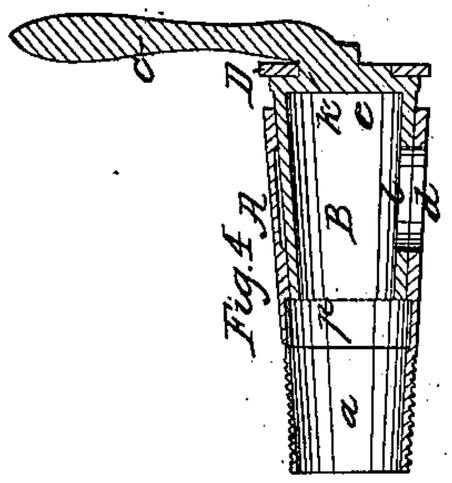
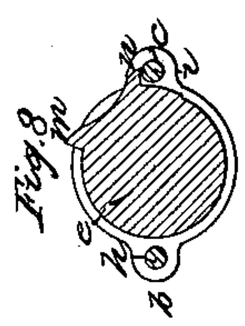
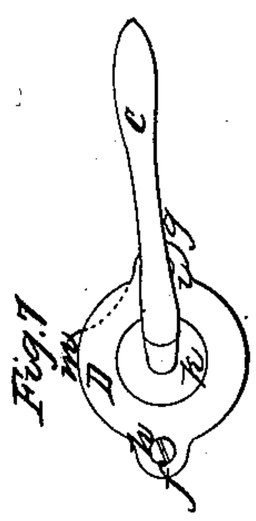
W. Ball,

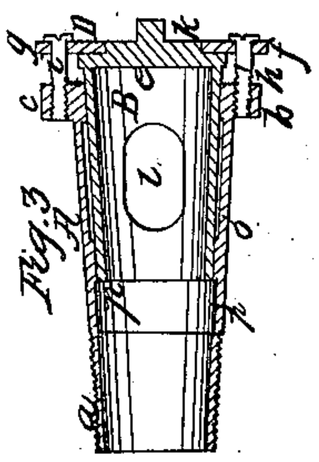
Molasses Gate,

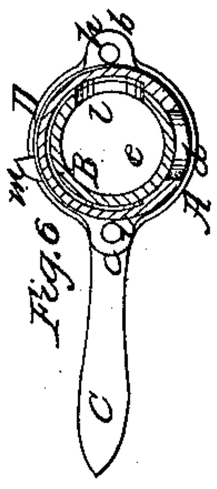
No. 5,431, Patented Feb. 1, 1848.

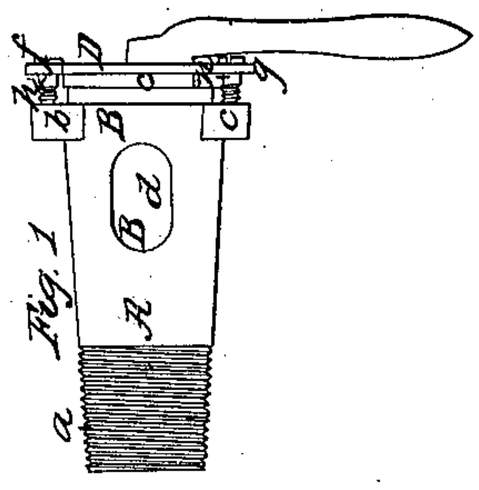












UNITED STATES PATENT OFFICE.

WILLIAM BALL, OF CABOTSVILLE, MASSACHUSETTS.

FAUCET.

Specification of Letters Patent No. 5,431, dated February 1, 1848.

To all whom it may concern:

Be it known that I, WILLIAM BALL, of Cabotsville, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Faucets for Removing Molasses, Oil, or Various other Liquids from Barrels or other Vessels Containing the Same; and I do hereby declare that the same is fully described and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1, denotes an elevation of the underside of my improved faucet, the same being represented as "closed." Fig. 2, is a similar view of it, as it appears when open. Fig. 3, is a central and longitudinal section of it, taken through the confining screws of the cap plate, when the faucet is "open." Fig. 4, is a central and longitudinal section of it, taken in the plane of the handle and orifice of discharge, when the faucet is "open." Fig. 5, is a transverse section taken through the middle of the orifice of discharge, when the faucet is "open." Fig. 6, is a transverse section taken through the orifice of discharge, when the faucet is "closed" or "shut." Fig. 7, is a front end view of the faucet. Finally, Fig. 8, is a transverse section, taken through the studs or projections just in rear of the cap plate and handle.

