

980,722.

Patented Jan. 3, 1911.

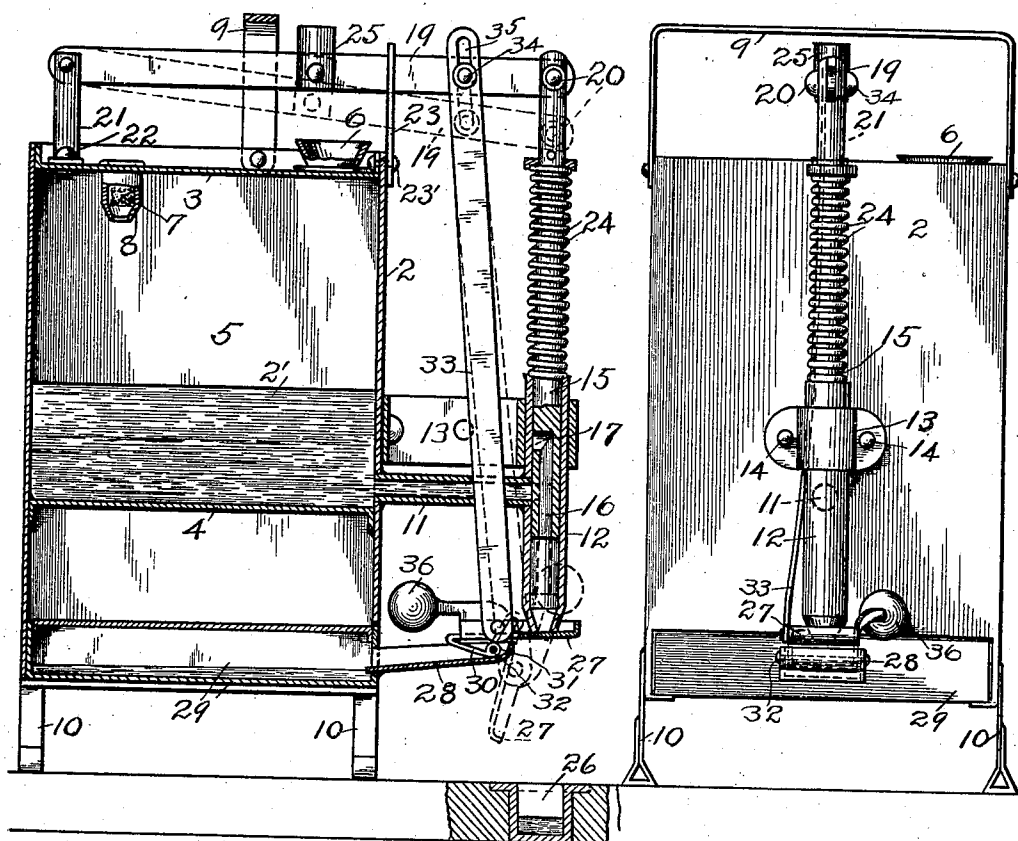


Fig. 1.

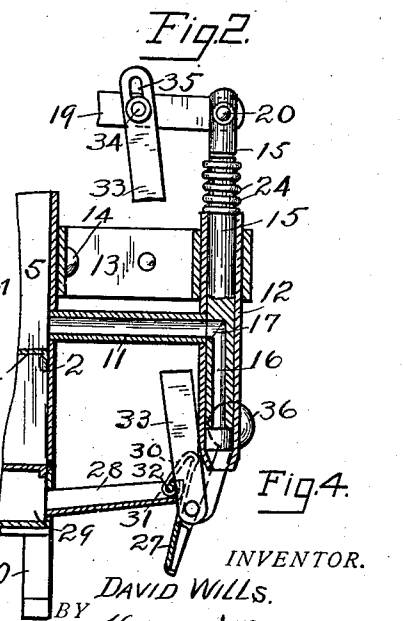


Fig.2.

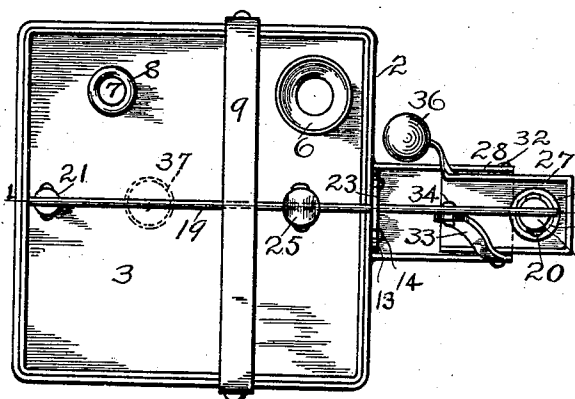


Fig.3.

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INK-WELL FILLER.

980,722.

Specification of Letters Patent.

Patented Jan. 3, 1911.

Application filed May 6, 1910. Serial No. 559,690.

