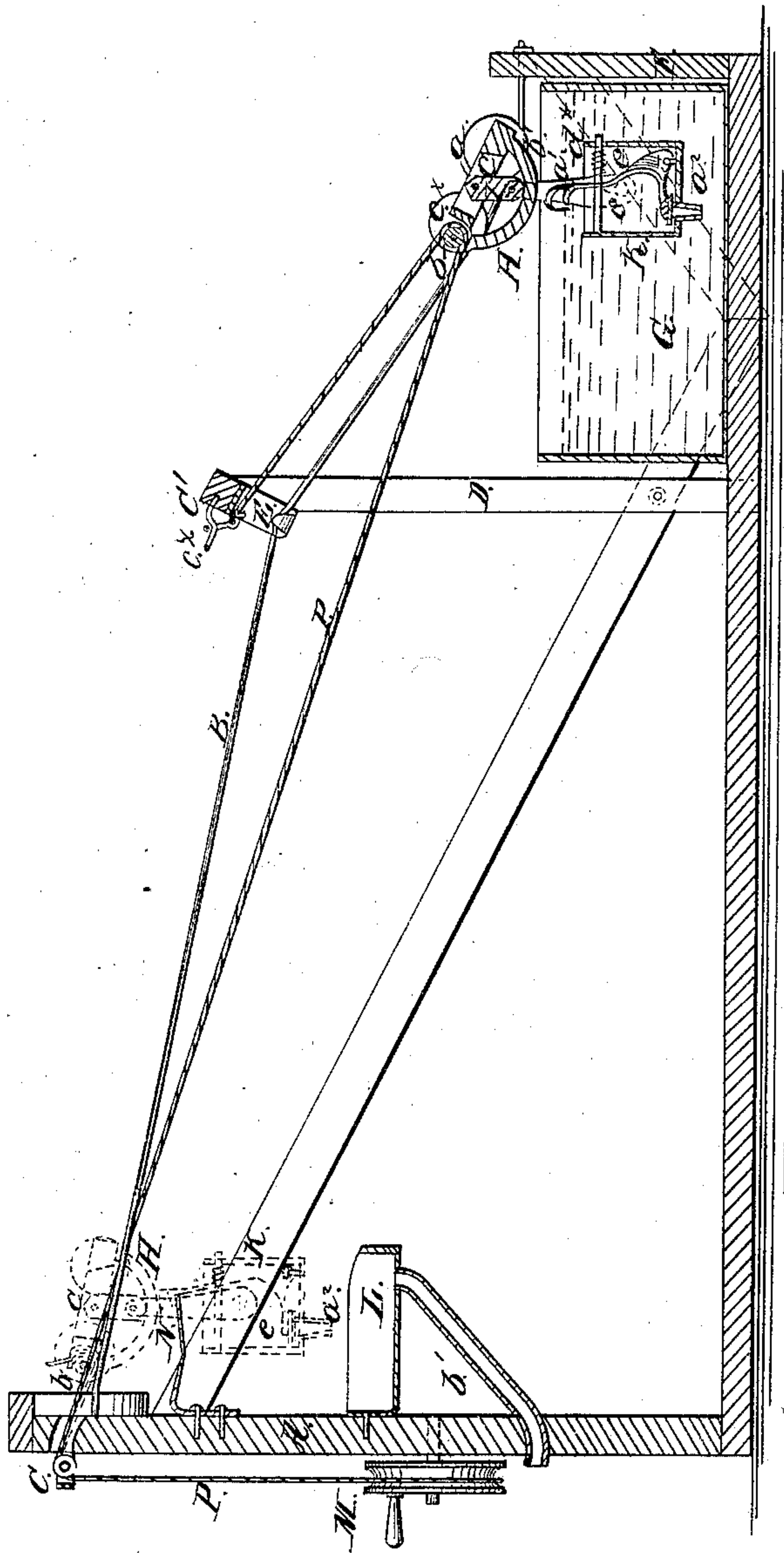


W. P. Walling,

Windlass Water Elevator,

N^o 79,707.

Patented July 7, 1868.



Witnesses:
W. C. Asakett
J. A. Levin

Inventor:
W. P. Walling
per Munnell
Atty's

United States Patent Office.

W. P. WALLING, OF SWARTZ CREEK, MICHIGAN.

Letters Patent No. 79,707, dated July 7, 1868.

IMPROVEMENT IN WATER-ELEVATORS.

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, W. P. WALLING, of Swartz Creek, in the county of Genesee, and State of Michigan, have invented a new and improved Apparatus for Drawing Water; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to a new and improved apparatus for drawing and carrying water from a spring or brook to any convenient distance, and is designed to avoid the labor of carrying water by hand from brooks or springs which are at some distance from a house or any place where the water is to be used.

The invention consists in a peculiar construction and arrangement of parts, as hereinafter fully shown and described, whereby the desired end is attained.

