M. V. B. WRIGHT.
Water-Elevator.

No. 208,217. Patented Sept. 17, 1878.

FIG. 1.

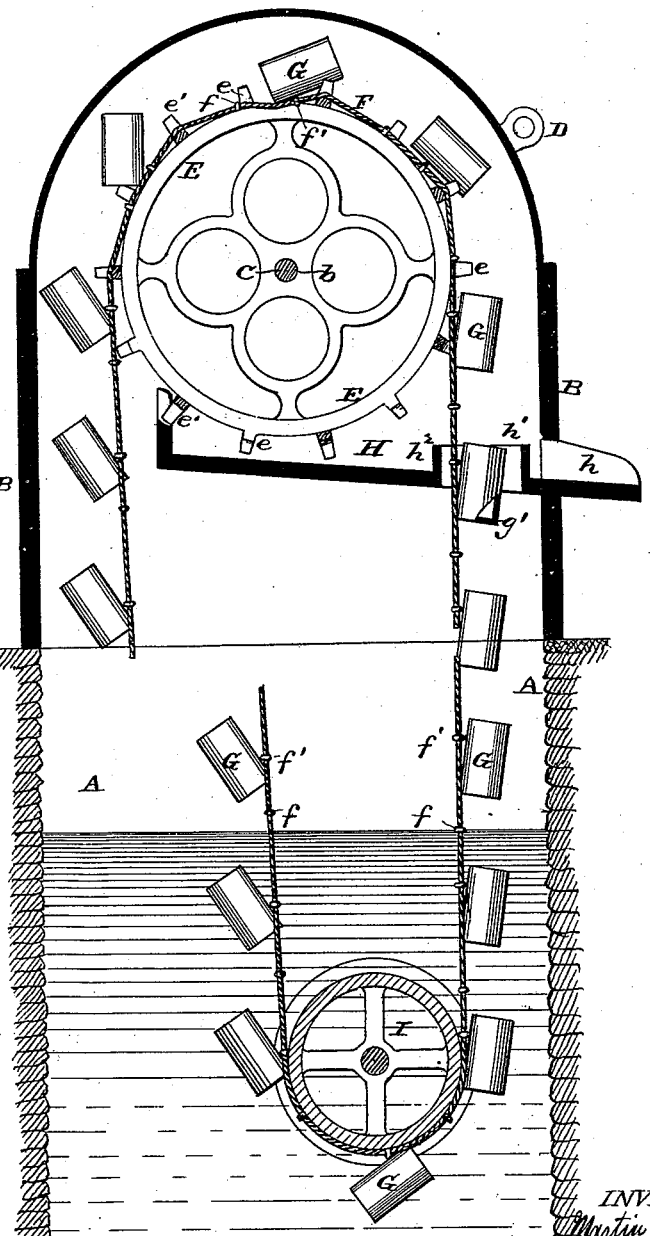


FIG. 2.

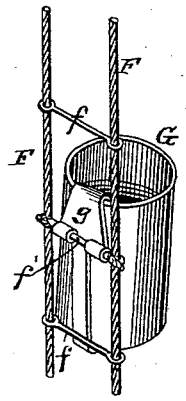
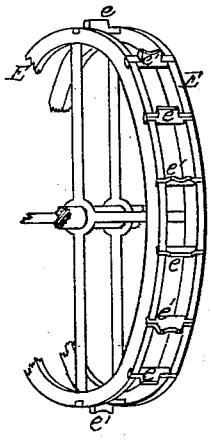


FIG. 3.



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UNITED STATES PATENT OFFICE.

MARTIN VAN BUREN WRIGHT, OF FORT WORTH, TEXAS.

IMPROVEMENT IN WATER-ELEVATORS.

Specification forming part of Letters Patent No. **208,217**, dated September 17, 1878; application filed August 18, 1877.

To all whom it may concern:

Be it known that I, MARTIN VAN BUREN WRIGHT, of Fort Worth, Tarrant county, Texas, have invented certain new and useful Improvements in Water-Elevators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My improvement relates to that class of water-elevators in which the water-vessels are suspended from an endless carrier (such as a chain or cord) caused to revolve by passing over a crank-wheel.

In my invention the wheel is formed of two disks or sides, whose rims are connected by transverse bars which project beyond the periphery of the disks to form cogs, each alternate one of which engages the cross-bars of the carrier, and the others serve to tilt the bucket as it comes near the top of the driving-wheel.

In the drawings, Figure 1 is a vertical section through well and curb, showing the elevator in elevation. Fig. 2 is a perspective view of one bucket, showing manner of attaching to cord. Fig. 3 is a perspective view of the wheel.

A represents a well or cistern. B represents the curb supporting the elevator-wheel. C is the wheel-shaft, and D a hand-crank thereon. The shaft turns in bearings *b*. The driving or elevator wheel consists of two disks, E E, connected by bars or cogs *e e'*, extending from the periphery of one disk to the periphery of the other and projecting beyond the peripheries. The cogs *e* engage cross-bars *f* upon the endless vessel-carrier F, so as to insure the revolution of the carrier with the rotation of the wheel.

The carrier F, I prefer to make of some non-metallic substance, such as hempen cord saturated with paraffine. Thus I avoid the disagreeable taste and color imparted by iron and the dangerous qualities imparted by other metals or alloys in common use, besides providing a cheap carrier that may be constructed by unskilled labor.

f' are cross-bars, which form the trunnions of pivot-shafts on which the water-vessels are supported or upon which they turn. The water-vessels G are attached to the bars *f'* by brackets *g*, which turn on said bars; or they may be attached by any other suitable means.

The cups or water-vessels are preferably made of glass, as they will then last to an indefinite time, and will impart no disagreeable or dangerous quality to the water.

The bars *f f'* may be of wood or metal; and where glass is used for the cups, metal may be dispensed with altogether, as the attachments between the bar *f'* and the cup may be by means of projections, either eye-formed or otherwise, blown upon or attached to the glass.

Where any metal is used that comes in contact with the water its surface should be of such metal or other material as to impart no objectionable quality to the water.

The bars or cogs *e'* are saddle-shaped upon the outer edge, so as to receive the bucket or cup G, and as the bucket comes near to its highest point of elevation it tilts over the support *e'*, and discharges the water into the interior of the wheel between the two disks E E. H is a trough or receiver beneath the wheel, into which the water falls, and from which it runs through a spout, *h*. The buckets G ascend through an aperture, h^1, in the trough, having a raised flange or margin, h^2, to prevent the descent of water through the aperture h^1.

I prefer to provide each bucket with a small perforation, *g'*, to allow the gradual escape of water, so that when the apparatus is at rest the water will not become heated in the buckets in summer nor frozen in winter.

At the bottom of the well or cistern the carrier F may pass around beneath a guide-pulley, I.

The shaft C may have the usual ratchet-wheel and pawl to prevent its backward rotation when the hand is removed from the hand-crank.

Operation: The wheel is turned. The cogs *e*, engaging against the cross-bar *f*, cause the carrier to revolve so as to raise the buckets with their mouths upward. The buckets come

in contact with the cogs e' of the wheel, and as they reach nearly to their highest elevation they are tilted up on the cogs e' and the water all emptied out before they commence their descent, so that all the water is poured into the trough H.

I claim as my invention—

The elevator-wheel constructed with disks E, connected by chain-cogs e and tilting cogs e', in combination with endless carrier F and buckets G.

M. V. B. WRIGHT.

Witnesses:
SAML. KNIGHT,
CHAS. HALL.