W. W. FRISHOLM.

BEER TAPPER.

APPLICATION FILED FEB. 8, 1909.

948,647. Patented Feb. 8, 1910.

Fig. 1.

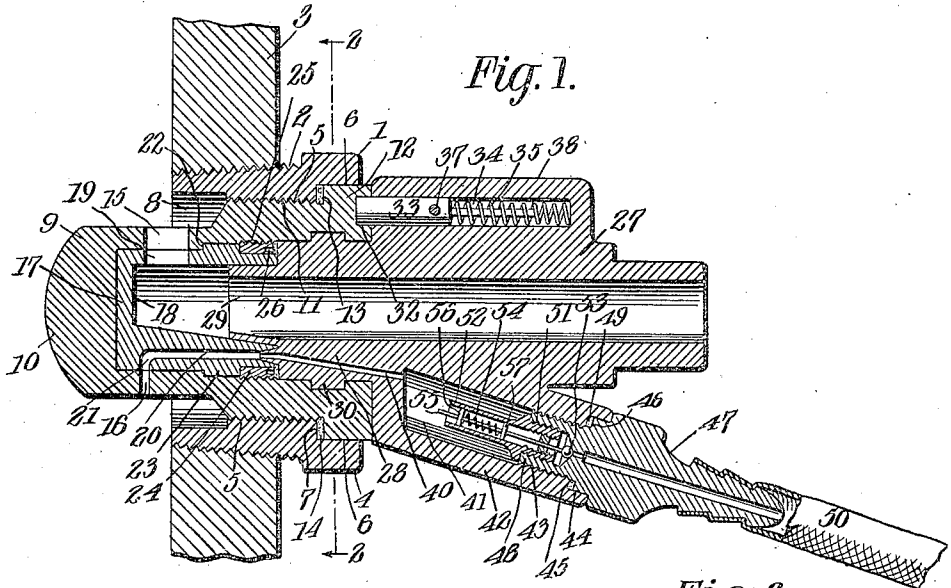


Fig. 3.

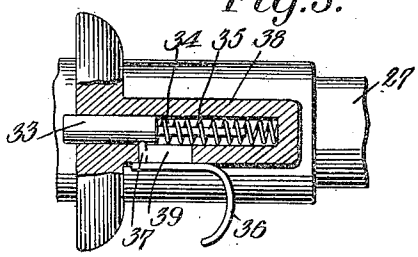


Fig. 2.

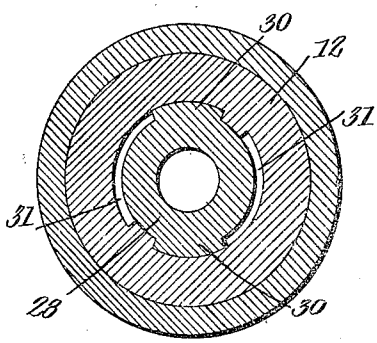


Fig. 6.

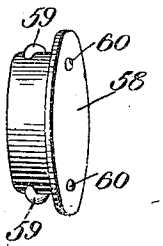


Fig. 4.

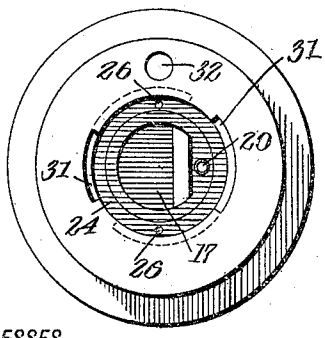
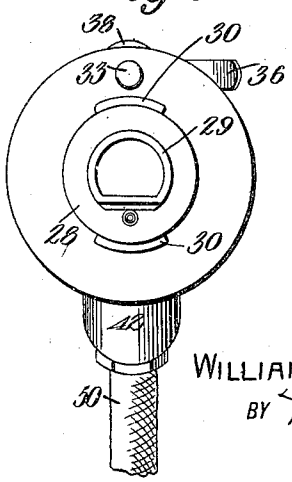


Fig. 5.



WITNESSES

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BEER-TAPPER.

948,647. Specification of Letters Patent. Patented Feb. 8, 1910.

Application filed February 8, 1909. Serial No. 476,622.

