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WELL WATER LIFTING DEVICE

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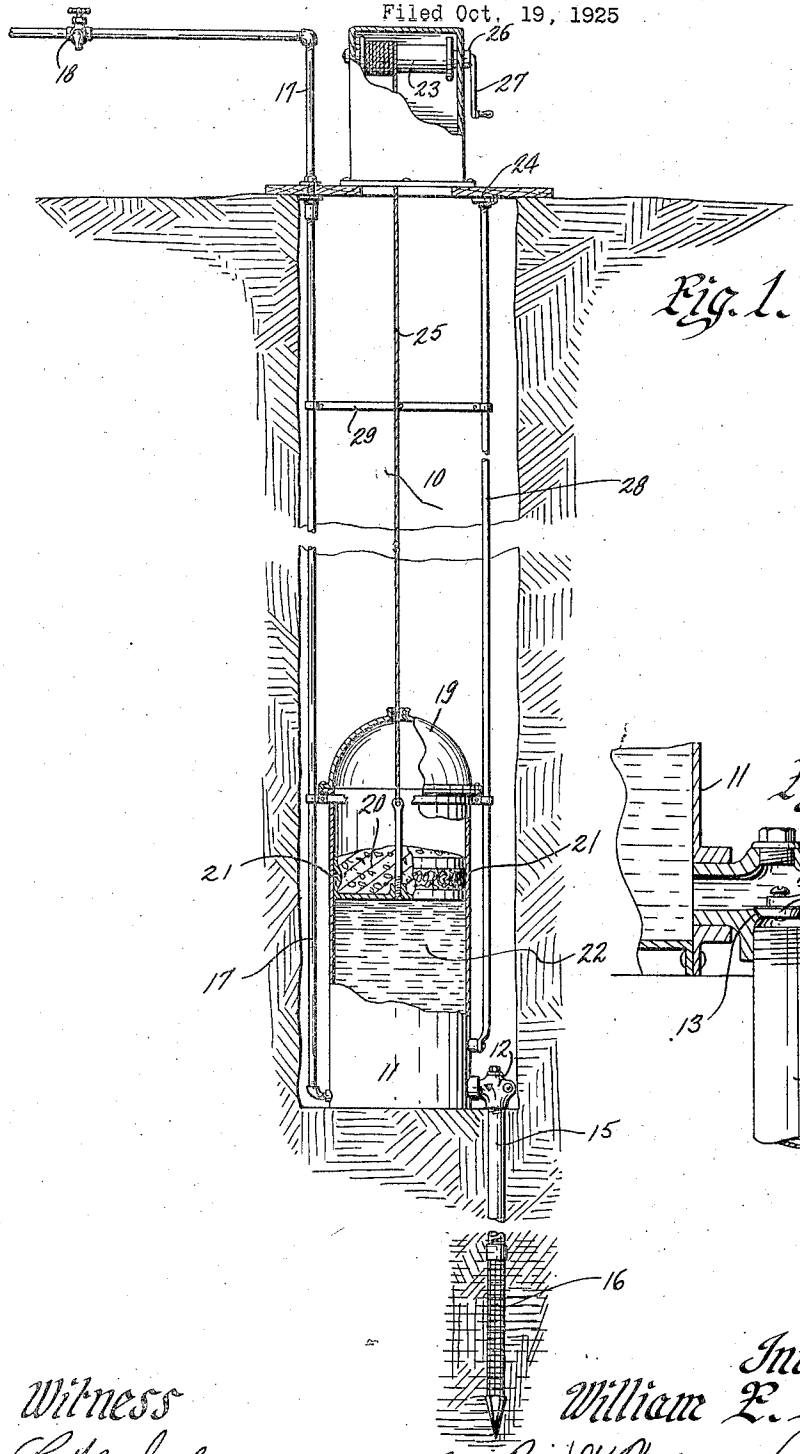


Fig. 1.

Fig. 2.

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WELL-WATER-LIFTING DEVICE.

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The object of my invention is to provide a well water lifting device of simple, durable and comparatively inexpensive construction, wherein well water may be piped into a house or the like and controlled as to its flow by an ordinary faucet or the like.

