E. F. Jenkins,

Beer Pump.

No. 110,976. Patented Jan. 17, 1871.

Fig. 3.

Fig. 2.

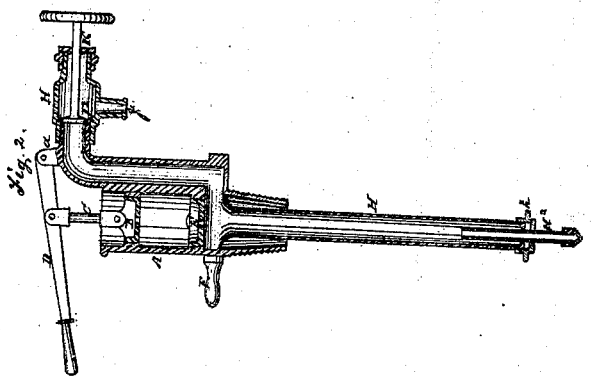
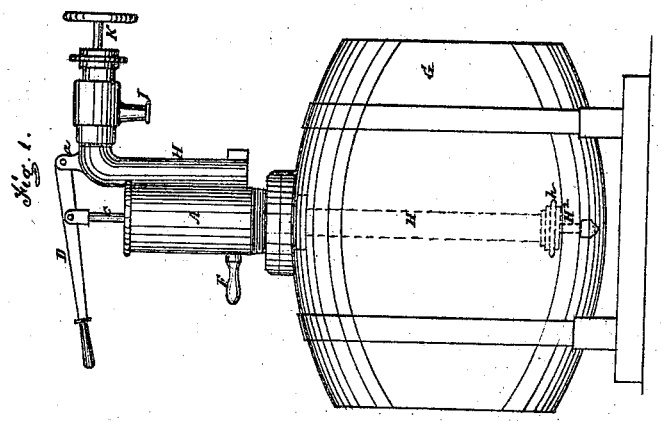


Fig. 1.



Witnesses.

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EDWARD T. JENKINS, OF BROOKLYN, NEW YORK.

Letters Patent No. 110,976, dated January 17, 1871; antedated January 7, 1871.

IMPROVEMENT IN PUMPS.

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, EDWARD T. JENKINS, of Brooklyn, Kings county, New York, have invented, made, and applied to use a new and improved Pneumatic Pump, for pumping wines, liquors, and other fluids out of barrels, casks, or other vessels; and that the following is a full, clear, and correct description of the same, reference being had to the accompanying drawings making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a side elevation of my improved pneumatic pump applied to a barrel.

Figure 2, a vertical cut section of the pump.

Figure 3, a view showing the construction of the upper valve.

In the drawings like parts of the invention are designated by the same letters of reference.

The nature of the present invention consists in certain improvements, as more fully hereinafter set forth, in the construction of a pneumatic pump, the object of the invention being to furnish a simple and effective pump for the purposes already indicated.

To enable those skilled in the arts to make and use my invention, I will describe the construction and operation of the same.

A shows the chamber of my improved pump, in which is contained the piston or upper valve B. This chamber may be formed of brass or any suitable metal, and the piston is also formed of brass, the space between the same and the chamber being packed, as is usual. This piston is provided upon its under side with a valve (see fig. 3) formed of a strip of leather, rubber, or any suitable material. This valve is the upper valve of the pump.

C shows a connecting-rod, connecting the piston to a lever, D, by which the same is operated, one end of said lever being pinned in the flanges *a* upon the discharge-pipe H.

Within the chamber A, a short distance below the piston, is secured the lower valve E, formed similarly to the upper valve.

The lower portion of the chamber A is made tapering, and is threaded, so that the pump may be readily and securely fastened into the barrel, cask, or other vessel from which the fluid is to be forced or withdrawn; and to aid in inserting or withdrawing the same the chamber is provided with a handle, F, by which the pump may be readily turned.

G shows the barrel, cask, or other vessel to be emptied, into which the pump is inserted by screwing the threaded portion of the chamber into the bung-hole of the barrel or cask, or into an opening made in the vessel.

H shows the discharge-pipe, through which the liquid or fluid is forced out of the barrel, cask, or other vessel. This pipe is made telescopic, that is to say, consists of two pipes, a long one, designated as H, and a smaller and shorter one, designated as H^2, which smaller pipe is inserted within the larger one, and is adjustable to the extent of its length, being held within the same by means of a nut or collar, *h*, passed over the threaded end of the pipe H.