To all whom it may concern:

Be it known that I, WILLIAM W. FRISHOLM, a citizen of the United States, and a resident of Leadville, in the county of Lake and State of Colorado, have invented certain new and useful Improvements in Beer-Tappers, of which the following is a specification.

My invention is an improvement in beer tappers and consists in certain novel constructions and combinations of parts hereinafter described and claimed.

Referring to the drawings forming a part hereof—Figure 1 is a longitudinal section of the improved tapper; Fig. 2 is a section on the line 2—2 of Fig. 1; Fig. 3 is a top plan view partly in section, of a portion of the tapper. Fig. 4 is an end view of the tap with the coupling removed; Fig. 5 is an end view of the coupling, and Fig. 6 is a perspective view of a cap for closing the tap.

The present embodiment of the invention comprises a bushing whose outer surface is slightly conical as shown and screw threaded as at 2, for engaging the tapping hole of the beer barrel 3. The bushing is also provided with the usual shoulder 4, and the inner surface is threaded as at 5.

The outer part of the opening of the bushing is enlarged as at 6 to form a shoulder 7 between the outer enlarged portion and the threaded portion, and at its inner end the opening is also cut away as at 8. The screw threads on the outer surface of the bushing are left handed while those on the inner surface are right handed. The tap 9 has its inner end closed as at 10, and is externally threaded as at 11 for engaging the inner threads of the bushing, and an annular flange 12 is provided on the outer end of the tap, and a shoulder 13 coöperates with the shoulder 7 before mentioned, a packing 14 being arranged between the shoulders.

The tap 9 is provided with a slot 15, and with a perforation 16, and a double valve 17 is received within the inner end of the tap, the said valve comprising a cylindrical casing having its inner end closed as at 18, and provided with a slot 19 adapted to register with the slot 15 in the tap. Within the wall of the casing is arranged a passage 20, which is adapted to register with the perforation 16 of the tap, the passage being provided with an angular portion 21 for this purpose.

The tap is reduced near its inner end to form a shoulder 22, and the valve casing is provided with an annular rib 23, for engaging the shoulder as shown in Fig. 1. A ring 24 of suitable material engages the outer face of the rib, and the ring is threaded as shown to engage a threaded portion 25 on the inner face of the tap, whereby to retain the casing in position. The outer face of the ring is provided with diametrically opposite openings 26 for receiving the points of a spanner whereby to place and remove the ring.

A coupling 27 is fitted into the tap 9, the said coupling having a reduced portion 28 for entering the tap, and a still further reduced portion 29 for entering the valve casing, and the reduced portion 28 is provided with lugs 30, which are adapted to engage bayonet slots 31 on the inner surface of the tap, whereby to lock the coupling in place, and the face of the tap is provided with an opening 32 for receiving a locking bolt 33 slidable in a recess 34 of the coupling and normally moved into engagement with the opening by a spring 35. A finger piece 36 is connected by a pin 37 with the locking bolt, and the said bolt is arranged in an enlargement 38 on the coupling, the side of the enlargement being slotted as at 39 for permitting the passage of the pin.

When introducing the coupling, it is turned in such a position, that the lugs will enter the slots, when it is turned, and when in locking position the bolt 33 will engage the opening 32.

The coupling is provided with a passage 40, which registers with the passage 20 in the valve casing, and this passage communicates with a cavity 41 in an angular projection 42 from the coupling. The outer end of the cavity is threaded as at 43, and beyond the threads it is reduced as at 44 to form a shoulder 45, which coöperates with a shoulder 46 on a coupling 47 having a reduced portion 48 screwing into the cavity, and a packing 49 is arranged between the shoulder and a similar shoulder on the coupling. The said coupling 47 is connected by a suitable pipe 50 with a source of air supply and the inner end of the coupling is internally threaded as at 51.

A valve casing 52 is threaded into the

inner end of the coupling, and within the casing is a ball valve 53 adapted to close the passage through the coupling, and normally retained in closing position by a spring 54 encircling the stem 55 of the valve, which stem slides through a bearing 56 in the casing and is provided with a collar 57, between which collar and the bearing the spring is arranged.

