports in its inner portion, the J-shaped notches in its outer end and the stop b^2 playing in the long notch of the bushing, the annular gland nut seated upon the outer end of the bushing and partially overlapping and bearing on the outer end of the plug, and the faucet pipe adapted to enter said plug and having lugs engaging the J-shaped notches thereof, substantially as herein described.

3. A tapping faucet consisting of an interiorly tapered hollow bushing with side ports in its inner portion, and a long notch a^4 in its outer end, the exteriorly tapered oscillatory hollow plug seated in said bushing and having the side ports in its inner portion, the J-shaped notches in its outer end and the stop b^2 playing in the long notch of the bushing, the annular gland nut seated and turnable upon the outer end of the bushing and partially overlapping and bearing on the outer end of the plug, said nut projecting from the face of the seat in which the bushing is fitted, the set screw in said nut bearing on the face of the bushing, and the faucet pipe adapted to enter the plug and having lugs engaging the J-shaped notches thereof, and a washer on its inner end, substantially as herein described.

In witness whereof I have hereunto set my hand.

MATTIE Z. FARRINGTON.

Witnesses:
S. H. NOURSE,
J. A. BAYLESS.