

(No Model.)

J. McKENZIE.

TAPPING BUSH FOR BARRELS.

No. 397,377.

Patented Feb. 5, 1889.

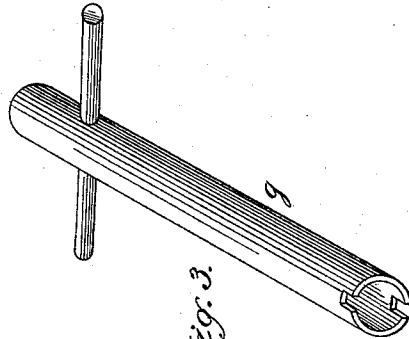


Fig. 3.

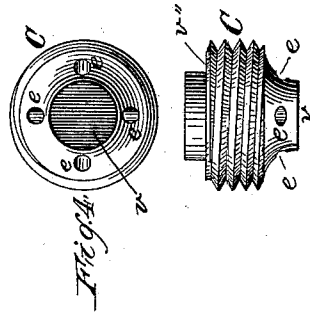


Fig. 4.

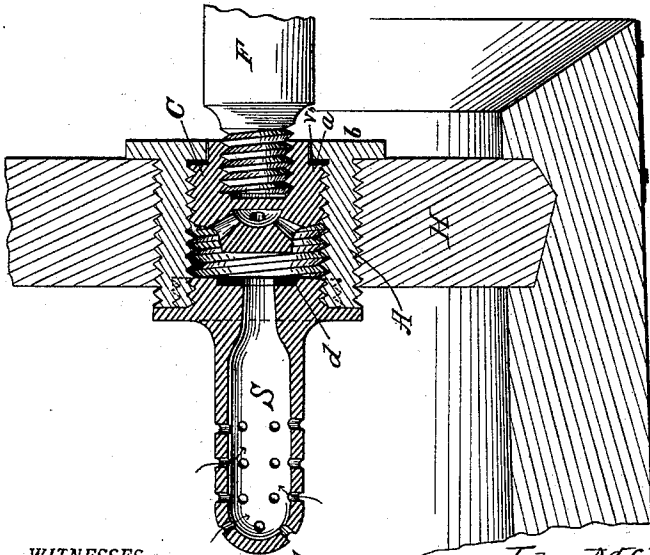


Fig. 5.

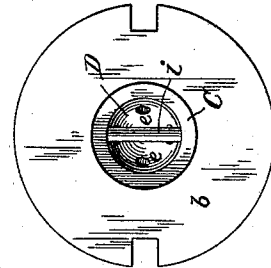


Fig. 6.

WITNESSES:

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TAPPING-BUSH FOR BARRELS.

SPECIFICATION forming part of Letters Patent No. 397,377, dated February 5, 1889.

Application filed May 9, 1888. Serial No. 273,339. (No model.)

To all whom it may concern:

Be it known that I, JOHN MCKENZIE, a citizen of the United States, residing at West Troy, in the county of Albany and State of New York, have invented certain new and useful Improvements in Tapping-Bushes for Barrels, &c.; 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.

This invention relates to a tapping or connecting bush or bung for barrels, kegs, tanks, tubs, &c., and is designed more particularly for use in connection with faucets on beer-kegs, so that the faucet or beer-cock may be inserted in a simple manner without resort to the customary method of driving the wooden bung into the barrel or keg by hammering the faucet against it—an operation which nearly always is accompanied by more or less splashing and waste of the contents of the vessel.

My invention comprises a permanent bushing screwed or otherwise fastened into the keg or other vessel, and provided at its front and back with an internal valve-seat, and having intermediate a double-ended valve provided with escape-ports between the valves, and means for setting either of said valves down on its corresponding seat, said valve being wholly within the bushing.

My invention further consists in the combination and arrangement of parts, all substantially as hereinafter more fully described and claimed.

In the drawings which form part of this specification, Figure 1 is a sectional view illustrating the application of the invention to a beer-keg. Fig. 2 is a face view of the device as it appears before the insertion of the faucet; Fig. 3 is a perspective illustrating a tapping-tool to be used by the brewer in cleaning the kegs. Fig. 4 shows a plan and elevation of the threaded double valve.

More particularly the invention is as follows: I construct the bushing A with an external thread and a flange, b, the bushing being of sufficient length to substantially clear the head H of the keg. At its front the flange b is continued inwardly, and is provided on

its inner surface with the valve-seat *a*. The inside of bushing A is formed with a left-hand thread, and its inner end is closed by the strainer S, which is formed with the valve-seat *d* on the surface which extends inside the bushing. Before placing the strainer S in position by screwing it into the bushing I insert the double valve C, which is threaded with a left-hand thread corresponding with the interior of the bushing. On its inner end the valve C is tapered off or cut away circumferentially, and at the cut-away portion is perforated with a number of openings, which lead into the interior of the socket D, which is formed in the valve-piece from the outside, as shown, and is provided with a right-hand thread for the reception of the faucet. The perforations *e* form a communication at the proper time between the interior of the vessel and the faucet, as will be seen.