A, in said figures is a tapering tube, circular in its cross section. It has a screw *a* cut on one end of it (for the purpose of inserting and fixing it in the head of a barrel or elsewhere), and two ears *b*, *c*, projecting in opposite directions from one another, from its upper part as seen in the drawings. It also has an elongated slot or discharge vent or opening *d*, made through its side.

Within the said tube A, is another tapering tube B, the lower end of which is open, while the upper end is closed by a head or plate *e*, to which a handle C, is attached, and from which it is made to extend, as seen in the drawings. The said tube B, is confined in place within the tube A, by a cap or collar plate D, through projections or ears *f*, *g*, of which screws *h*, *i*, are respectively passed and screwed into the ears *b*, *c*, of the tube A. The said collar plate has a circular aperture made through it centrally, the same being of a diameter equal to that of a circular bearing *k*, which projects from or makes part of the head plate *e*, and passes and works through the said aperture, and has the handle C, projecting from it. The said inner tapering tube B has an elongated aperture *l*, of the size of the vent *d*, made through its side. It also has two studs or projections *m*, *n*, extending from its head plate as seen in Fig. 8.

Within the interior part or surface of the outer tube A, is a shallow lubricating chamber or space *o*. It is about the length of the discharging vent, and extends around the interior of the tube, from near one side of the vent to near the other side of it, as seen in Fig. 6. At a short distance below the chamber *o*, there is another chamber or space *p*, made in the tube A, and formed entirely around the lower end of the inner tube B, and a short distance below it as seen in the drawings.

When the tube B, is turned around within the tube A, so as to bring the hole *l*, of the former in direct or partial coincidence with the aperture, vent or opening *d*, the faucet is said to be "open," in which case the liquor of the vessel into which the faucet may be fixed, will flow through the faucet, and out of the two openings *l*, and *d*. In such a position of the two holes, the projection *m*, will be in contact with the side of the screw *h*.

On applying the hand to the handle C, and turning the tube B, around within the tube A, until the projection *n*, is made to come into contact with the screw *i*, I close the faucet, that is to say, I move the aperture *l*, of the inner tube B, entirely by and beyond the discharging vent *d*, and by so doing, carry a solid portion of the tube A. directly over the vent *d*, in such manner as to entirely close it, and prevent any of the liquor from passing out of the vessel and through said vent while the parts of the faucet are suffered to remain in such a relation to one another. In this position of the said parts the faucet may be said to be "closed."

My improvement consists in the application and use of the lubricating or antifriction chamber *o*. The peculiar object of the same may be thus explained. It is well known that when a faucet is made without such a chamber, and with two ground tapering surfaces, working together in direct contact with one another, a small portion of the molasses or other thick liquid of the vessel into which said faucet may be intro-

duced, will enter between the two tubes or surfaces thereof in contact and become divided therein and in such manner as cause them to so adhere or stick together, as to often render it very difficult if not almost impossible to open the faucet. When two metallic cylinders are grounded together so as to exclude air or moisture they will often adhere in certain places, or at those points that become dry, and to such extent as when moved on one another as often to tear out the sound metal and cause creases to appear in one or both of the surfaces in contact. Now when this is the case with a faucet it must necessarily prove injurious and cause a leakage. In my improved faucet it will be seen that the only parts of the adjacent surfaces of the two tubes in rubbing contact are a narrow belt of surface, surrounding the vent or discharge opening, and two narrow circular belts, extending around within the outer tube and just above and below the vent, together with corresponding portions of the outer surface of the inner tube. When the faucet is closed the liquid of the vessel, flows freely through the aperture *l*, and into the lubricating chamber *o*, and so as to fill said chamber, with a thick body of said liquid, sufficient not only to prevent the adjacent surfaces (within the said chamber) of the two tubes, from adhering together, but to lubricate or moisten the rubbing surfaces, during their movements on one another.

What I claim therefore as my invention is—

The combination of the lubricating chamber *o*, with the two outer and inner tubes A, and B, of the faucet the whole being effected substantially in the manner and for the purpose as specified.

In testimony whereof I have hereto set my signature this eleventh day of December A. D. 1847.

WM. BALL.

Witnesses:
A. W. STOCKWELL,
D. B. WHIPPLE.