The accompanying drawing represents a side sectional view of my invention.

A is an upright, or a fixture of any suitable height, located near the house, or any place where the water is designed to be brought.

B B are two parallel ways attached to the upper part of A, and extending to the brook or spring, designated by G, the ways having an inclined position, and supported at a point between the upright, A, and the brook or spring G, by brackets, E, of hook-form, the ways, between the brackets and the brook or spring, a comparatively short distance, having a greater elevation than at the other part. This position of the ways is rendered necessary on account of the main portion of the same requiring to be at a considerable elevation, and out of the way of animals, and to admit of loads of hay, &c., passing under them, the ways, near the brook or spring, therefore, necessarily having a greater inclination as they extend from the brook or spring, at the surface of the ground, and, in a majority of cases, quite low ground, up to the elevated brackets E, which are located at not a great distance from the brook or spring.

C represents a car mounted on four wheels, which have grooved peripheries, and work or travel on the ways B, which may be constructed of wire of a suitable diameter, and strained to a proper degree of tension. This car is provided with a pendent semicircular bar, H, which has a longitudinal central position relatively with the car, and in the centre of the latter there is pivoted a pendent bar, I, the lower end of which just touches and rests upon the concave surface of bar H, the bar I being radial with H, and the pivot *a* of the former being the centre of a circle, of which H is a part. This bar H relieves the pivot *a* of the weight of the pail. To the lower part of the pendent bar I there are attached two curved lines, *b' b'*, one at each side of the same, the lower ends of said bars being perforated, to receive lugs or projections *c'*, at opposite sides of the pail K, and forming a bail for the same. In the bottom of the pail K there is fitted a discharge-tube, *a²*, which is covered by a valve, *e*, attached to the lower end of a bent lever, *e'*, the fulcrum of which is on the bottom of the pail. The upright and longer arm of this lever extends up above the top of the pail, and has two lateral projections, *a¹*, extending from it.

In the end of the car C which faces the upright, A, there is fitted a grooved pulley, *b*, around which a windlass-rope, P, passes, said rope P being attached to a ring, C', which prevents it being drawn through the car, and forms the connection of the rope to the car, a notch, *c^x*, being made in the upper surface of the latter, to cause the ring to have an upright position when the car is drawn under the direct pull of the rope P. This position of the ring is shown by dotted lines in the drawing.

C^x is a projection which extends from a cross-piece on the top of uprights D, the hooks or brackets E being also attached to said cross-piece. M is a windlass attached to the upright, A, the rope P being secured to said windlass, and passing over a guide-pulley, O, at the upper part of A.

The upright, A, has an arm, N, extending laterally from it, towards the brook or spring, and below this arm N there is a water-receiver, L, having a discharge-pipe, *b'*, attached.

The operation is as follows:

Suppose the pail K to be in the brook or spring G, and filled with water, and the ring C' on the projection

C, which is always the case when the pail is in this position. By turning the windlass M in the proper direction, the car C and filled pail will be drawn up the inclined ways to the brackets E E, with an increased power, over the windlass M, as the pulley *b* is a movable one. This increased power favors the ascent of the car up the steep incline from the brook or spring to the brackets E, and when the car reaches the latter, the ring C' is, by the movement of the car C, shoved off from the projection C^x, and the pull of the rope P on the car is then direct, and the pulling-power decreased, but the speed of the car correspondently increased, power being sacrificed for speed, where the former is not required, as when the car is on the slightly-inclined portion of the ways B. Just before the car reaches the termination of its movement towards the upright, A, the upper end of the lever *e'* in the pail, comes in contact with the outer end of the arm N, and the upper end of said arm is forced backward, and the valve *e* opened, to admit of the discharge of the water from the pail K into the receiver L, a spiral spring, *d*^x, which bears against lever *e'*, closing the valve *e*, when the empty pail is allowed to descend.

As the empty pail descends, the ring C', which is in an upright position, as previously alluded to, will catch over the projection C^x, and retain or hold the end of the rope P, while the pail descends from the brackets E to the brook or spring, and while the filled pail is being drawn up, until the car reaches the brackets E E, and the ring C' is shoved off from the projection C^x.

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

1. The projection C^x, in combination with the ring C', rope P, pulley *b*, and car C, as herein described, for the purpose specified.
2. The bucket K, provided with the discharge-spout *a*² in its bottom, and containing the angular valve-lever *e'*, the valve *e* of which is held closed by the spiral spring, and opened to discharge the water by means of the projection N upon post A, fitting beneath the arm *a'* of said lever, as herein shown and described.
3. The angular pivoted valve-lever, in combination with the coiled spring, bucket K, car C, and projection N, as herein described for the purpose specified.
4. The grooved vibrating-link I, in combination with the slotted car C, curved bar H, curved arms *b'*, and bucket K, as herein described for the purpose specified.

W. P. WALLING.

Witnesses:

GEO. W. RALL,
J. L. WILCOX.