J. T. STALLSWORTH.

PUMP.

APPLICATION FILED AUG. 21, 1911.

1,043,267. Patented Nov. 5, 1912.

Fig. 1.

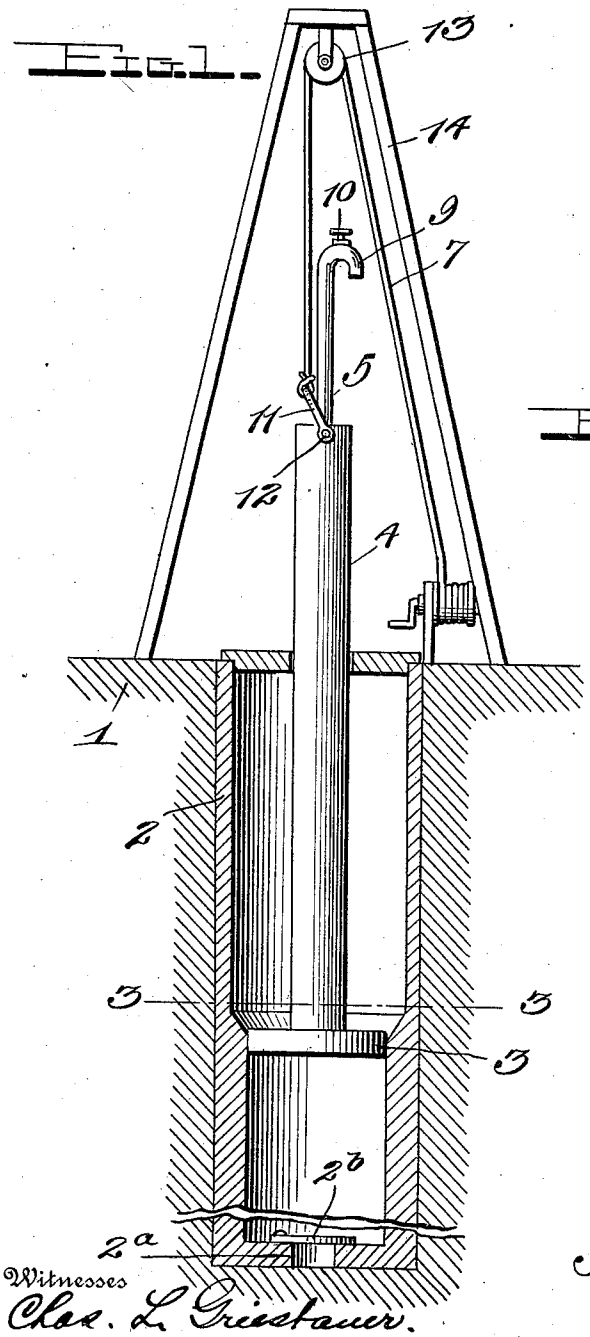


Fig. 3.

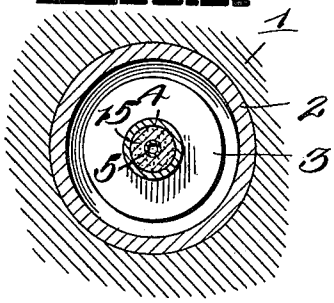
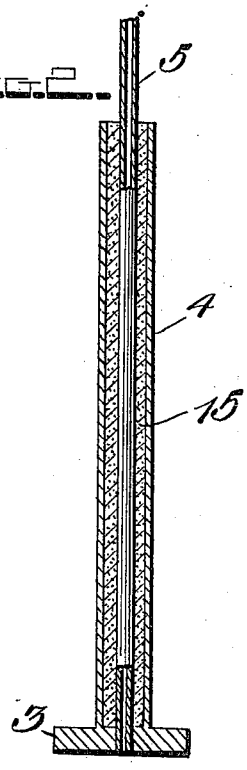


Fig. 2.



Witnesses

Chas. L. Griesbauer.

A. B. Norton.

Inventor

J. T. Stallsworth,

By Watson E. Coleman.

Attorney

UNITED STATES PATENT OFFICE.

JOHN T. STALLSWORTH, OF TOLO, OREGON.

PUMP.

Specification of Letters Patent. Patented Nov. 5, 1912.

