(No Model.)

J. W. WADSWORTH.

PUMP.

No. 445,577. Patented Feb. 3, 1891.

Fig. 1.

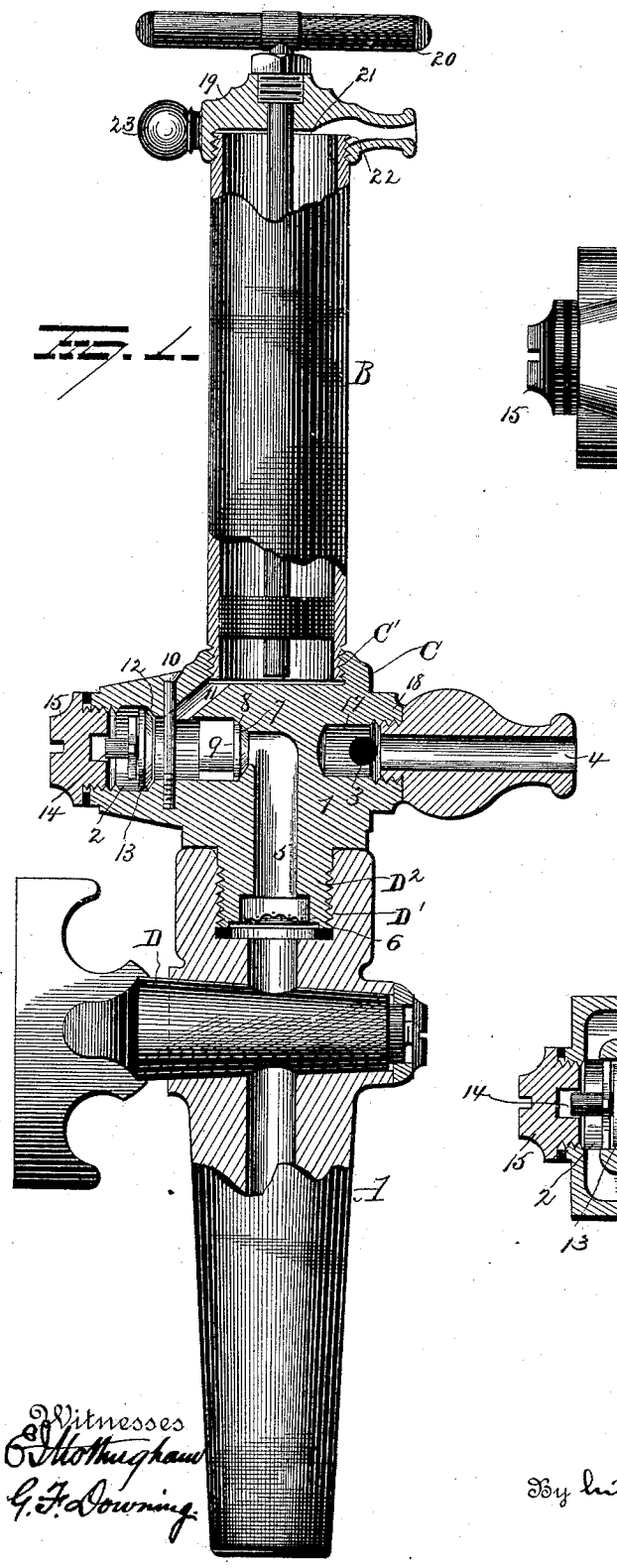


Fig. 2.

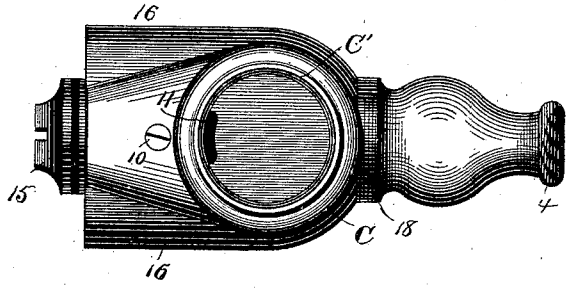
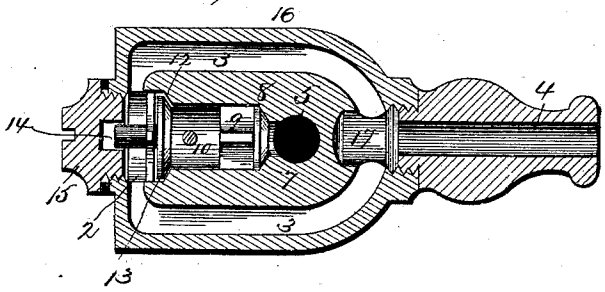


Fig. 3.



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UNITED STATES PATENT OFFICE.

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PUMP.

SPECIFICATION forming part of Letters Patent No. 445,577, dated February 3, 1891.

