G. H. BENNETT.

Apparatus for Raising Water.

No. 221,766. Patented Nov. 18, 1879.

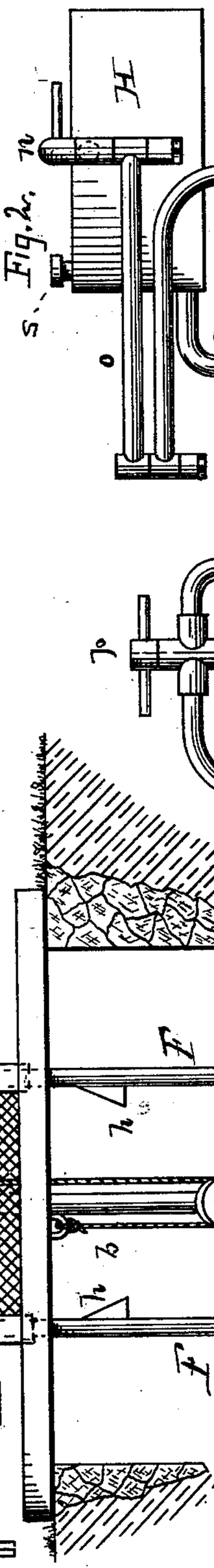

Fig. 2.

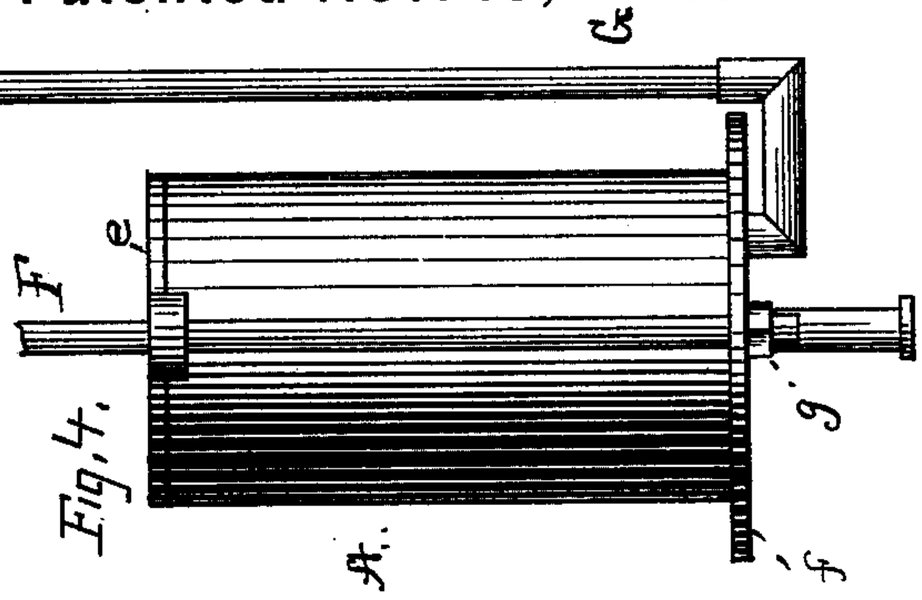

Fig. 4.

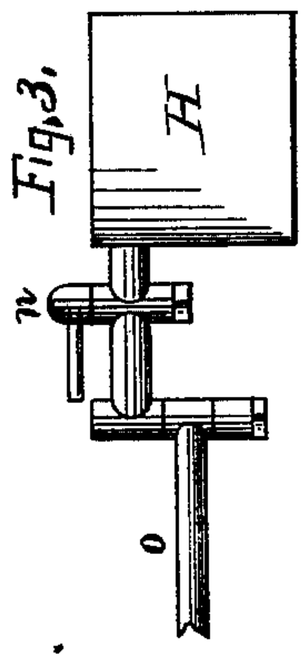

Fig. 3.

Fig. 1.

WITNESSES

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GEORGE H. BENNETT, OF LEAVENWORTH, KANSAS.

IMPROVEMENT IN APPARATUS FOR RAISING WATER.

Specification forming part of Letters Patent No. **221,766**, dated November 18, 1879; application filed August 22, 1879.

To all whom it may concern:

Be it known that I, GEORGE H. BENNETT, of Leavenworth, in the county of Leavenworth and State of Kansas, have invented a new and valuable Improvement in Apparatus for Raising Water; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of my invention, partly in section. Fig. 2 is a view of the reservoir with its various connections. Fig. 3 is an end view of the reservoir, and Fig. 4 a detail view of the cylinder in elevation.