The object obtained by making the pipe telescopic is, that the pipe is always brought to bear upon the bottom of the barrel, cask, or other vessel by extending or withdrawing the shorter pipe H^2, thus adapting the pump to barrels, casks or other vessels of different sizes. The end of the pipe H^2 is cap-shaped, and is provided with a series of small perforations extending into this pipe, through which the fluid enters and passes to the main pipe H.

The pipe H is provided with a discharge-orifice, as at J, and also with a rim, J^2, supported upon a spindle, K, by which the discharge of the fluid may be regulated or governed at the pleasure of the operator.

Such being the construction, the operation is as follows:

The pump is inserted in the barrel, cask or other vessel, the contents of which are to be forced out, by removing the bung from the barrel or cask, or by making an opening in the vessel sufficiently large to allow the tapering threaded portion of the chamber to be secured in the same, and is secured in the same so that the air shall have no opportunity of escaping. The telescopic pipe used is, of course, adjusted so that the lower portion of the shorter pipe or tube shall have its bearing upon the bottom of the barrel, cask, or other vessel. The lever D is then depressed and elevated alternately by the operator, so that the upper valve connected to the same by the connecting-rod shall have a reciprocating motion imparted to it, and by this movement the air entering the chamber A will be forced downward through the upper valve formed of the strip of leather, rubber, or suitable material, which valve is opened as the valve-seat is depressed, and closed as the same is elevated through the movement of the lever D, and passes through the lower valve (operating in the same manner as the upper valve) into the barrel, cask, or other vessel upon the surface of the contents of the same.

The movement of the lever is continued until a sufficient quantity of air has been forced down into the barrel, cask, or other vessel to force the contents of the same through the perforations in the lower or shorter tube up and into the larger or main pipe, where, as the movement of the lever is continued, it rises until it reaches the discharge-orifice.

When the contents of the barrel, cask, or other vessel reach this point, the valve J^2, supported upon the spindle K, may be opened by turning the wheel L

upon one end of the spindle, and the contents of the barrel, cask, or other vessel will be discharged through the discharge-orifice, the motion of the lever operating the upper valve being continued.

It will be observed that in the operation of my improved pump I make use of the same opening in the vessel to be emptied to allow the air to enter therein that the discharge-pipe is placed in; also, that the liquor or liquid discharged does not pass through any portion of the pump that it may be necessary to pack, and that by the employment of the valve J^2 complete control of the discharging or transferring of the liquid or fluid is obtained; thus any desired quantity can be drawn off and the discharge then be stopped by closing the valve J^2.

In the case of high-priced wines, the features, that no contact takes place between the liquor and the pump, save the telescopic pipe through which it passes, and that the discharge of the liquor can be controlled, are of value, particularly the latter feature, if the liquor is to be "bottled," as, by the ability to control the discharge, no liquor need be wasted or lost, while the non-contact of it with any portion of the apparatus, save the telescopic pipe, preserves in a great degree its purity.

The apparatus just described is capable of being operated by one person, as he can operate the apparatus until a sufficient quantity of air has been forced into the barrel to elevate the liquor or fluid, while under the mode at present pursued two persons are usually employed, one to pump and a second one to fill.

For the purposes of bottling liquors, wines, or fluids, my apparatus will be found particularly valuable, while it may be generally used for raising fluids and transferring them from one vessel to another. The apparatus can be readily adapted to the desired object, is easily managed, and will be found economical in its working.

Having thus set forth my invention,

What I claim as new is—

1. A pneumatic pump, applicable to the discharge of liquids from close vessels, having a chamber, which serves as the cylinder of the condensing-pump, while affording a passage to the discharge-pipe through which the liquids escape from the vessel, said parts being constructed and arranged as described and shown.

2. The combination, with the chamber A, of the valves B and E, connection C, lever D, and telescopic discharge-pipe H, when the same shall be constructed and operate substantially as and for the purpose set forth.

3. In combination with the second clause of claim, the valve J^2 and spindle K, substantially as and for the purposes set forth.

EDWARD T. JENKINS.

Witnesses:

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