To all whom it may concern:

Be it known that I, DAVID WILLS, a citizen of the United States, residing at Auburn, in the county of Cayuga and State of New York, have invented certain new and useful Improvements in Ink-Well Fillers, of which the following is a specification.

This invention relates to improvements in ink well fillers, and has for its object to provide a device of the class for use in schools and offices, for the purpose of readily and quickly refilling or replenishing ink wells, and a particular object of the invention is to provide means for doing the said work in a cleanly manner.

To this end the invention consists of a receptacle or vessel of suitable size and construction for holding and carrying a supply of ink, the same being easily portable.

The invention further consists of a valve operatively connected to the vessel or tank, and of novel means for operating and controlling the same. And the invention further consists of means for preventing the ink from dripping upon the desk or floor after each filling operation, and of means for automatically operating certain parts of the device.

The invention further consists of the features and parts set forth in the detail description which follows, and as illustrated by the accompanying drawing forming a part of this specification, in which—

Figure 1 is a sectional view of the tank taken on line 1—1 of Fig. 3; showing the construction and arrangement of the principal parts of the invention; also showing by full and dotted lines the manner of operating the valve and drip receiver. Fig. 2 is a front elevation of the device. Fig. 3 is a top plan view of the same. Fig. 4 is an enlarged detail sectional view, showing the valve in position to discharge the ink.

Similar characters of reference are assigned to corresponding parts throughout the several views.

In the drawing, 2 represents a hollow receptacle or tank arranged for holding a quantity of ink 2', which receptacle may be made of metal or other suitable material. The body of the tank is preferably made of one piece formed up in the usual manner, and fitted with a top 3, and a bottom 4, each of which is applied to the body in a manner to hold liquor. The ink is supplied

to the interior 5 of the tank, by means of a filling neck 6, which pierces the top 3.

7 represents a float indicator which may consist of a cork or other like substance which is disposed loosely in a tube 8, which depends through a perforation in the top 3. The cork 7 will rise to the top of the tube for indicating that the tank is full. The tank or vessel 2 may be carried by means of a loop-handle or bail 9, which may be secured to the tank in any suitable manner.

10 represents a series of legs for supporting the tank when not in use, one of which depends from each corner of the bottom of the tank.

To draw the ink from the tank for filling the bottles or wells, I provide a tube 11 which enters the side of the tank slightly above the bottom 4, and then extends horizontally away from the tank. The ink flows through this tube into a vertically arranged cylinder 12, constituting a valve casing which is supported by means of a clamping bracket 13, which is secured to the side of the tank by rivets or screws 14. The cylinder 12 is hollow throughout its length and its lower end is formed into a nozzle having an opening which is somewhat contracted for preventing a gushing discharge of the ink. The flow of the ink from the tank is controlled by a valve which consists of a plunger 15, which operatively fits in the cylinder 12. The plunger is bored out longitudinally, as at 16, and then diametrically, as at 17, to provide a duct or passage for the ink to flow from the tube 11 into the cylinder 12. The plunger 15 is operated vertically in the direction to open the valve by means of a lever 19, which is pivoted at one end to the upper end of the plunger, by means of a bolt or pin 20, the opposite end of said lever having its fulcrum in a forked support 21, which is mounted upon and secured to the top 3 of the tank by rivets or screws 22. The lever 19 is disposed beneath and at right angles to the handle 9, and is held from lateral movement, and is also limited to a certain vertical movement by means of a slotted guard 23, which is secured to the front side of the tank, as at 23'.

The full lines in Fig. 1 show the lever 19 and plunger 15 held in normal resting position, for preventing the discharge of the ink from the tank, by means of a spring 24, 110

which preferably encircles the plunger between the lever 19 and the cylinder 12. If desired the spring 24 may be dispensed with, and another spring, as 37, shown by dotted lines in Fig. 3, may be disposed between the lever 19 and the top 3 of the tank. To open the valve for drawing ink from the tank for filling a well or bottle, the operator depresses the lever 19 by placing a thumb or finger on a push button 25 which is mounted upon the lever 19 near the handle 9. This push button is so located that the operator may hold the tank by gripping the handle with the fingers, and at the same time depress the lever 19, for opening the valve, with the thumb of the same hand.

The dotted lines in Fig. 1 illustrate the manner and extent of depressing the lever and plunger for opening the valve. When the plunger is in the position shown by full lines in Fig. 1, the duct 17 is held above and away from the mouth of the tube 11, thus cutting off the flow of the ink into cylinder 12 by the closely fitting plunger. When the lever 19 and the plunger 15 are shifted to the position shown by dotted lines in Fig. 1, and by full lines in Fig. 4, the duct 17 is brought to register with the mouth of tube 11, and the ink will then flow freely through the passages 17 and 16 into the lower end of the cylinder 12, and then discharge through the nozzle into the ink well, as 26.

