M. E. RAY.

BEER PIPE AND BEER COIL CLEANER.

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1,151,968. Patented Aug. 31, 1915.

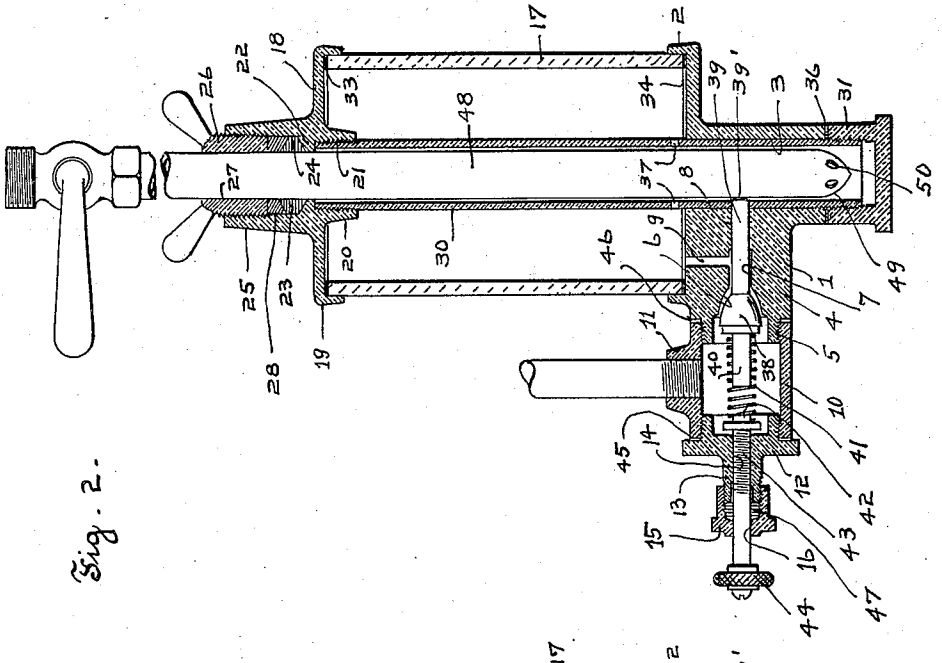


Fig. 2.

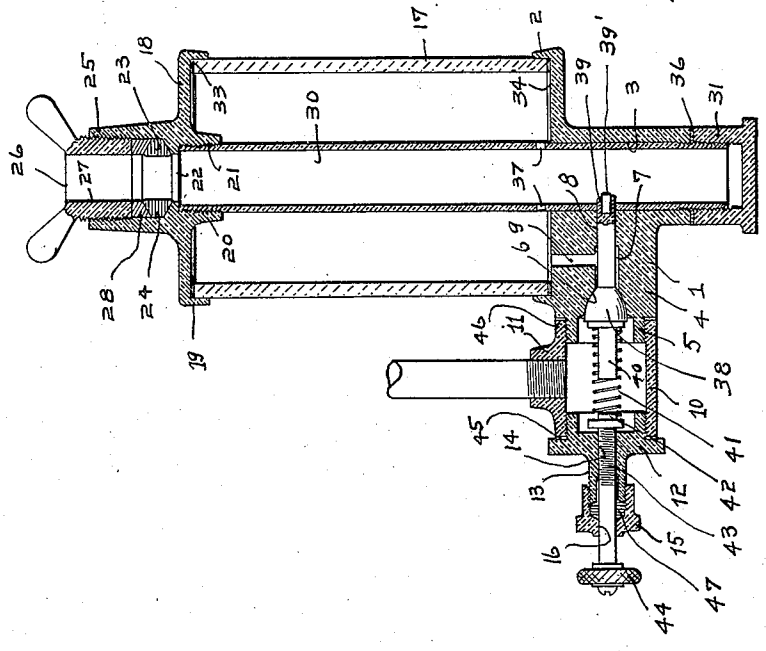


Fig. 1.

Witnesses.
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UNITED STATES PATENT OFFICE.

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BEER-PIPE AND BEER-COIL CLEANER.

1,151,968. Specification of Letters Patent. Patented Aug. 31, 1915.

Application filed July 6, 1914. Serial No. 849,017.

To all whom it may concern:

Be it known that I, MILES E. RAY, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented a new and useful Beer-Pipe and Beer-Coil Cleaner, of which the following is a specification.

My invention relates to a beer-barrel tap-pipe and a beer-coil cleaner and has for its object to provide a device of the kind, connected to a source of hot or cold water, or both, having a reservoir for cleaning solution and a water inlet-valve so arranged, that by inserting a tap-pipe into the reservoir, the inlet-valve is opened and maintained open until the tap-pipe is withdrawn, said inlet-valve being arranged for opening by side thrust from the tap-pipe and being spring loaded for closing, is adapted to bear against the side of the tap-pipe, thereby preventing the tap-pipe being blown from the reservoir by pressure of the inlet water.

The objects of my invention are accomplished as hereinafter described and illustrated in the drawings, in which—

Figure 1, is a vertical section of my device, with the tap-pipe removed and the inlet-valve closed, and Fig. 2, is a like section, showing a tap-pipe inserted into the reservoir and the inlet-valve opened by the pipe.