This invention relates to that class of inventions known as "water-elevators;" and the object of the present invention is to provide an economical means whereby the water may be raised from the bottom or cooler portion of a well or cistern in such a volume that it will be sufficient for ordinary use for a considerable period of time and yet remain at the bottom or cooler portion of the well or cistern until the supply is exhausted; and the invention consists in the construction and operation of the several parts, as will be hereinafter described, and subsequently pointed out in the claims.

In the accompanying drawings, A represents a hollow tube or cylinder, constructed of metal, glass, or other suitable material, in which works a plunger, B, the rod of which is suitably connected to a cross-plate, C, having hung thereto weights D, of any suitable construction, for the purpose of forcing the plunger down into the cylinder. To the top of this cross-plate C is secured a pulley-block, *a*, under the sheave of which passes a rope or wire cable, *b*, fastened at one end to a staple in the well-curb, and having the other end secured to a winch, *c*. By this means the cross-plate C, to which are hung the weights D and plunger B, is operated, and hoisted to a suitable distance, when desired to raise the water in the cylinder, as will be hereinafter more fully described.

The well-curb E is constructed in such a manner as to do away with nails or screws, and yet withstand exposure to the weather for years by having the upright portions fitted into mortises in the top and base of the said curb, the whole held firmly together by rods F running through the base, upright, and top pieces of the said well-curb, and firmly secured by means of the screw-nuts *d*.

The well or cistern is ventilated by means of ventilators placed in panels between the upright pieces of the curb, or by means of wire-gauze or perforated metal plates occupying the place of the said panels.

The rods F, after being passed through the well-curb, are passed down through the cross-plate C and projections upon the head *e* and base-plate *f* of the cylinder, and are secured and held in place at their lower ends by means of the screw-nuts *g*, and by tightening these nuts the base-plate is brought firmly against the packing, thereby making the cylinder perfectly water-tight. To these rods F are provided stops *h*, to prevent the cross-plate C from being raised too high and thereby doing damage to the plunger or cylinder-head.

In Fig. 2 of the drawing I have shown a water-tight reservoir, H, which is intended to be built in a range in such a manner that the water may be heated for the various domestic purposes for which hot water is required.

To the base-plate *f* of the cylinder A is connected a pipe, *i*, having a valve, *k*, opening into the said cylinder. As the winch is revolved the plunger B is raised and the water drawn by suction up through the pipe *i* into the cylinder A, and, the said cylinder being filled, the plunger is forced down by means of the weights D hung from the cross-plate C, thereby causing the water to flow up the main supply-pipe G to the heating-reservoir H through the pipe *l*, connected to the said reservoir at or near its bottom, and this pipe is provided with a check-valve, *m*, to prevent the warm water from working down into the cold water in the supply-pipe. At or near the top of this heating-reservoir is a stop-cock, *n*, through which the warm water is drawn off, and allowed to flow by means of the swing-pipe *o* to the place where it is needed; and as

the warm water is drawn off at the top of the reservoir, the cold rushes in at the bottom thereof through the pipe *l*, thereby keeping the reservoir under pressure at all times.

When cold water is needed, it is drawn off through the stop-cock *p* of the pipe *q*, the said pipes *l* and *q* being connected with the main supply-pipe G by means of the coupling *r*.

When the supply of water is exhausted the winch is again revolved, thereby raising the plunger and filling the cylinder, and this operation repeated at different times, as the water-supply is exhausted.

Warm water may be supplied to the upper portions of a dwelling by connecting pipes to the coupling *s* at the top of the reservoir, and cold water by means of pipes connected to the coupling *r*.

The cylinder A is to be made of such a size that a considerable volume of water can be raised therein sufficient for ordinary use for a considerable period of time and yet remain at the bottom or cooler portion of the well until wanted.

It will also be seen that after the water is raised in the cylinder it is forced automatically up the supply-pipe to the place of discharge, and also where a heating-reservoir is employed the said reservoir is kept constantly under pressure.

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

1. The means herein described for raising water from the bottom or cooler portion of a well or cistern and conveying the same to a place of discharge, consisting of the cylinder A, having a pipe, *i*, and valve *k*, and main supply-pipe G, connected at or near the bottom thereof, and the rods F, having stops *h*, in combination with the plunger B, cross-plate C, detachable weights D, rope and pulley *b a*, and winch *c*, substantially as specified.

2. The well-curb E, constructed in the manner described, without the use of nails or screws, having ventilating-panels of any suitable construction, substantially as and for the purpose specified.

3. The combination, with a device for raising water from the bottom of a well or cistern, of the heating-reservoir H, having a swing-pipe, *o*, connected at or near the top of said reservoir by means of the stop-cock *p*, and the supply-pipe *l*, having a check, *m*, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE H. BENNETT.

Witnesses:
NEWTON MANN,
NATHAN A. MANN.