In operation, the bushing is threaded into the tapping hole and the tap is threaded into the bushing. The valve casing is arranged within the tap with the slot and the perforation in register with the slot and perforation of the tap, and is locked in position by means of the ring. The coupling 27 is then inserted in place and locked by the bolt 33. A suitable pipe not shown is connected with the outer end of the coupling 27 for leading the beer to the place of discharge, and the pipe 50 is connected with a suitable source of air supply.

It will be evident that when beer is withdrawn from the barrel, air is permitted to enter to take the place of the beer withdrawn. When inserting the tap in place, a cap 58 is secured to the outer end of the tap in the same manner as the coupling, the cap being provided with lugs 59 for engaging the bayonet slots, and with openings 60 for engagement by the points of the spanner. It will be evident that when the cap is in place, it may be screwed home by the spanner.

It will be understood that the air enters the barrel through the pipe 50 under considerable pressure, which entrance is permitted by the ball valve, the valve however preventing the air from passing outward.

It will be understood that the slot 15 is closed, as is also the perforation 16, by the rotation of the coupling. These openings are however normally and usually open, the tap 27 being connected as before stated by a discharge pipe with the usual beer faucet, which may be at a distance from the keg. When the said faucet is open, the pressure in the discharge pipe is reduced and the beer flows through the slot 15 while air enters through the perforation 16.

I claim:

1. In a device of the class described, a bushing externally and internally threaded and in opposite directions, a tap having a closed inner end threaded into the bushing, the bushing having an internal shoulder and the tap an external shoulder coöperating therewith, a packing between the shoulders, said tap having an internally threaded portion and provided with a slot and a perforation, a valve casing provided with a slot for registering with the slot of the tap and with a passage therethrough for registering with the perforation, a ring threaded into the tap and engaging the casing for securing it into place, said tap having on its inner face bayonet shaped recesses, a coupling having an opening therethrough for communicating with the casing and a passage for communicating with the passage of the casing, said coupling being provided with lugs for engaging the recesses, and with a spring pressed locking pin, the tap having an opening for engagement by the pin, means outside of the coupling for operating the pin, an air coupling threaded into the passage of the coupling, and a check valve in the air coupling.

2. In a device of the class described, a bushing for engaging a beer barrel, a tap having a closed inner end threaded into the bushing, said tap having adjacent its closed end a slot and a perforation arranged opposite each other, a valve casing provided with a slot and a passage for registering with the slot and the perforation of the casing respectively, a ring threaded into the tap, and engaging the casing for securing them in place, said tap having on its inner face bayonet shaped recesses, a coupling having lugs for engaging the recesses, and a spring pressed locking pin in the coupling, the tap having an opening for receiving the pin, said coupling having a passage for communicating with the passage of the casing, and an air coupling threaded into the passage, and provided with a check valve.

3. In a device of the class described, a bushing for engaging a beer barrel, a tap having a closed inner end threaded into the bushing, said tap having adjacent its closed end a slot and a perforation arranged opposite each other, a valve casing provided with a slot and a passage for registering with the slot and the perforation of the casing respectively, a ring threaded into the tap, and engaging the casing for securing them in place, said tap having on its inner face bayonet shaped recesses, a coupling having lugs for engaging the recesses, and a spring pressed locking pin in the coupling, the tap having an opening for receiving the pin, said coupling having a passage for communicating with the passage of the casing.

4. In a device of the class described, a bushing for engaging a beer barrel, a tap having a closed inner end threaded into the bushing, said tap having in its side wall a slot and a perforation, a valve casing provided with a slot and a passage for registering with the slot and the perforation of the casing respectively, a ring threaded into tap and engaging the casing for securing it in place, a coupling, means in connection with the coupling and the tap for detachably connecting them together, said coupling having an air passage communicating with the passage of the valve casing, and an air coupling threaded into the passage and provided with a check valve.

5. In a device of the class described, a bushing for engaging a beer barrel, a tap having a closed inner end threaded into the bushing, said tap having adjacent the closed end a slot and a perforation arranged opposite to each other, a valve casing provided with a slot and a passage for registering with the slot and the perforation of the casing respectively, means for securing the casing in place, a coupling provided with passages registering with the casing and the passage of the casing respectively, means for detachably connecting the coupling to the tap, and a check valve in the passage of the coupling.

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Witnesses:
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