27 represents a shallow pan-like part for catching or receiving the drippings from the lower end of the cylinder after each closing of the valve. This receiver is pivotally mounted upon a spout 28 which projects from one end of a drip pan 29, which is fitted, drawer-like, into the under side of the tank. The drip receiver 27 may be formed out of sheet metal, and it is preferably disposed so as to slightly decline toward the tank, for directing the drippings into the spout 28, from whence the waste ink flows into the pan 29. The inner end of the drip receiver 27 has a tongue 30, which is folded beneath the body of the part and is formed into a loop 31 to receive a pin 32 which pierces the sides of the spout 28, for pivotally mounting the drip receiver.

To fill an ink well it is necessary to shift the drip receiver out of the position shown in Figs. 1, 2 and 3 into the position shown in Fig. 4. To do this I provide a lever or link 33 which is pivoted at its upper end to the lever 19 by a pin 34, which plays in a slot 35 in the lever 33, the lower end of said lever is pivoted to the side of the drip receiver 27 at a point slightly forward of the pin 32 so as to permit of the tilting of the receiver. A counter-weight 36 is applied to the rear end of the drip receiver to normally hold the said part in horizontal position against the lower end of the cylinder 12. The weight 36 is arranged to tilt and hold

the receiver in engagement with the cylinder and at the same time to lift and hold lever 33 in the position shown by full lines in Fig. 1, in which the pin 34 appears at the bottom of the slot 35. Under this arrangement the initial downward movement of lever 19 forces the lever 33 downward and effects the tilting of the drip receiver 27 on the pin 32 from the horizontal position shown in Figs. 1, 2 and 3 to the vertical position shown in Fig. 4, thus allowing the ink to freely gravitate from the tank into the ink well. The arrangement of the levers 19 and 33, and also the connection of the latter with the drip receiver are such that but a slight downward movement of the said levers is necessary to tilt or swing the receiver 27, out of the way, before the valve opens for the discharge of the ink. The operator is required to maintain the pressure on the push button and lever 19 during the filling of the well. As soon as the pressure upon lever 19 is relaxed, the spring 24 will quickly raise the plunger and shut off the flow of the ink. At the same instant the counter-weight will restore the drip receiver to its normal position shown by full lines in Figs. 1, 2 and 3.

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

1. An ink-well filler, comprising a tank for holding a supply of ink, said tank having an opening for filling and an opening for drawing off the ink, a valve connecting with the latter opening, said valve disposed outside of the tank and comprising a reciprocating plunger partially inclosed in a cylindrical casing having a depending nozzle, a lever mounted on the top of the tank, one end connecting with said plunger, said lever capable of being depressed manually for opening the valve for drawing ink from the tank, a spring for closing the valve and also for restoring said lever, a drip-pan disposed underneath the tank, a drip receiver pivoted to said pan, means for holding said receiver in position to catch the drippings from the valve nozzle, and means for tilting said receiver so as to permit the ink to gravitate into an ink-well when the valve is opened.

2. An ink-well filler, comprising a receptacle for containing a supply of ink, a valve for controlling the discharge of ink from said receptacle, said valve comprising a plunger inclosed in a cylindrical casing disposed at one side of the receptacle, a bracket for supporting said casing, a tube extending between the receptacle and the valve casing for drawing the ink from the receptacle, a spring carried by a member of the valve for holding the valve in closed position, a lever mounted on the receptacle and connecting with said valve member, said lever adapted

to be operated by hand for opening the valve for drawing ink from the receptacle, a drip receiver pivoted beneath the valve, a counter-weight arranged for holding said receiver in position to catch the drippings from the valve when the valve is closed, and means for shifting said receiver by the depressing of said lever for permitting the filling of an ink-well.

3. In an ink-well filler, the combination with a fluid supply-tank having a filling opening and a discharge opening, of a valve for controlling the discharge of fluid from said tank, said valve comprising a reciprocating plunger partially inclosed in a cylinder, a bracket for supporting said cylinder at one side of said tank, a tube for connecting said cylinder with said discharge opening, a hand operated lever, carried by said tank for depressing said plunger for opening the valve, a spring for raising said plunger for closing the valve, a pan carried by said tank for storing the drippings from said valve, and a counter-weighted part for catching said drippings and delivering the same to said pan.

4. The combination with a receptacle for containing a supply of fluid, and a valve for controlling the discharge of said fluid, of a

drip receiver pivotally disposed beneath the valve, a lever for operating said valve, and a link pivotally connected with said lever and also with the drip receiver, adapted for tilting said drip receiver for permitting the fluid to gravitate into a well or bottle at each opening of the valve.

5. The combination with a receptacle for containing a supply of fluid, and a valve for controlling the discharge of said fluid, of a drip pan supported by said receptacle a drip receiver pivotally connected to said drip pan and disposed beneath the valve, a lever for operating said valve, a link pivotally connected with said lever and also with the drip receiver adapted for tilting said drip receiver for permitting the fluid to gravitate into a well or bottle at each opening of said valve, and a counter-weight carried by said receiver adapted to restore said receiver to normal position after each closing of the valve.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID WILLS.

Witnesses:

HENRY W. DUMFORD,
JOHN PADBURY.