The device has a bottom casting 1, which is provided with an annular top flange 2 of suitable diameter and concentric thereto, with a central through bore 3. Said bottom is further provided with a side boss 4, the free end 5 of which is externally threaded and is centrally counter-bored to form a valve-seat 6. From the valve seat, said boss is provided with differentiating bores 7 and 8 respectively, of which the bore 8, is extended to intersect the bore 3, the bore 7, being intersected by a port 9, opening at the top of the casting within the area impounded by the flange 2.

10 designates a T body, threaded to the side boss 4 and being provided with a tapped boss 11, is adapted for coupling to a source of water supply under pressure. The outer end of the T is closed by a cap 12 threaded thereon. Said cap has a central disposed stem 13, and is provided with a bore 14, internally threaded. Said bore is in line with the valve-seat 6, and the bores 7 and 8. The end of the stem, 13 is externally threaded to receive a cap 15, also provided with a through bore 16. The reservoir body 17, is preferably a glass cylinder of suitable height and of a diameter to enter within the flange 2 of the bottom casting. The top 18, is also provided with a flange 19, adapted to receive the top of the cylinder. The top 18, is further provided with a central boss 20, depending from the body of the top and is internally threaded to form a socket 21.

22 designates a ledge above the socket, adapted to provide a support for a compressible packing medium 23, which is inserted into the bore 24, formed in the boss 25 which extends centrally upward from the top. The top end of the bore 24 is threaded to receive a winged compression nut 26 which is provided with a bore 27. A washer 28 is interposed between the nut and the body of the packing, to avoid destruction of the packing when the nut is turned.

A tube 30 is thread-coupled within the socket 21, said tube being of a length to extend through the cylinder and through the bore 3 of the bottom casting. The free end of the central tube 30 is threaded to receive a cap 31 by means of which, top, cylinder, and bottom are held assembled. 33 and 34 are gaskets interposed respectively between the cylinder and the top, and between the cylinder and the bottom, and 36 is a gasket interposed between the bottom and the cap. When the top, cylinder, and the bottom are thus assembled, the bore 8 is extended through the wall of the tube 30. The latter is further pierced above the bottom 1, with ports 37. The valve 38 has a stem 39 which extends through bores 7 and 8 and through the wall of the tube 30, being guided by the bore 8, and is provided at its inner end with hardened steel tip 39′. The valve 38 has also a stem 40, which extends into the T body and provides a support for the closing spring 41. The adjustable compression of the spring is accomplished by mounting one end of the spring upon a shoulder 42, integral with the stem 43, threaded only in the bore 14, of the cap 12, the free end of said stem being provided with a knob 44.

45 and 46 designate packing for the respective ends of the T body and 47 designates gland-packing for the stem 43. The areas of the respective bores through which the tap-pipe 48 is inserted are such as to permit free movement of the tap-pipe.

In operation, the device is coupled by its T to a source of water, under pressure. A cleansing solution may be introduced into

the cylinder through the bore in the winged nut. A tap-pipe, the end 49 of which is pointed, is then pushed through the bore in the winged nut, expanding the packing 23 in the boss 25 until the movement of the pipe unseats the inlet-valve and permits the water under pressure to displace the solution in the cylinder through the ports 50 in the tap-pipe. Said pipe is now held in place by spring pressure of the valve stem upon the side of the tap-pipe, which pressure effects a dis-alinement of the pipe within the stem and causes an effective binding of the tap-pipe within the bore of the tubular stem and thereby prevents the pipe being forced out as a piston from said tubular stem. The cleansing solution is thus forced through the tap-pipe, cooling coil and bar-fixture not shown, followed by clean water.

What I claim is,

1. A beer-pipe and beer-coil cleaner, consisting of an assembled reservoir for cleaning solution, said reservoir comprising a cylinder, a top, a bottom and a tubular down-stem adapted to couple said parts, and having a tap-pipe opening provided with a packing-gland; a bottom water chamber with water supply, said water chamber being provided with an out-let port into said reservoir, ports from said reservoir into the tubular down-stem, a valve controlling the outlet from the water-chamber into the reservoir, having a stem extending into the tube, and being spring pressed to seat and adapted, when the tap-pipe is inserted into the down tube to bear against the tap-pipe and displace said pipe for locking.

2. A beer-pipe and beer-coil cleaner, consisting of an assembled reservoir for cleansing solution, said reservoir comprising a cylinder, a top, a bottom, and a tubular down-stem adapted to couple said parts, and having a tap-pipe opening provided with a packing-gland; a bottom water chamber with water supply, said water chamber being provided with an out-let port into said reservoir, ports from said reservoir into the tubular down-stem, a valve controlling the outlet from the water-chamber into the reservoir, having a stem extending into the tube, being spring pressed to seat and adapted, when the tap-pipe is inserted into the down-tube to bear against the tap-pipe and displace said pipe for locking, and means to adjust the spring pressure upon the valve and the tap-pipe.

In witness whereof I have hereunto set my hand and seal this 24 day of June 1914.

MILES E. RAY. [L. S.]

Witnesses:
ELLA BRACKNEY,
N. S. BRACKNEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."