

A.M. Dix.

Pumping Apparatus.

N^o 86,287.

Patented Jan. 26, 1869.

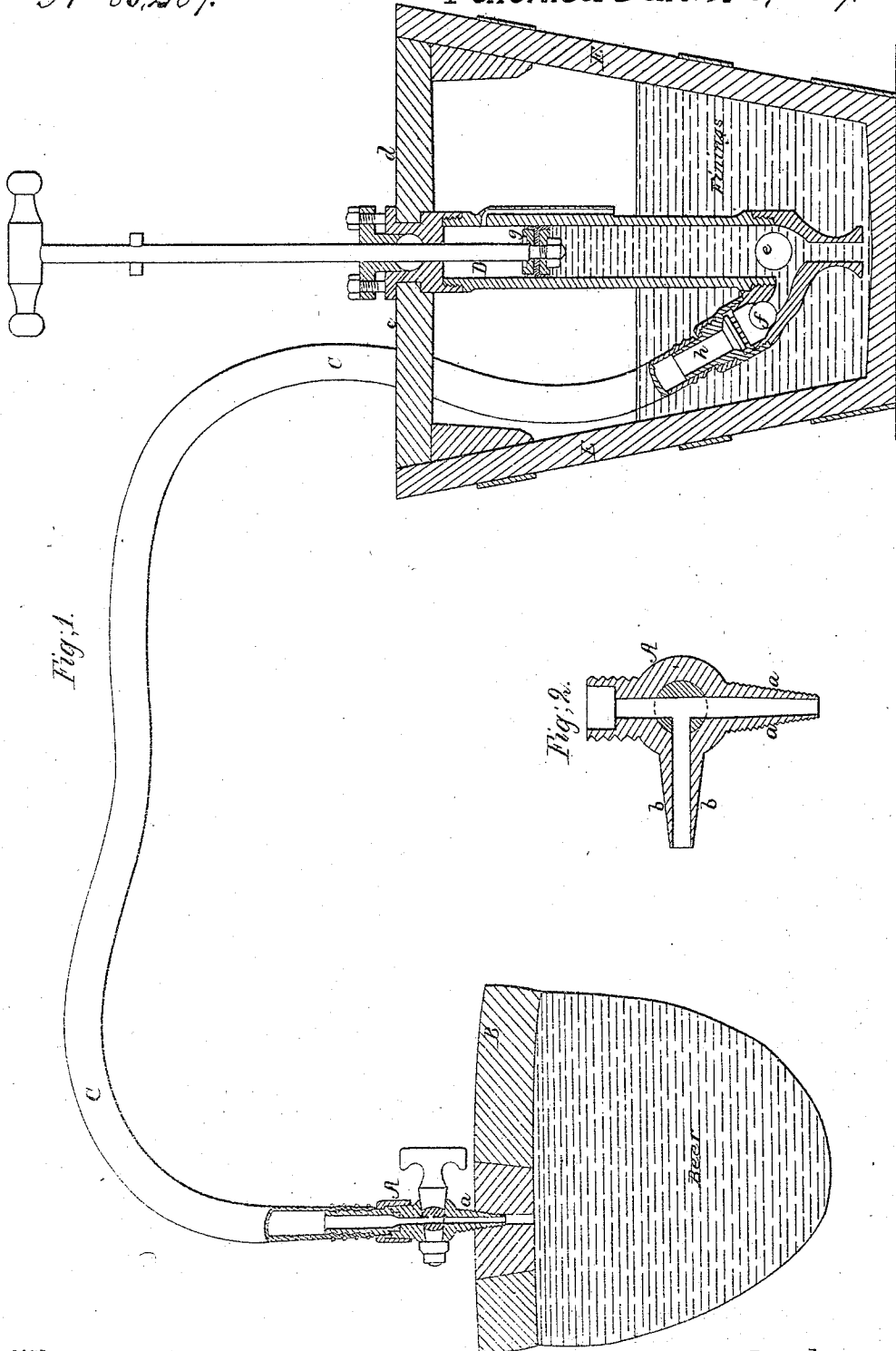


Fig. 1.

Fig. 9, a.

Witnesses.
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ALEXANDER MILLS DIX, OF SHELTON, ENGLAND.

