

W. R. REED & G. BLYTHE.

Water-Elevators.

No. 154,190.

Patented Aug. 18, 1874.

Fig. 1.

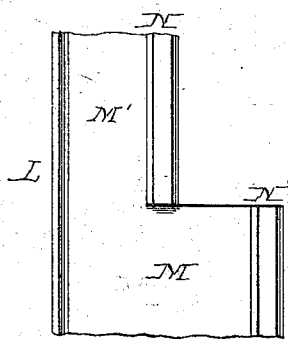
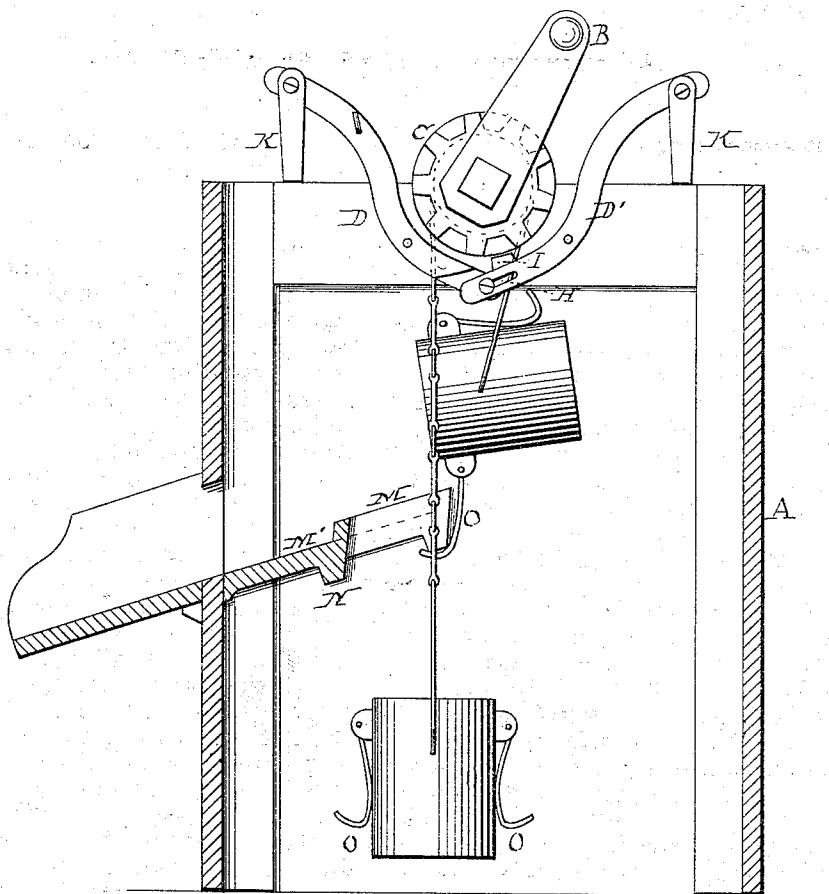


Fig. 2.

WITNESSES
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INVENTORS
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By
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UNITED STATES PATENT OFFICE.

WILLIAM R. REED AND GEORGE BLYTHE, OF CHILLICOTHE, MISSOURI,
ASSIGNORS OF ONE-THIRD THEIR RIGHT TO BENJAMIN F. BERRY,
OF SAME PLACE.

IMPROVEMENT IN WATER-ELEVATORS.

Specification forming part of Letters Patent No. **154,190**, dated August 18, 1874; application filed May 27, 1874.

To all whom it may concern:

Be it known that we, WILLIAM R. REED and GEORGE BLYTHE, of Chillicothe, Missouri, have made and invented a new and useful Improvement in Water-Elevators, of which the following is a specification:

The invention relates to improvements in water-elevators; and consists in providing a windlass of usual construction, upon the axle of the cylinder of which, adjacent to the crank end, is attached a cog-wheel, extending below which and pivoted against the frame are two bowed levers, upon one of which is a stud or cog that, when the levers are operated, is forced up between the cogs of the wheel above, the extremities of the levers below the wheel being so constructed and arranged as to permit the elevation or depression of the stud, thus enabling the operator to control the windlass at pleasure. The invention further consists in providing a trough constructed with one part of its side toward the well, projecting inward beyond the axis of the cylinder, while the other part is narrower, extending only far enough to trip a bucket hung upon the side of the cylinder toward the trough.

By this construction, buckets hung upon both sides of the cylinder are tripped in a convenient manner, to facilitate which the under edge of the trough is provided with a lip or rim, upon which the trippers catch as the buckets are being raised.

The trippers we have devised are hinged or jointed at or near the point of connection with the bucket, whereby the delivery of the water is materially facilitated, as the bucket tips with ease and certainty.

The nature of the invention will more fully appear in the description of the details of construction hereinafter.

The object of the invention is to provide a convenient and effective water-elevator, and especially an advantageous means of controlling the windlass and delivering the water.

Figure 1 is a side elevation of a device embodying the invention, partly in section. Fig. 2 is a view of the under side of the trough.

A in the accompanying drawings is a rectangular frame of usual construction, upon the up-

per edge of which are the bearings of the axle of the cylinder, upon which, in close proximity to the side of the frame, nearest the crank B, is the cog-wheel C, the diameter of which is somewhat greater than the diameter of the cylinder. Extending below the wheel C are the levers D D', which are pivoted to the frame, and curved at their lower ends so as to conform to the periphery of the wheel C, their power ends or handles being carried outward, so as to be readily controlled by the operator at the crank. To the lower extremity of the lever D is attached the pin E, which works in the slot H in the lower extremity of the lever D', the slot H being of sufficient length to permit the necessary depression, to which allusion is made hereinafter, and the extremities of the levers conformed so as to work freely. Attached to the lower end of one of the levers is the stud or cog I, which is of such size and shape that it will fit between the cogs of the wheel C, and so placed that when forced upward it will occupy a position directly below the axis of the wheel C, entering between the cogs, as aforesaid, thus effectually checking the movement of the cylinder; and at the power ends of the levers are pivoted the pins K, which, when depressed, rest upon the edge of the frame, and serve to hold the stud I away from the wheel C. L is the trough, which is constructed with the part M extended beyond the axis of the cylinder, so as to catch the tripper of a bucket hung upon the side of the cylinder removed from the trough, while the part M' is narrower, and arranged to catch the tripper of a bucket hung upon the side of the cylinder toward the trough. To facilitate the tipping of the buckets upon the edge of the under side of the trough is provided the rim or lip N, upon which the trippers O catch as the buckets are being elevated, the buckets being hung so as to effect this result.

The distinctive character of the trippers O is that they are hinged or jointed at or near the point of connection with the bucket—in the present instance turning between ears. By this construction the delivery of the water is accomplished with great ease.

Having thus described our invention, what

we claim as new and useful, and desire to secure by Letters Patent, is—

1. The combination of the levers D D', provided, respectively, with the pin E and slot H, and one of them having the stud I with the wheel C, substantially as shown and described.

2. The trough L, having the parts M M', constructed as described, for the purposes specified.

3. The lip N upon the under side of the trough L, for the purpose specified.

In testimony that we claim the foregoing improvement in water-elevators, as above described, we have hereunto set our hands and seals.

WILLIAM R. REED. [L. S.]
GEORGE BLYTHE. [L. S.]

Witnesses:

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