1,043,267. Application filed August 21, 1911. Serial No. 645,205.

To all whom it may concern:

Be it known that I, JOHN T. STALLSWORTH, a citizen of the United States, residing at Tolo, in the county of Jackson and State of Oregon, have invented certain new and useful Improvements in Pumps, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in pumps and particularly to pumps which are employed for raising water from wells and the like.

One object of the invention is to provide an improved form of pump by means of which water may be easily and conveniently raised from wells.

Another object of the invention is to provide an improved form of pump which may be employed in raising water from deep wells where it would be impracticable to employ the usual type of pump.

A further object of the invention is to provide an improved pump which is not likely to freeze.

A further object is to provide means whereby the water raised from the well can be conveniently drawn therefrom.

With the above and other objects in view the invention consists in the construction, combination and arrangement of devices hereinafter described and claimed.

In the accompanying drawings—Figure 1 is a side elevation of a pump constructed in accordance with my invention, the well casing being shown in section. Fig. 2 is a detail vertical sectional view of the weighted plunger and the delivery pipe of the pump. Fig. 3 is a horizontal sectional view of the plane indicated by the line 3—3 of Fig. 1.

In the drawings, a well is indicated at 1. A tubular well casing is shown at 2, its upper end being counterbored and diametrically enlarged, while its lower end is provided with an aperture 2^a which is adapted to be closed by a check valve 2^b. In connection with the well casing I provide a weighted plunger 3 which fits snugly in the bore of the well casing and is adapted to move vertically therein. A boxing 4 is on the upper side of the plunger at the center thereof. This boxing may be of any suitable form and construction and may be secured at its lower end to the plunger by any suitable means. The boxing is here shown as tubular in form. The lower end of a vertical delivery pipe 5, which is carried by the plunger, extends through an opening in the center of and is secured to the plunger, the said delivery pipe passing upwardly through the center of the boxing 4, the upper end of the delivery pipe being turned to form a discharge spout 9 and being also provided with a suitable cutoff valve 10 whereby it may be opened or closed. A bail 11 is pivotally connected as at 12 to the upper end of the boxing 4.

Within the scope of my invention any suitable means may be employed for raising the plunger and the delivery pipe. For the purposes of this specification I show a cord 7 and a pulley 13, for this purpose, the pulley being mounted in a suitable frame 14 which is disposed above the upper end of the well and the cord passing over the pulley and having one end attached to the bail 11.

In order to appropriately weight the plunger 3 for operation, I put suitable material such as sand, indicated at 15 in the boxing 4 and surrounding that portion of the delivery pipe which extends through the boxing.

In the operation of my improved pump, assuming that the plunger and the delivery pipe are raised and that the cord 7 has been released, the plunger, by its weight and the pressure of the weighted boxing, which it carries, moves downwardly in the well casing and exerts pressure on the column of water in the well casing, hence causing the 9 water to be forced upwardly through the delivery pipe. On opening the valve 10 water will flow from the spout 9 as will be understood. The weighted plunger moves downwardly a distance corresponding to the quantity of water discharged from the delivery pipe.

Should the water accumulate above the plunger when the latter is lowered, the plunger can be raised by the cord 7 and pulley 13 or other suitable means, nearly to the top of the well casing and into the counterbored portion thereof and the water will then pass below the plunger. Also by raising the plunger and the delivery pipe all of the water will be caused to pass back into the well and freezing will be thereby prevented. It will be understood that the length of the

delivery pipe and the boxing must be proportioned to the depth of the well and the required pressure on the plunger.

Having thus described my invention, I claim:—

In a pump of the class described, the combination with a tubular casing having its lower end provided with a check valve, a gravity plunger movable vertically in the casing, the upper end of the casing being enlarged and arranged above the path of normal travel of the plunger, a discharge pipe secured to and extending entirely through said plunger, said discharge pipe being provided at its upper end with a controlling valve, a boxing on the plunger surrounding and housing the discharge pipe and spaced therefrom, pulverulent packing filling the space between the boxing and discharge pipe to form an additional weight to the plunger whereby upon the opening of the controlling valve the plunger will gravitate for the purpose set forth.

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

JOHN T. STALLSWORTH.

Witnesses:
T. M. Jones,
Cassie Jones.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."