P. Perrine,

Windlass Water Elevator,

No. 49,914. Patented Sep. 12, 1865.

Fig. 2.

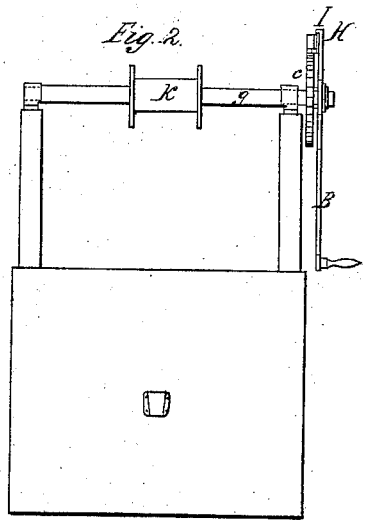


Fig. 3.

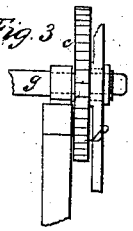


Fig. 4.

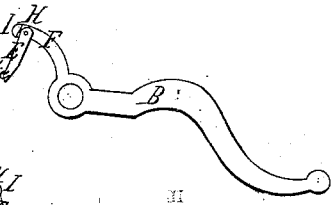
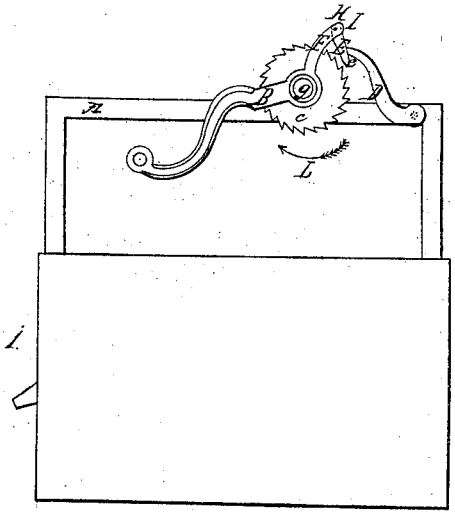


Fig. 1.



Witnesses;
Charles Cryston
Joseph Lee

Inventor;
Peter Perrine

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

PETER PERRINE, OF LITTLE FALLS, NEW YORK.

IMPROVEMENT IN WATER-ELEVATORS.

Specification forming part of Letters Patent No. **49,914**, dated September 12, 1865.

To all whom it may concern:

Be it known that I, PETER PERRINE, of the village of Little Falls, county of Herkimer, and State of New York, have invented a new and useful Improvement in Machines for Raising Water from Wells, and for similar purposes, which machine I denominate a "Water-Elevator;" and I 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, and forming a part of this specification.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Figure 1 presents the side elevation, showing the several parts in their relative positions. Fig. 2 presents the front elevation; Fig. 3, a portion of front elevation enlarged; Fig. 4, reversed view of lever-crank.

A (see Fig. 1) is the frame to which the operating parts are attached.

K is the barrel on which the bucket-rope is wound in drawing it from the well.

C is the ratchet-wheel, permanently attached to the shaft *g* of the barrel K. The hooked pawl D restrains the rotation of the shaft and the return of the bucket until, in the operation of the devices hereinafter described, it is released from the teeth of the ratchet.

B is the combined crank and brake, fitted loosely on the hub of the ratchet-wheel.

F is a continuation of the crank B on the opposite side of the center of motion. To the extremity of F is hinged a second pawl, E, which, by taking hold of the teeth of the ratchet-wheel, prevents the rotation of the crank before mentioned in the direction indicated by the arrow L without at the same time rotating the barrel K, and with it drawing up the bucket which may be attached. The pawl E, in revolving with the crank to which it is connected, moves in a different plane from that of the wheel C and the pawl D, in order that there may be no interference, excepting that part *e* of the pawl E entering the teeth of the wheel, which projects sidewise from the body of the pawl, and is of such form that it may pass under the pawl D in the same way as the teeth of the wheel when the bucket is being elevated. In reversing the motion of the crank for part of a revolution the same part *e* engages the hook of the pawl D and lifts it from its hold in the teeth of the ratchet. At the same time the further motion of the crank is restrained, and the point of connection between the pawl E and the continuation F of the crank becomes a fulcrum for the crank, which now becomes a brake capable of restraining the revolution of the barrel in the return of the bucket to the well by the friction produced by pressure on the hub of the wheel C.

The nib I on the part F of the crank prevents the pawl E from swinging too far from the teeth of the ratchet.

The mode of operating my water-elevator is as follows: When it is desired to raise the bucket from the well it is only necessary to turn the crank in the ordinary manner. The pawl E will engage itself in the teeth of the ratchet-wheel C, causing it and the barrel K to revolve with the crank. The revolution of the barrel K, of course, winds up the bucket-rope and elevates the bucket. When it is desired to lower the bucket into the well the crank is turned in the reverse direction until the projecting part *e* of the pawl E comes up under the hook of the pawl D, engaging it and lifting it from the teeth of the ratchet, at the same time preventing the further motion of the crank and furnishing a fulcrum, as before described, by the aid of which the crank is made to act as a brake by pressing on the hub of the wheel C.

It is evident that by increasing or diminishing the pressure-producing friction on the hub, the bucket may be allowed to descend more or less slowly, as desired.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combined arrangement of the crank B, the pawl E, and the hooked pawl D, substantially as herein set forth.

PETER PERRINE.

Witnesses:

JOHN FITZGERALD,

ADOLPHUS PERRINE.