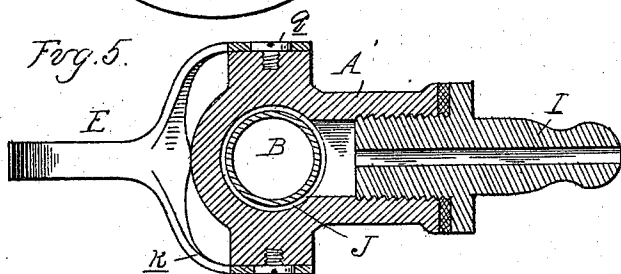
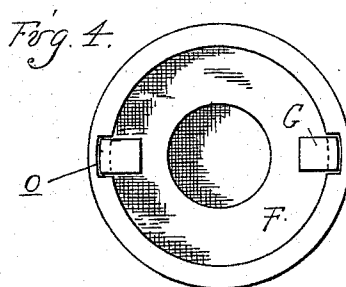
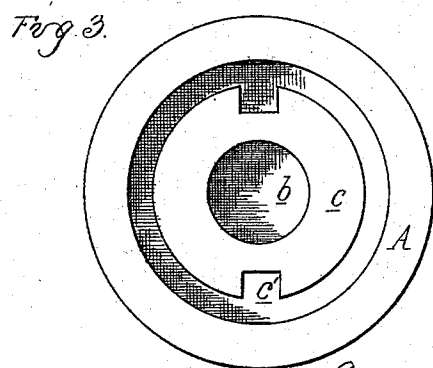
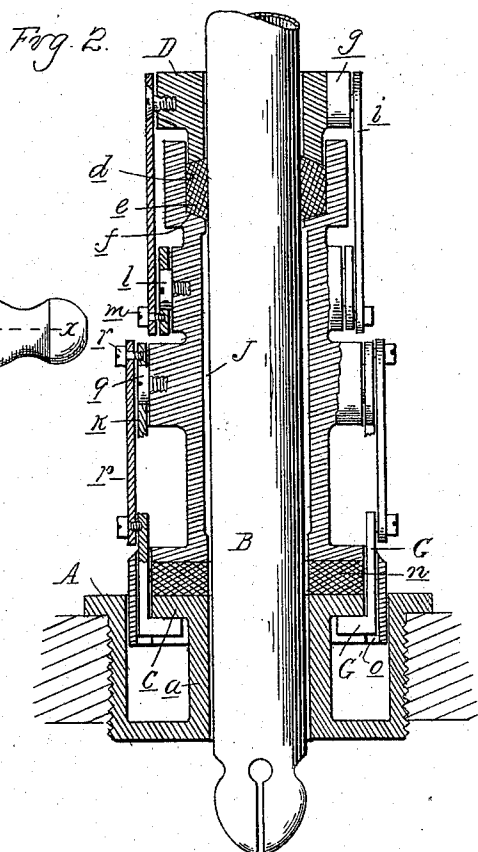
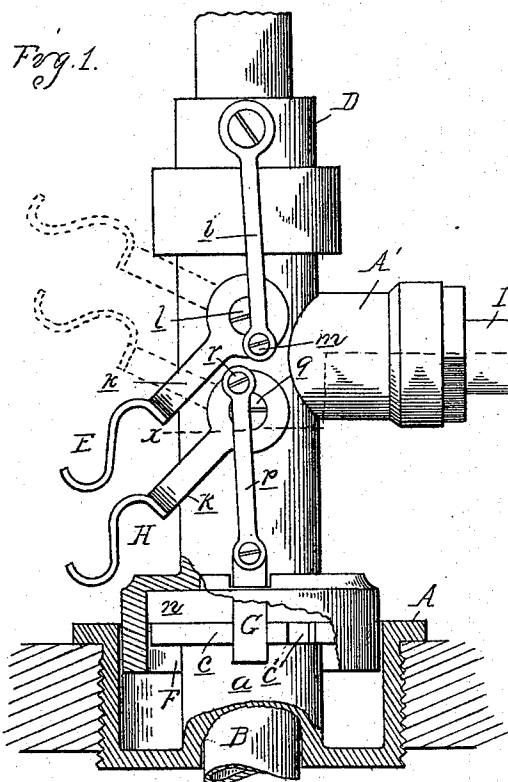


(No Model.)

A. FISCHER.
TAP AND BUSHING.

No. 573,867.

Patented Dec. 29, 1896.



Witnesses
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UNITED STATES PATENT OFFICE.

ALBERT FISCHER, OF DETROIT, MICHIGAN, ASSIGNOR TO THE AMERICAN
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TAP AND BUSHING.

SPECIFICATION forming part of Letters Patent No. 573,867, dated December 29, 1896.

Application filed February 3, 1896. Serial No. 577,912. (No model.)

To all whom it may concern:

Be it known that I, ALBERT FISCHER, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in a Tap and Bushing, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to that class of devices for tapping beer-barrels, casks, &c., in which a tap-tube slidably passes through a coupling-sleeve and which is adapted to be connected with a similar coupling member on the bushing secured in the barrel; and the invention relates more particularly to an improved construction, arrangement, and operation of the coupling-sleeve of the tap, all as more fully hereinafter described, and shown in the accompanying drawings, in which—

Figure 1 is a sectional elevation of the tap and bushing coupled together. Fig. 2 is a central section thereof at right angles to the plane in Fig. 1. Fig. 3 is a plan of the bushing. Fig. 4 is an end elevation of the coupling-sleeve of the tap. Fig. 5 is a horizontal section on line *x x*, Fig. 1.

