

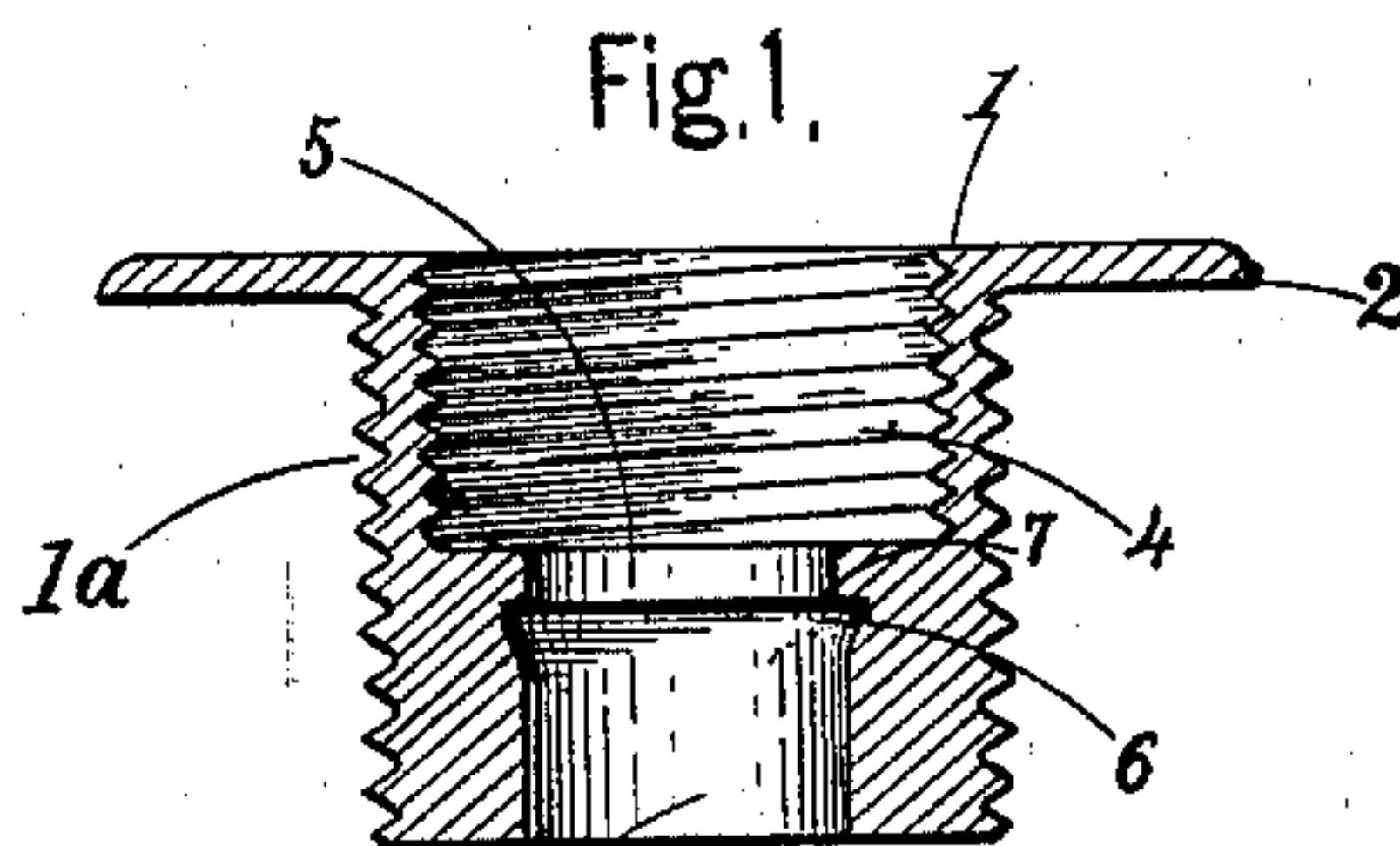
No. 608,196.

Patented Aug. 2, 1898.

C. HAMMER.
TAP HOLE BUSHING.

(Application filed Oct. 18, 1897.)

(No Model.)



Witnesses,

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TAP-HOLE BUSHING.

SPECIFICATION forming part of Letters Patent No. 608,196, dated August 2, 1898.

Application filed October 18, 1897. Serial No. 655,529. (No model.)

To all whom it may concern:

Be it known that I, CONRAD HAMMER, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Tap-Hole Bushings, of which the following is a specification.

My invention relates to certain improvements in tap-hole bushings for beer-kegs or other kegs or barrels, and will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 represents a vertical central section on or about line *a a*, Fig. 2. Fig. 2 represents a plan or top view. Fig. 3 represents a vertical central section through the complete device, the section cutting centrally through all parts except the handles for turning the upper portions of the device.

Referring to the drawings for the details of construction, 1 represents the bushing, which is provided with an exterior-screw-threaded portion 1^a and a top flange 2, adapted to screw into the keg or barrel. After being screwed into place in the barrel or keg it is additionally secured and fastened to prevent rotation by screws which pass through the holes 3 in the flange 2 into the barrel or keg. It is also provided with a central screw-threaded opening 4, which extends from the top downward to nearly the center of the bushing and terminates in a comparatively short circular opening of lesser circumference 5. The opening 5 merges into a groove 6, which extends around the inner side of the opening. This groove 6 is formed with its top edge extending outwardly at substantially a right angle to the opening, so as to leave a sharp-edged flange 7 at the top, and the lower portion is beveled or inclined downward gradually, terminating in the opening 8, which is slightly larger in diameter than the opening 5. The object of this construction is that the cork may be easily inserted and pushed through into the keg, but which when once in place cannot be easily withdrawn, owing to the sharp upper edge of the groove 6. (See Figs. 1 and 3.)

