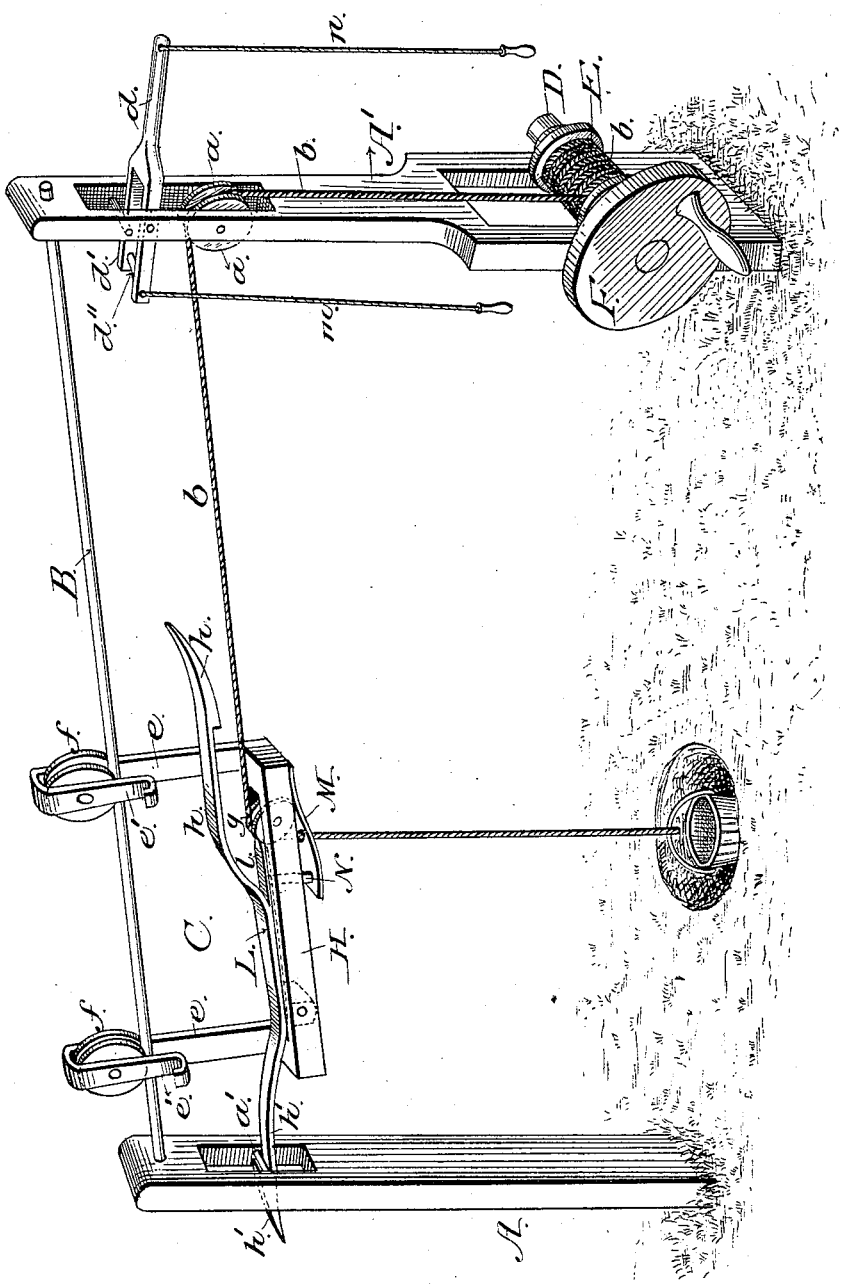
(No Model.)

# G. J. MANSFIELD.

## WATER ELEVATOR.

No. 342,919. Patented June 1, 1886.

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# UNITED STATES PATENT OFFICE.

GEORGE J. MANSFIELD, OF VIOLA, TENNESSEE.

## WATER-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 342,919, dated June 1, 1886.

Application filed March 3, 1886. Serial No. 193,849. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE J. MANSFIELD, a citizen of the United States, residing at Viola, in the county of Warren and State of Tennessee, have invented a new and useful Improvement in Water-Elevators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, in which the figure is a perspective view of a water-elevator embodying my improvements.

This invention relates to devices for elevating and carrying water, whereby water may be drawn from a well or other suitable source of supply and carried vertically or horizontally; and it consists in the combination of devices hereinafter described and claimed.

To enable others skilled in the art to make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawing, A and A′ represent suitable posts, the former being located near the mouth of the well or source of supply, and the latter placed at any desired distance from the well, and at a point where it may be desired to deposit the water.

