A. Bain,

Faucet,

No. 45,013, Patented Nov. 15, 1864

Fig. 2.

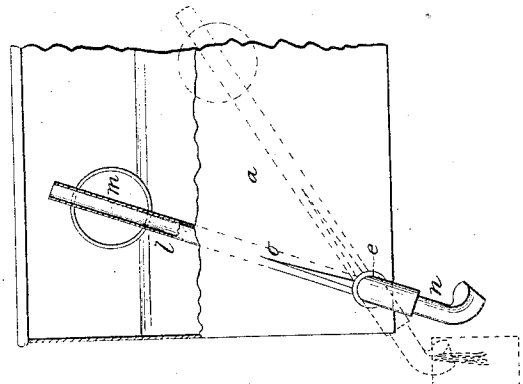


Fig. 3.

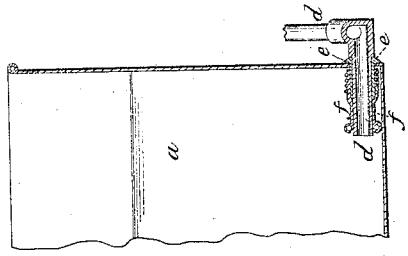


Fig. 4.

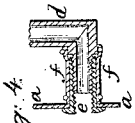


Fig. 1.

Witnesses:
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Chas. H. Smith

Inventor:
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UNITED STATES PATENT OFFICE.

ALEXANDER BAIN, OF NEW YORK, N. Y.

IMPROVEMENT IN APPARATUS FOR DRAWING LIQUIDS.

Specification forming part of Letters Patent No. 45,013, dated November 15, 1864.

To all whom it may concern:

Be it known that I, ALEXANDER BAIN, of the city and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Means for Drawing off Liquids; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is an elevation of my apparatus. Fig. 2 is a section of the same in one of its modified forms, and Fig. 3 is a section of the drawing-off pipe at the point where it passes through the vessel containing the liquid.

Similar marks of reference denote the same parts.

The nature of my said invention consists in a pipe or tube attached at or near the bottom of a vessel containing liquid and the upper or free end capable of being moved up or down, so that its orifice will be either above or below the surface of the liquid in said vessel, in order that the liquid may flow through the pipe when the orifice is below the level of the surface or be retained in said vessel when the same orifice of the tube is above said level.

This invention is adapted to the drawing off of water and most kinds of liquids, and at any degree of temperature between the freezing and boiling points, and it is especially adapted to the drawing off of liquids of a glutinous nature, such as ales, wines, sirups, varnishes, &c., from barrels or other vessels, because, there being no cock or faucet to become obstructed, much of the inconveniences heretofore experienced are avoided, as there is only a plain tube to keep free, and that may be smooth and of a uniform size, or nearly so, from end to end.

In the drawings, *a* illustrates a vessel of any desired size or character. *b* is my tube for drawing off in its simplest form, consisting of an india-rubber or flexible pipe that is attached to a hollow thimble near the lower part of the vessel *a*, and the free or moving end is provided with a surrounding sleeve or hook, *c*, by which the same can be suspended to keep the moving end above the liquid level when not in use, by simply unhooking this and lowering the orifice until the same is below the level, said liquid will run through the tube into any vessel provided for it.

I have shown the same device in another form at *d*, which is a pipe bent or formed as an elbow passing into the vessel *a* through a thimble or stationary pipe, *e*, securely fixed to said vessel *a*. A tube or sleeve of india-rubber, as seen at *f*, Fig. 3, is drawn over the inner end of this tube *d* and thimble or stationary pipe, *e*, being made fast by a winding of wire or otherwise to the respective parts. It will be understood that this rubber sleeve makes the joint between *d* and *e* perfectly water tight, and at the same time, being elastic, allows the pipe *d* to be freely moved so that its upper orifice shall be above or below the liquid level to stop or allow the flow of said liquid, and after drawing down the pipe this sleeve acts as a torsion-spring to throw the pipe up again. I provide in addition the counterpoise *g* for the same purpose, or a spring may be substituted for this weight. The orifice or moving end of the pipe *d* may come up under a stationary cover or cap, *h*, as shown, to exclude air, dust, &c., and if desired for a drinking fountain or other vessel, a step or platform, *i*, may be suspended from the pipe *d* and kept vertical by the parallel motion bar *k*, so that the pipe itself may be moved by placing a cup or other receptacle upon this step *i* and pressing it downward, and when the liquid has run sufficiently the pipe will rise as the cup is removed.

In Fig. 2 the same device is represented in a modified form, the pipe *l* being inside the vessel *a* and moved by the floating hollow ball *m*, said pipe passing through the ball. The lower end terminates outside the vessel as a bib, *n*, the india-rubber sleeve being used to keep the joint water tight and allow the motion as before. The bib *n* is to be soldered or otherwise attached after the pipe has been passed through the thimble or stationary pipe *e*. When the bib *n* is drawn aside or forward, as seen by dotted lines, so that the float is immersed and the end of the pipe *l* passes below the surface of the liquid, said liquid will run through the pipe, and when the bib is released the float again elevates the orifice of the pipe above the surface and checks the flow of liquid. An index at *o*, attached to the bib, may be employed to indicate the level of the liquid in the vessel. The thimble or pipe

e might project from the vessel instead of passing into it, and the india-rubber sleeve be applied on the outside of the vessel instead of on the inside, as represented in Fig. 4, and the pipe *d* might be screwed into the thimble, fitting loosely, while the sleeve *f* is doubled back on itself around *e*, and afterward its end is to be turned or unfolded and attached to *d*, as shown.

I do not claim drawing off liquids through a float to which a pipe is attached, as that has before been done in steam heating and other apparatus; but

What I claim, and desire to secure by Letters Patent, is—

1. A pipe connected with the lower part of a vessel containing the liquid to be drawn, and rising above the level of such liquid to retain the same, and fitted so that said pipe can be turned down below the level of said liquid for its delivery, as specified, thereby dispensing with the cocks or faucets heretofore employed for stopping the delivery of liquid, as set forth.

2. The sleeve *f*, fitted, as specified, to make a water-tight joint at the place where the discharging-pipe passes through the thimble or stationary pipe *e*, as set forth.

3. The step or platform *i* and parallel motion bar *k*, in combination with the pipe *d*, as and for the purposes specified.

In witness whereof I have hereunto set my signature this 19th day of March, A. D. 1864.

ALEXR. BAIN.

Witnesses:

THOS. GEO. HAROLD,

CHAS. H. SMITH.