A represents a screw-threaded bushing secured into the barrel and formed with a central nipple *a*, apertured to form the tap-hole *b* into the barrel and formed with segmental annular flanges *c*, surrounding the top of the nipple, whereby said nipple forms a coupling member for the tap, all substantially as heretofore shown and described in Letters Patent Nos. 530,703 and 542,063, except that the flanges *c* are preferably of even thickness, instead of forming interrupted screw-threads on the under side, as shown in above Letters Patent.

B is the tap-tube, which is the same as heretofore in use in taps of this character. This coupling-sleeve I provide at its upper end with an annular recess *d*, extending around the tap-tube and containing an elastic packing-ring *e*, seated against a shoulder *f* on the bottom of the recess. Into the upper end of this recess slidably engages a follower-sleeve D, which is adapted to bear against the upper end of the elastic packing and thereby serve as a means for compressing the same.

To this end the follower-sleeve has pivotally secured to it at diametrically opposite points *g* the straps *i*, which connect it with the forked ends of a locking-lever E. The latter is provided upon its free end with a suitable finger or hand hold, and its forked ends *h* embrace the coupling-sleeve and are fulcrumed thereto at diametrically opposite points in any suitable manner. The straps *i* are pivotally secured to this locking-lever eccentrically to the fulcrum at *m*, and the construction and operation of these parts is such that the lever E is free to be moved from its dotted position into the position shown in full lines, and if so moved it compels by its elbow leverage the follower-sleeve D to press upon the elastic ring *d* and thereby compact it around the tap-tube B to form a tight packing for the same. At the same time the pivotal points *n* of the straps *i* have been carried over the fulcrum *l* of the lever, and the latter is thereby firmly locked.

When the lever E is thrown by the operator into the dotted position, the pressure upon the elastic ring *d* is released and thereby permits of a freer sliding movement of the tap-tube in the action of tapping than it would have if the tap-tube would have to be pushed through a normally tight packing, as in the former constructions.

My improvement also saves the wear and tear on the packing occasioned by the insertion of the tap-tube into the tap-hole of the bushing.

The inner end of the coupling-sleeve is suitably enlarged to form a recess F for the reception of the nipple *a*, and on the bottom of this recess is placed a gasket *n* for the face of the nipple to seat against. In the wall of this recess are formed upon diametrically opposite sides slots *o*, which form longitudinal guide-bearings for two sliding coupling-bars G, which have lateral offsets G', adapted to engage on the segmental flanges *c* of the nipple *a*.

The sliding coupling-bars G are firmly guided in the slots *o* and have their outer free ends pivotally connected by means of straps *p* to a locking-lever H.

The locking-lever H is similar to the lever E. It has forked inner ends, which embrace

the coupling-sleeve and by means of which it is fulcrumed at *q* to the coupling-sleeve at diametrically opposite points in line with the sliding coupling-bars *G*, and the straps *p* are

5 eccentrically connected thereto at *r*.

In the operation of coupling the lever *H* is first raised to the position shown in dotted lines, which is as far as it will go. Then the coupling-sleeve is engaged with the nipple *a*
 10 by passing the offsets *G'* through the intervals *c'* on the nipple and then turning the sleeve until these offsets engage under the flanges *c* of the nipple. When this is done, the mere depressing of the lever *H* into the
 15 position shown in full lines completes the coupling by drawing the coupling members firmly against each other and locking the lever *H* in position as the pivotal connections
 20 *r* of the straps *p* pass over the fulcrum of the lever *H*. This coupling device has the advantage that it is not in any way liable to injure the gasket *n*, whereas in the above-named Letters Patent, wherein a screwing
 25 movement of the coupling-sleeve is required, the packing-ring or gasket (which is usually made of rubber) is often torn or twisted and makes it more difficult to produce a tight joint.

My improved construction also has the advantage that it is less liable to become accidentally loosened or detached, and it may be mentioned that it can be used equally as well with the bushing shown and described in the
 30 above-mentioned Letters Patent.

35 The coupling-sleeve is provided with the usual vent-nozzle *I*, secured into a lateral branch *A'* of the coupling-sleeve and communicating therethrough with the annular space *J*, provided for between the tap-tube and the interior wall of the coupling-sleeve.
 40

What I claim as my invention is—

1. In a tap and bushing, the combination with a bushing and nipple provided with interrupted coupling-flanges, of a tap compris-

ing a tap-tube and a coupling-sleeve formed with a recess adapted to receive the nipple of the bushing and form a seat therefor and sliding coupling-bars in the walls of the recess to engage with the flanges of the nipple, and a lever fulcrumed on the coupling-sleeve and having pivoted actuating connection with the sliding bars, substantially as described.

2. In a tap and bushing, the combination with a bushing having a nipple provided with interrupted coupling-flanges, of a tap comprising a sliding tap-tube and a coupling-sleeve formed at its inner end with a recess adapted to receive the nipple, an elastic packing-ring in said recess adapted to form a seat for the nipple, sliding coupling-bars in guide-bearings formed in the walls of the recess, offsets on said coupling-bars adapted to engage with the flanges of the nipple, and a locking-lever fulcrumed upon the coupling-sleeve and having pivotal actuating connection with the coupling-bars, substantially as described.

3. The combination with a bushing having a nipple formed with interrupted coupling-flanges, of a tap consisting of a tap-tube and of a coupling-sleeve having in one end an elastic packing-ring for the tap-tube and a sliding follower adapted to compress the same, and in the other end a seat for the nipple and sliding coupling-bars adapted to engage with the flanges of the nipple, and two locking-levers having bifurcated arms fulcrumed at diametrically opposite points of the coupling-sleeves and straps eccentrically connecting the arms of the levers with the follower-sleeve and coupling-bars respectively for actuating the same, substantially as described.

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

ALBERT FISCHER.

Witnesses:

M. B. O'DOHERTY,
 O. F. BARTHEL.