The member 9 is adapted to screw into the inner-threaded portion 4 against a leather or rubber gasket 10 to insure a tight joint. In

this portion 9 is secured a vent-nozzle 11, and it is provided with handles 12, by which it is secured in place or removed therefrom. It is also provided with a central opening 12^a of about the same diameter as the opening 5 in the bushing and adapted to register with the said opening 5 when seated in the bushing. The portion 9 is also provided with a central screw-threaded opening 15 of larger diameter than the opening 12^a and directly above and communicating with the said opening 12^a.

A circular hollow ring 16, of rubber or other suitable elastic material, is seated at the termination of the opening 15, and an upper member 13, which is also provided with a pair of handles 18, a central opening 19, and an exterior screw-thread 14, is adapted to be screwed down upon the ring 16, and thereby contract the interior circumference of the same.

From this it will be seen that a pipe or tube, or, as I term it, a "tap," can be inserted through the openings in the various portions of the device and the cork pushed or driven into the barrel, a tight joint being secured by the contraction of the ring 16.

The vent 11 is provided with a one-way valve 11^a for the easy admittance of air. The vent is located, as will be noticed by reference to the drawings, Fig. 3, below the hollow ring 16, thus preventing any vacuum or partial vacuum within the keg or barrel as the air flows through the vent to replenish the interior supply, and thus automatically adjusts itself to prevent the air within the keg or barrel from falling below the normal pressure of the surrounding atmosphere. The one-way valve 11^a prevents the escape of air from the keg or barrel, and thus allows a suitable pressure to be maintained upon the liquid within.

Heretofore in tapping kegs the tap had to be driven in with a mallet, and often when the tap was not properly placed in the orifice in the bushing the severe pounding strained and loosened the bushing or opened the seams in the keg and caused a leak, thus necessitating the return of the keg to the brewery. Invariably upon the tap being driven home when no packing was employed the beer spurted out between the bushing and the peripheral exterior of the tap, often staining

the operator's clothes. With my improved device the tap is not required to be driven in with a mallet, but is simply pushed in, the ring 16, which is hollow to provide greater elasticity to allow for the easy passage of the tap and also insure a tight joint, and thus prevent the spurting of the liquid, the hollow tubular form of the ring thus providing an air-cushion the elasticity of which cannot be surpassed.

With a solid elastic packing the tap has to be driven in after the packing has been contracted sufficiently to insure a tight joint, as the packing is not elastic enough to allow the tap to be pushed through, and the driving often tears, breaks, or loosens the packing and allows a leak.

I preferably construct my bung of cork, as that material is best adapted for the purpose, its elasticity allowing it to be easily pushed or forced into the keg by the tap.

The opening 5 of the bushing is comparatively short, and the lower opening 8 is longer, being about the same length as the bung, which is first pushed through the opening 5 and then expands, forcing its upper peripheral edge into the groove to automatically lock the bung against withdrawal. The slightly-larger circumference of the lower opening in which the bung is seated while in the bushing allows it to be easily forced inward into the barrel or keg by the tap.

My improvement secures a great saving of material, as split or broken bungs, cracked bushings, and strained and leaky kegs occasioned by the malleting required in the devices heretofore in use to drive the tap in are abolished.

The brewery supplies the kegs provided with the bushing and cork only, the portions 9 and 13 being inserted in place when it is desired to tap.

I am aware that hollow elastic rings have heretofore been used in jar-closures to insure a tight joint, and therefore I do not claim such broadly, but only as exemplified in the

following claims, the employment of a hollow ring in tapping devices allowing the tap to be easily inserted and pushed through by hand and at the same time providing a tight joint.

With the solid packing heretofore used the tap invariably had to be driven in with a mallet.

I claim as my invention—

A tap-hole device comprising a bushing, adapted to receive a bung of elastic material, and to be seated in the opening in the barrel, or keg, and provided with a screw-threaded upper opening terminating in a comparatively short central circular opening of reduced circumference which in turn terminates at its lower extreme in a groove having its upper edge extending at substantially a right angle to said opening, and its lower edge inclining diagonally downward from the upper edge, said groove terminating in a lower circular opening of slightly-larger circumference than the upper opening, a middle portion also provided with an upper central screw-threaded opening, merging in a circular opening of smaller diameter and an exterior screw-threaded portion adapted to screw into the screw-threaded opening in the bushing, a rubber packing interposed between the top of the bushing and the middle portion, an upper portion also provided with a central opening and an exterior screw-thread adapted to screw into the screw-threaded opening in the middle portion, a vent provided with a one-way valve attached to said middle portion, and a hollow contractile ring between the middle portion and the upper portion forming an air-cushion and adapted to have the circumference of its interior contracted by screwing down the upper portion, and adapted to be contracted around the tap to insure a tight joint without interfering with its easy insertion by hand, as set forth.

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