Still a further object is to provide in a well water lifting device a receiver tank, which may be drawn full of water and thereafter the device used for drawing water into the receiver tank, serves as a means for normally tending to force the water from the tank through the faucet or outlet openings in the discharge pipe of the device.

Still a further object is to provide a tank adapted to be mounted in the water level of the ground or closely thereto, which tank is provided with a piston manually operated for causing water to be drawn into the tank when the piston is raised through an inlet valve and when the piston is permitted to be lowered the inlet valve will be automatically closed.

Still another object is to provide a windlass for elevating the piston within the receiver tank for creating a vacuum in the tank and causing water to be drawn therein.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which:

Figure 1 is a sectional view showing my improved well water lifting device; and

Figure 2 is a detail, sectional view taken through the inlet valve structure.

In the accompanying drawings, I have used the reference numeral 10 to indicate a well opening, which may be of any desired depth.

Mounted within the well opening 10 is an enlarged, receiver tank 11 having a valve fitting 12 secured thereto near its bottom.

The valve fitting 12 is provided with a valve seat 13 and a one way valve member 14.

A pipe 15 is in communication with the valve fitting 12 on the inlet side of the valve 14.

A sand strainer point 16 is in communication with the pipe 15.

Water, in order to pass into the receiver pipe 11, passes through the sand strainer point 16, the pipe 15, through the valve 14, and then through the fitting 12 into the tank 11.

The sand strainer point is so positioned that it is within the water level below the top of the surface.

The receiver tank 11 has a discharge pipe 17 in communication therewith, which may extend into a house or the like and has a faucet or other valve control outlet 18 connected thereto.

The tank 11 is provided with a removable cover 19.

A weighted piston 20 having a suitable washer 21 around its periphery is mounted within the tank 11 and is adapted to rest upon the water or other liquid 22 within the tank 11.

The piston 20 is quite heavy and may be raised by a windlass structure 23. The windlass 23 is mounted upon a suitable platform 24 upon the ground level.

The piston 20 is connected to the windlass 23 by a cable or the like 25.

The windlass 23 includes an ordinary one-way clutch 26 so that when the cable 25 is lowered, the crank 27 need not rotate.

In order to retain the receiver tank from lifting upwardly when the piston 20 is raised, I provide a frame or brace 28 which is connected to the platform 24, and to the receiver tank 11.

The brace 28 may be connected to the discharge pipe 17 by a suitable cross brace 29.

In the practical operation of my water lifting device, all that is necessary is to operate the windlass 23 for raising the piston 20. The raising of the piston 20 creates a vacuum within the pipe 11 below the piston 20, causing water to be sucked or drawn through the strainer sand point, through the valve 14 into the tank 11.

When the tank 11 is filled, then the windlass 23 is released so that the weight of the piston 20 rests upon the water 22 within the tank 11.

The weight of the piston 20 upon the water will of course cause the water to be under pressure, the valve 14 being closed.

When the faucet 18 is open, the water 22 within the tank will be forced through the pipe 17 and out through the faucet 18.

The receiver tank 11 is mounted a sufficient depth under the surface of the ground

so that the tank therein will practically be the same as water drawn from an ordinary well structure.

The receiver tank may be filled as often as necessary by simply operating the windlass structure 23.

The piston 20 being free to move downwardly will always insure a sufficient pressure upon the water to force it up through the discharge pipe 17 where it may be drawn therefrom through the faucet 18.

Some changes may be made in the construction and arrangement of the various parts of my invention, without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims, any modified forms of structure or use of mechanical equivalents, which may be reasonably included within their scope.

I claim as my invention:

A device of the class described comprising a platform, a cable winding drum mounted thereon and a receiver tank suspended therefrom, a check valve communicating with the interior of said receiver tank, a pipe extending downward therefrom and communicating with a source of water supply, a discharge pipe communicating with the bottom of said receiver tank and connected to the top thereof and also to one side of said platform, a brace from the other side of said platform to said tank, said discharge pipe and said brace constituting the means of suspension of said tank from said platform, a weighted piston in said tank and a cable connected to said piston, and adapted to be wound on said cable drum whereby said piston may be raised.

Des Moines, Iowa, October 12, 1925.

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