A suitable track, B, secured to the upper ends of the posts, constitutes, with these posts, a frame-work upon which the carriage C reciprocates, as I shall hereinafter fully explain.

In the lower portion of the post A′ is mounted a transverse drive-shaft, D, having a drum, E, and operating drive-wheel F, and in the upper portion of the post is a suitable guide-pulley, *a*, over which passes a cord or chain, *b*, which, after being wound around the drum, extends rearwardly, and has attached to its outer end a bucket or other receptacle which receives the water from the well, after which the winding of the cord around its drum causes the bucket to ascend and deposit its load, as I shall hereinafter fully describe.

Pivotally secured within the post A′, and above the guide-pulley *a*, is a lever, *d*, the short arm *d′* of which is bifurcated, and is provided with a transverse pin, *d″*, as shown.

The carriage C, as before stated, reciprocates upon the track B, and is suspended therefrom by means of hangers *e*, in the upper ends of which pulleys *f* are mounted. These pulleys engage the track, and the short arms *e′* of the hangers, after passing over the pulleys, extend downwardly far enough to prevent all liability of the pulleys disengaging themselves with the track and thereby impair the successful operation of the carrier. The main portion of the carrier consists, essentially, of a longitudinal slotted beam, H, secured to the lower ends of the hangers, and having pivotally mounted between its sides a pulley, *g*, over which the cord or chain *b* passes.

Within the slotted portion of the beam H is pivotally secured a lever, L, having forwardly and rearwardly extending arms *h h′*, the outer ends of which are barbed, whereby the lever is engaged and the travel of the carriage automatically checked. It will be observed the post A is also provided with a pin, *a′*, which engages the rear barbed end of the lever L when the carriage has been returned to a position immediately over the well or cistern, and by depressing this end of the lever permits the bucket to descend. To accomplish this latter movement I provide the lever at or near its center with a projecting tongue, *l*, the forward end of which is designed to enter the groove in the periphery of the pulley *g*, and bear with sufficient friction against the cord *b* to prevent the descent of the bucket during the time the same is being transported.

To release the carrier and have it return to its position over the well, and to release the bucket after it has been carried to its destination, I provide the lever *d* with operating cords *m* and *n*, whereby the operator, by drawing upon the cord *m*, releases the pin *d″* from its engagement with the forward barbed end of the lever L, and permits the carrier to return to its position over the well. If it be desired to release the bucket after the carrier has completed its forward movement and been engaged by the pin *d″*, the operator draws upon the cord *n*, which raises the forward end of the lever L, but without causing it to be disengaged with the pin *d″*. The raising of the lever, as described, affects the position of the tongue *l*, by forcing said tongue from its seat in the grooved periphery of the pulley *g*, and thereby releases the cord or chain *a*, and permits the bucket to descend. If it be desired to stop the descent of the bucket at any point between

the carriage and ground, the operator lets go the cord *n*, when the weight of the forward arm of the lever L will cause the lever *d* to resume its normal position, all the time, however, retaining its engagement with the barbed end of the former lever.

Secured to the under side of the beam H is a flat spring, M, the free end of which is provided with a lug or arm, N, which projects upwardly to within a short distance of the tongue *l*, whereby in its ascent the bucket comes in contact with the spring, and by forcing the same upward causes the lug N to raise the said tongue from its seat, at the same time the rear barbed end is depressed and is released from the pin *a'*. The spring also serves as a yielding bearing for the bucket, and relieves the cord or chain from unnecessary strain caused by the continued winding of the same.

From the foregoing description it is evident I am enabled to elevate water or other substances, and thence carry the same in a horizontal or inclined plane to a designated place of deposit, the carrier being automatically stopped and held at the completion of its forward and rearward movement, and the bucket or receptacle released as stated.

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

1. The posts A A', the track B, and the winding mechanism, in combination with the carriage C, the spring M, having the pin N, the lever L, having the tongue *l*, a lever, *d*, pivoted within the post A', and the cord or chain *n*, whereby the lever L is raised and the tongue disengaged with the cord, substantially as herein described.

2. The combination, with the posts A A', the track B, the cord *b*, and winding mechanism, of the carriage C, the levers *d''* and L, and the pulleys *a* and *g*, mounted in the post A' and carriage, respectively, the cords or chains *m* and *n*, for operating the lever *d*, and the spring M, having a projecting lug or pin, N, substantially as herein described.

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Witnesses:
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