Letters Patent No. 86,287, dated January 26, 1869.

IMPROVEMENT IN PUMPING-APPARATUS FOR SUPPLYING FININGS AND OTHER LIQUIDS TO CASKS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ALEXANDER MILLS DIX, of Shelton, England, brewer, have invented "an Improved Mode of and Apparatus for Supplying Finings or other Liquids to Casks or other Vessels;" and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters and figures marked thereon; that is to say—

The chief object of my invention is a better mode of supplying isinglass, or other finings, to casks, but the invention also applies to supplying or filling up casks, or other vessels, with other liquids.

The ordinary mode of supplying finings to casks is to take out the shive, or bung, and pour the finings through the bung-hole, or to pour in the finings before the shive is inserted; but this mode is inconvenient, some of the contents of the cask being often lost, the best time for inserting the finings being just prior to delivery and stillaging. Now,

My invention consists in forcing in the finings through a hole, made for the purpose, by a gimlet or otherwise, in the shive, or other part of the cask, and in the employment, for effecting the introduction, of a three-way tap and a force-pump, or other mode of obtaining the required pressure.

The force-pump is fitted in a tub, or vessel, into which the finings are placed, and in communication with the tap, by a pipe, flexible or otherwise.

The tap has two nozzles, or outlets, one of which is screwed, or inserted, through the hole before mentioned, while the second nozzle, or outlet, remains outside the cask.

The invention will be fully understood on reference to the accompanying drawings, of which—

Figure 1 is a sectional view of the apparatus complete, with the three-way tap A inserted into the shive, or bung, of a cask, B, the hole into which it is screwed having been previously made with a gimlet.

The tap has two nozzles, *a b*, as seen in the detached sectional view, Figure 2, the nozzle *a* being screw-threaded, for the purpose of screwing into the shive, or bung, as shown in fig. 1.

The second nozzle, *b*, remains outside the cask, and allows liquid to escape, when the cask is completely full.

The tap is in connection, by a flexible tube, or pipe, C, with a force-pump, D.

This pump is fitted in a tub, E, in which the finings

are placed, and is held firmly therein by two cross-bars, or rails, *c d*, which also serve as handles, for lifting or moving the tub, or vessel, from place to place.

The force-pump D is of the ordinary construction, and is fitted with spherical valves, *e f*.

In the position shown in fig. 1, the piston *g* of the pump is nearly at the top of the up-stroke, and has lifted the valve *e*, to allow the finings to enter the pump-barrel, and fill the space below the piston. The finings are expelled therefrom on the down-stroke of the piston, which forces the valve *e* upon its seat, and lifts the valve *f*, thereby opening the passage *h*, leading to the pipe C, and thence to the tap A.

Should it be required to introduce finings when the cask is full of beer, I force in a small quantity through the nozzle; then turn the tap, so as to open the way to the second nozzle, to allow some of the beer to run out. I again turn the tap, and force in more finings; then again let out some of the beer, and so on, until the required amount of finings has been introduced.

In the same way, I can force in finings, or beer, to fill the cask, when the same is not properly filled, or after any leakage, and let out any froth or gas there may be in the cask, the escape from the outer nozzle indicating when the cask is full of liquid.

When the tap is withdrawn, the hole is quickly closed by a peg, or otherwise.

In case any of the liquid should escape past the packing in the pump-barrel, I form a small outlet in the upper or other convenient part of the barrel, to lead such escapement down or through a pipe, or channel, therefrom, in order that the liquid may be returned to the vessels in which the pump is fitted.

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

The pump-barrel, with valves *e f*, and a perforated diaphragm in its branch, when retained within the vessel E by the handle cross-bars *c d*, and applied in connection with a tube, C, which is swivelled to said barrel, and to the three-way screw-tap A *a b*, and all parts are constructed and adapted to operate substantially as herein represented and described.

In witness whereof, I, the said ALEXANDER MILLS DIX, have hereunto set my hand, this 25th day of July, 1868.

ALEXANDER MILLS DIX.

Witnesses:

WILLIAM GATCOMBE DIX, of Shelton.

LEVI WATKIN, Jr., of Shelton.