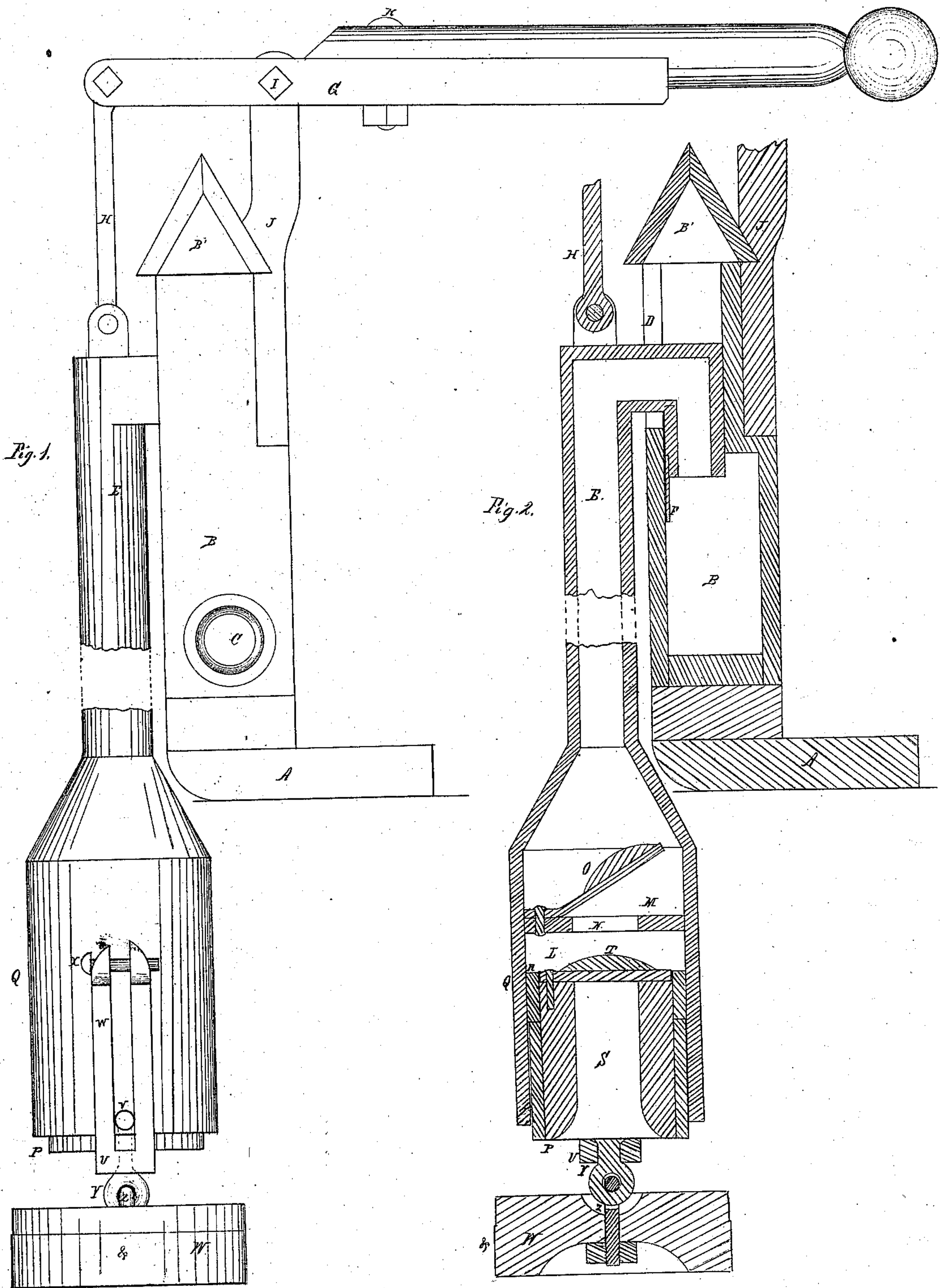


*T. Ling,*  
*Pump Lift,*  
*No. 12,601, Patented Mar. 27, 1855.*





# UNITED STATES PATENT OFFICE.

THOMAS LING, OF SHELBY, OHIO.

## SELF-ADJUSTABLE OR ANCHORING PUMP.

Specification of Letters Patent No. 12,601, dated March 27, 1855.

*To all whom it may concern:*

Be it known that I, THOMAS LING, of Shelby, in the county of Richland and State of Ohio, have invented a new and useful and  
5 Improved Pump; and I do hereby declare that the same is described and represented in the following specifications and drawings.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation referring to the drawings in which the same letters indicate like parts in each of the figures.