Application filed July 17, 1890. Serial No. 359,052. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. WADSWORTH, a citizen of Allegheny city, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Pumps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in pumps, and more particularly to a pump adapted for removing or drawing off liquid, such as beer from a barrel or other receptacle; and it consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth and pointed out in the claim.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of the device. Fig. 2 is a detached view of the intermediate controlling mechanism. Fig. 3 is a horizontal sectional view of the intermediate controlling mechanism.

A represents the barrel of the faucet; B, a pump, and C an intermediate controlling mechanism, to which latter a spigot or outlet is attached, as explained hereinafter. The forward end of the barrel of the faucet is made slightly tapering, as usual, to enter the receptacle containing the liquid to be withdrawn, and at a point near its rear end said barrel A is provided with an ordinary turning-plug or stop-cock D. The rear end of the barrel A is enlarged somewhat and provided with an interiorly-screw-threaded socket D′ for the reception of a similarly-threaded stem D^2, projecting from the intermediate valve or controlling device C, which latter is provided at its other end with an interiorly-screw-threaded recess C′ for the screw-threaded end of the pump B.

The device C comprises a barrel 1, a valve-chamber 2, outlet-ducts 3, and a spigot 4. The valve-chamber 2 extends downwardly to a point at about the center of the barrel 1, where it communicates with an inlet-port 5, which latter extends through the stem D^2, having at its end a strainer 6. In proximity to the juncture of the valve-chamber 2 and the inlet-port 5 a valve-seat 7 is made, upon which a valve 8 is located and adapted to normally close communication between the valve-chamber 2 and inlet-port 5, the stem 9 of this valve projecting a short distance into the valve-chamber and adapted to engage a pin 10, extending across said chamber, and thus limit the play of the valve 8. A duct 11, which communicates at its lower end with the recess C′, passes diagonally through a portion of the barrel 1 and terminates at its upper end just above the stem 9 of the valve 8, thus connecting the valve-chamber with the pump-barrel. Immediately above the termination of the duct 11 is the valve-chamber 2. Said chamber is bored to produce a valve-seat 12, upon which a valve 13 is located. The stem 14 of the valve 13 projects upwardly, and is adapted to enter a recess in a cap 15, screwed into the top of the valve-chamber, whereby said valve 13 is maintained in proper position.

The outlet-ducts 3 are made in flanges 16 at opposite sides of the barrel 1, said ducts communicating with the valve-chamber at points above the valve 13 and terminating at their lower ends in a recess 17 in the under side of the barrel 1. Surrounding this recess is an internally-screw-threaded flange 18 for the reception of the similarly-threaded upper end of the spigot 4.

The pump-cylinder is connected with the valve mechanism, as previously stated, and provided with a piston and piston-rod of any approved construction, which latter passes through the head 19 of the pump, and is provided on its free end with a handle 20. The head 19 of the pump is formed with a slight depression to produce a shallow chamber 21, with which a perforation 22 in the periphery of the cap is adapted to communicate, a small spigot or outlet-port communicating with said perforation. Opposite the spigot or outlet-port 22 a knob 23 is secured to the cap, whereby to turn it. When the head 19 is screwed upon the cylinder of the pump to its fullest extent, the perforation 22 will be partially closed; but by turning the head 19 more or less the size of said perforation may be varied and the outlet of air from the pump-cylinder varied.

When the piston is withdrawn, a partial vacuum will be produced between the valves

8 and 13, causing the former to be raised and the latter to remain closed. Thus communication will be opened between the valve-chamber and the inlet-port 5, whereupon liquid will flow into said chamber and from thence through the duct 11 into the pump-cylinder and fill the vacuum produced therein by the withdrawal of the piston, the air behind said piston having escaped through the spigot or outlet-port 22. The pump being now filled with liquid, the piston is propelled and the liquid forced back again through the duct 11 into the valve-chamber beneath the valve 13, whereupon said valve 13 will be raised by the pressure of the liquid and open communication between the valve-chamber 2 and outlet-ducts 3, thus permitting the liquid to flow to the spigot 4.

By means of the apparatus above described beer, cider, or other liquid may be easily and quickly withdrawn from a keg or barrel without the necessity of admitting air to the barrel, thus relieving the liquid from any injurious effects produced by the contact therewith of air.

Slight changes might be made in the details of construction without departing from the spirit or scope of my invention. Hence I do not wish to restrict myself to the precise details of construction herein described; but,

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination, with a faucet and pump, of an intermediate controlling mechanism connected with said parts, this controlling mechanism having a spigot at one end, a main duct leading through from the faucet to the pump, valve mechanism in said duct, and ducts leading from this valve mechanism around the main duct and terminating in the spigot, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOHN W. WADSWORTH.

Witnesses:
JAMES LOWRIE,
WM. S. ROSS.