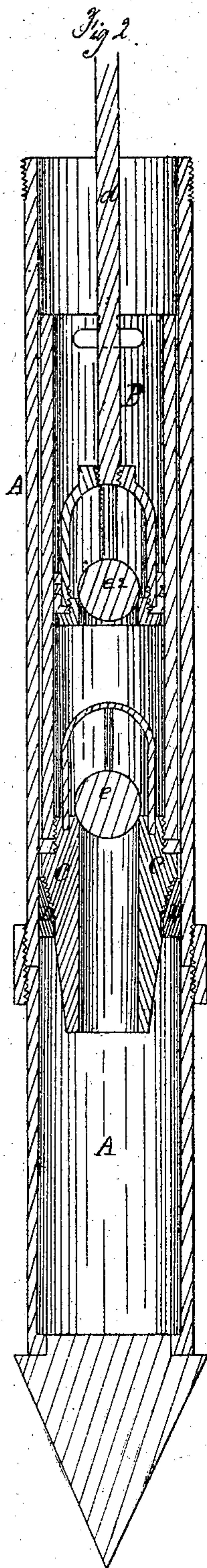
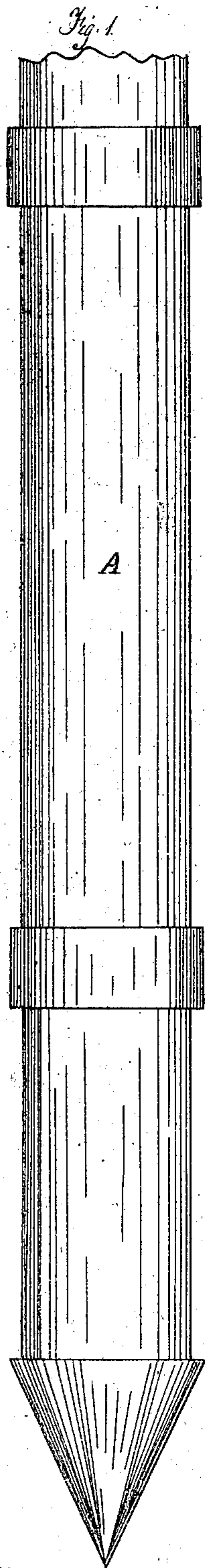


*J. T. Whipple,*  
*Tubular-Well-Tubes.*

*Nº 74.738.*

*Patented Feb. 18. 1868.*



*Witnesses.*  
*W. H. Sherburne,*  
*J. F. Gordon.*

*Inventor*  
*James T. Whipple*  
*By W. H. Sherburne Attorney*



# United States Patent Office.

JAMES T. WHIPPLE, OF CHICAGO, ILLINOIS.

*Letters Patent No. 74,738, dated February 18, 1868.*

## IMPROVEMENT IN PUMPS FOR DEEP WELLS.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, JAMES T. WHIPPLE, of Chicago, in the county of Cook, and State of Illinois, have invented a new and useful Improvement in Well-Tubing; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a perspective view of the outside of the tube, and

Figure 2 is a central transverse vertical section through the same.

Similar letters of reference, where they occur in the separate figures, denote like parts in each of the drawings.

My invention relates to an improvement in that class of wells that is made by sinking a hollow tube into the ground to any given distance, and the nature of my improvement consists in a device, or, in other words, a valve within a cylinder, which is placed within the main pipe at any required distance from the surface of the ground. Said cylinder is so constructed as to form a water-tight joint between its sides and the sides of the main pipe, by means of a suitable packing, or other ways, also receiving the operating or suction-valve, which is connected to the handle of the pump by means of a connecting-rod, whereby the water can be raised a greater distance than with the common suction-pump, as will be more fully explained by the description hereinafter given.

It is found in the constructing of tubular wells, that, by the resistance of the screen or filter, the water cannot be raised by the common suction-pump to a distance greater than from twenty-five to twenty-eight feet; therefore it is necessary to excavate the earth (for the purpose of attaching the pump) to a distance sufficient to leave only twenty-five or twenty-eight feet between the pump-valve and the bottom of the well. But by the use of my arrangement this difficulty is practically overcome, as the valve may be placed at any required distance from the bottom of the well, to admit of the water being drawn to the valve by suction, and, as the same passes through and above the valve, it is lifted or forced the remaining distance to the spout of the pump.

To enable others skilled in the art to construct and use my invention, I will proceed to describe the same with reference to the drawings.

A represents the main pipe, which is a hollow metallic tube, made in sections from four to six feet in length. The lower end of the first section, when driven into the ground, is provided with a suitable point and screen, but as the same forms no part of my invention, it is not necessary to be fully described. Within said pipe I insert a cylinder, B, which is provided internally at the bottom with a thread that takes into a like thread on the upper and outer side of a hollow disk, C. Said disk is provided at or near the middle with a shoulder, cut diagonally toward the centre. The bevelled surface thereof is provided with series of threads, that take into a like thread within the upper end of ring D, the same being cut away to correspond with the shoulder of disk C. Said disk is provided with suitable packing L, between its upper shoulder and the lower end of cylinder B, which, when properly adjusted, forms a water-tight joint between the sides of said cylinder and the sides of the main pipe. Within said cylinder B, and attached to the disk, is a globe or other suitable valve, e, that operates in connection with a second or plunger-valve, e'', within said cylinder, and connected to the handle of the pump by means of rod d.

The operation of my arrangement is as follows: As the main pipe is driven to the proper depth, ring D (being so constructed as to closely fill the cavity in the main pipe) is forced down into the tube to the required depth, cylinder B is then inserted within the tube, the thread at the lower end of disk C taking into the thread of ring D, and as said cylinder is given a number of rotating movements by means of a suitable wrench, which takes into notches cut in the upper end of said cylinder, the lower end of the same comes in contact with and against packing L of disk C, thus forcing the same outward against the sides of the main pipe A, whereby a water-tight joint is obtained, rod d of valve e'' is then connected to the handle of the pump, and the well is complete.

As the manner of allowing the water to enter the pipe forms no part of my invention, I have omitted its description, but I would briefly say that it may be admitted by perforating the lower end of the main pipe, or by raising the same in any equivalent manner.

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

Cylinder B, provided with valves *e* and *e''*, when so constructed as to be capable of being adjusted to any given point within the main pipe, in combination with ring D, disk C, and provided with packing L, whereby a water-tight joint may be obtained between the cylinder and the sides of the main pipe, substantially as and for the purpose set forth.

JAMES T. WHIPPLE.

Witnesses:

N. H. SHERBURNE,

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