The nature of my invention consists in so constructing a pump and affixing an anchor  
15 to it with a flexible joint, that if it is dropped into a well, the anchor will adapt itself to the bottom, and fix or hold that part of the pump required to be stationary, without cramping the moving parts; but  
20 allow them to operate freely, or be operated so as to raise the water from the well. And further in so connecting the anchor to the other parts of the pump, that when the pump is drawn from the well it will draw  
25 the anchor out with it. Also in constructing the top of the pipe which conducts the water out of the well, so as to discharge the water downward into a box having an opening for the pipe to traverse inclosed by a  
30 plate fastened to the pipe. And further in a sliding lever that may be adjusted to balance the pipe and parts fastened to it, with the water in the same.

Figure 1, is an elevation of my pump.  
35 Fig. 2, is a section representing the several parts cut through the center.

In these drawings A is the end of a bar which may be placed partially across the well or otherwise, to which the box B is  
40 fastened. This box B may be made square in the form represented and provided with a spout C for the escape of the water or fluid pumped, and an elongated opening D in one side near the top for the end of the  
45 pipe E, which conducts the water into the box B. The end of the pipe E is so constructed as to discharge the water downward and it has the plate F fastened to it so as to traverse with it and cover, or keep the  
50 opening D closed when the pipe E is raised by the lever G to which it is connected by the link H as represented in Fig. 1, so as to prevent the water as it is discharged from the pipe from splashing out through the  
55 opening D. The plate F is fitted to the interior of the box so as to guide and steady

the pipe E. The lever G is vibrated on the bolt I which passes through it and the standard J, fastened to the box B. This lever G is made in two parts which are fastened together with the bolt K which passes through  
60 a long slot in the lower part of the lever, so that the upper part may be adjusted far enough from the bolt K to balance the pipe and parts fastened to it with the water in  
65 the same, so that the operator has to apply but little more power than is necessary to overcome the friction of the working parts in operating the pump to raise water.

The pipe E should be made nearly long  
70 enough to reach the bottom of the well and enlarged at the lower end so as to form a chamber L which should have a valve seat M fastened in the upper part and provided with an opening N and valve O to close it  
75 when the pipe is raised in pumping. The stationary piston P is made so that the cylinder Q (which forms the chamber L) will traverse freely upon it; the upper end of the piston being provided with a leather pack-  
80 ing R to prevent the water from escaping between the cylinder and the piston. There is an opening S, entirely through the piston which is closed by the valve T, when the cylinder descends so as to force the water in  
85 the chamber through the opening N up into the pipe E.

The piston P is fastened to the bracket U which extends entirely across the piston and cylinder and is provided with two slotted  
90 arms, which extend up each side of the latter, which is provided with projections (one of which is seen at v) which traverse freely in the slots in the arms of the bracket one of which arms is seen at W. The ex-  
95 tremities of the arms W are perforated for the pin X which passes through each part, and when the pipe and cylinder are raised to draw it out of the well, the pin X rests upon the projection V, so as to draw the bracket  
100 and parts fastened to it out of the well at the same time. The eye bolt Y is fastened in the center of the bracket U and connects it to the eye bolt Z in the weight or anchor and which makes or forms a flexible joint  
105 so as to allow the anchor to adapt itself to the bottom of the well, if it should be inclined, without cramping the piston so as to increase the friction of the cylinder as it is traversed upon it. The cap B' on the box  
110 B is designed to prevent any refuse matter from falling into the box.



I contemplate that the details in the construction of my pump may be varied in many ways which will readily suggest themselves to skillful artisans without departing from the principle or merits of my invention. Also that the piston may be fastened to the pipe so as to operate with it, and the cylinder to the anchor so as to remain stationary; the pipe being provided with projections like V, and the cylinder with arms like W or such an equivalent device as will connect the cylinder and anchor to the pipe or piston so as to draw the stationary parts of the pump from the well by the moving parts or tube.

Pumps constructed as above described are peculiarly adapted to the bored wells, which are made about four inches in diameter, which wells are very numerous in some of the western States of this Republic. Besides they are far better and cheaper for such wells and others, than any pump which has a spear or rod working in the tube or pipe of the pump.

I believe that I have described the construction and use of my invention so as to enable any person skilled in the art to construct and use the same, also some of the

several modes in which I contemplate its application, and I will now specify what I claim as my invention and desire to secure by Letters Patent.

1. Connecting the piston or stationary part to a weight or anchor by a flexible joint or its equivalent; so as to allow the anchor to adapt itself to the bottom of the well without cramping the other parts, substantially as described.

2. Connecting the anchor to the cylinder or moving parts by means of the projections and slotted arms or their equivalents, so as to draw the anchor from the well by means of the pipe and cylinder, or moving parts substantially as described.

3. I claim the devices, substantially such as are herein described, or their equivalents for guiding and steadying the upper end of the pipe and discharging the water downward into a box having an opening in the side in which the pipe traverses closed below the pipe by the plate F or its equivalent.

THOMAS LING.

Witnesses:

SAML. GRUBB,  
I. DENNIS, Jr.