To facilitate the setting of the valve into closed position for shipment or handling previous to the insertion of a faucet, I form the socket D with a cross-bar, *i*, adapted to interlock with a hand-wrench, *g*, which serves to screw the valve inwardly until the valve-face *v* comes to a bearing on its seat *d*, which closes all communication between the interior and exterior of the vessel through the strainer S, so that in this condition there is no outlet possible.

When it is desired to tap a barrel fitted in this manner, I take the faucet F, which is formed with a right-hand thread fitting the socket D, and screw it into said socket until it becomes tight and will not go any farther. I then apply more force in the same direction to the faucet F, and the force overcomes the friction of the threaded valve C between its valve-face *v* and its seat *b*, and the continuation of the rotation draws the valve *v* away from said seat, thereby opening the communication into the interior of the faucet, and at the same time causing the valve *v''* to become seated on its seat *a*, whereupon the contents of the vessel can pass through the strainer, through the perforations *e*, and thence through the faucet.

It is obvious that before screwing the faucet into position in the manner described it is desirable to have its own valve closed, so

that on establishing communication the contents will not rush out through the faucet itself. The required operation is merely the rotation of the faucet a few revolutions, and occupies but a trifle of time, and during such operation there can be no possible splashing or spilling of the contents of the vessel.

I have shown two valves and their valve-seats as being of the "compression" type; but I do not confine myself to this form, as the specific form of valve may be varied. Obviously, of course, there may be a variety of modifications of the cross-bar *i* and the wrench *g* for effecting the movement of the valve without using a faucet for that purpose. Again, the special form given the flange *b* may be varied in several well-known ways for the application of different forms of wrenches in order to screw it firmly into the cask or keg.

The strainer portion may be formed with a right-hand thread, if desired, so that in the rotation of valve *C* in the act of seating it on the inner valve-seat, *b*, there will be no tendency to loosen the seat *b* and strainer. In that event it would be necessary to slightly enlarge the inner diameter for the formation of the right-hand thread in order to permit the entering of the left-hand threaded valve, *C*, into the bushing proper, as indicated at Fig. 1 by the dotted lines.

The applications of the invention are numerous besides the use on beer-kegs—for instance, oil-barrels, sirup-casks, various tanks, tubs, and vats, and in some cases a hose or pipe can be used instead of a faucet for the transfer of liquid from one vessel to another. In some cases the strainer *S* will not be required, and in that event the device will appear as if (in Fig. 1) the strainer were cut off just behind the seat *b*.

It will be observed that both the valve-seats and both the valve-faces of the valve-piece *C* are entirely within the bushing *A*. The latter at its inner end is closed by the strainer-piece *S*, and therefore all liquid passing either of the valve-seats is strained before reaching

them, and there is no possibility of obstructions coming to rest between the valves and their seats. Furthermore, all screw-threads by which the valves are operated are also entirely within the bushing, and are therefore absolutely preserved against damage or obstructions.

I claim as my invention—

1. A tapping or connecting device consisting of an internally-threaded bushing with valve-seats at its inner and outer ends and a double-ended valve fitted to screw in said bushing, and having a socket in its outer end communicating with ports in said valve between the ends thereof, said socket having a thread of opposite character to that of the valve, whereby the screwing of a faucet fitting into said socket or out of same acts to seat or unseat one of the other of the valves.

2. The tapping or connecting device consisting of the internally-threaded bushing *A*, having the two internal valve-seats *a* and *d* wholly within said bushing, and the valve-piece *C*, threaded internally and externally, and having at its ends the respective valve-faces *v* and *v''*, and intermediate ports, *e*, communicating with the outer end of valve-piece *C*, the said valve-piece being shorter than the interior of the bushing and adapted to move back and forth therein.

3. The tapping or connecting device consisting of the internally-threaded bushing *A*, having seat *a*, plug or strainer *S*, having center-ported seat *d* and externally-threaded valve-piece *C*, having the valve-faces *v* and *v''* and intermediate ports, *e*, and constructed at its outer end with the socket *D*, reaching to said ports *e* and having an internal thread of opposite character to that in the bushing, substantially as described.

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

JOHN MCKENZIE.

Witnesses:

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JAMES ANDREWS.