(No Model.)

G. W. GALE.

WATER ELEVATOR.

No. 434,029. Patented Aug. 12, 1890.

Fig. 1.

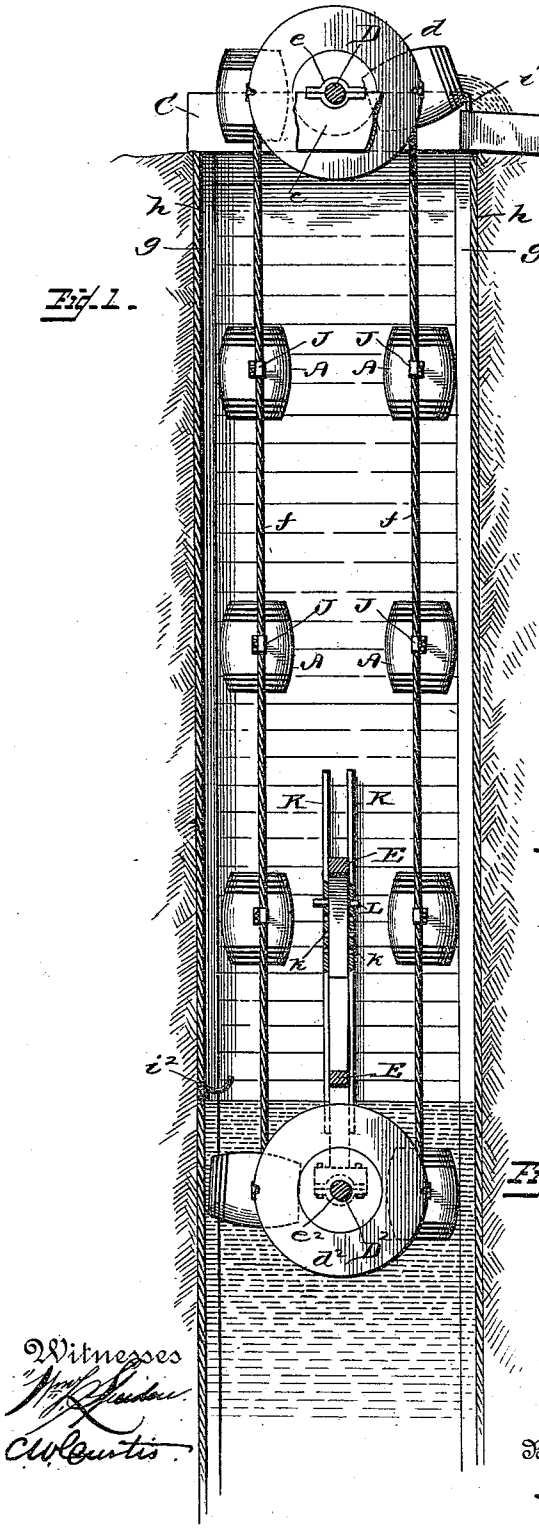


Fig. 2.

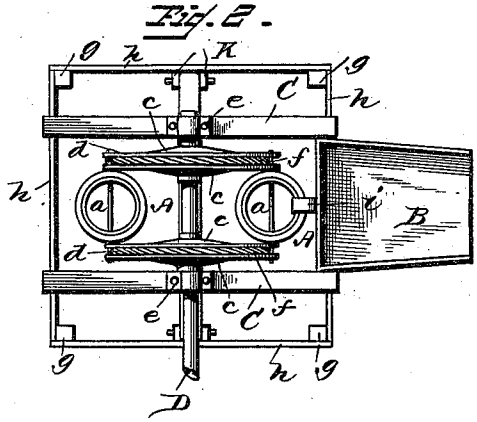


Fig. 3.

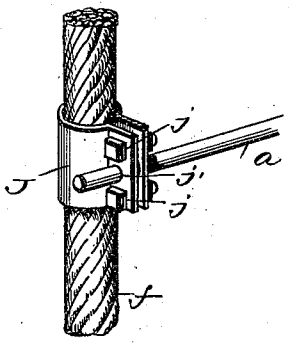
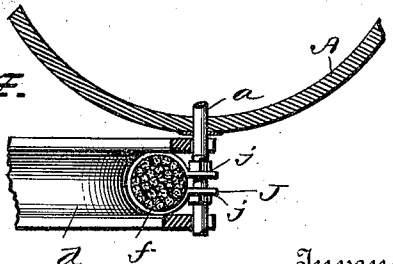


Fig. 4.



Witnesses
W. Gordon
C. W. Curtis.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE WASHINGTON GALE, OF GREELEY, COLORADO.

WATER-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 434,029, dated August 12, 1890.

Application filed April 26, 1890. Serial No. 349,651. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WASHINGTON GALE, a citizen of the United States, residing at Greeley, in the county of Weld and State of Colorado, have invented certain new and useful Improvements in Water-Elevators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in windlass water-elevators; and it has for its object to improve the general construction of the same, and to provide simple means for securing the water-carrying devices to the endless ropes, and to devise simple instrumentalities for automatically tipping the water-carriers to discharge and receive the water.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, like letters of reference indicating like parts throughout the several views, and in which drawings—

Figure 1 is a vertical section through a well provided with my improved water-elevator. Fig. 2 is a plan view of the same. Figs. 3 and 4 are details of the clamps.

The well-curb is of usual construction, being rectangular in cross-section, and is composed of the corner-posts *g g* and the side boards *h*, which are fastened at their ends to the said corner-posts. The shaft D, journaled in the bearings *e*, which are secured to the bars C C, placed over the upper end of the well-curb, is provided with the grooved pulleys *d*, which are secured thereon. These pulleys *d* may be of wood and braced on each side by metal washers *c c*, or they may be cast integral. The flanges or rims on each side of the grooves in the pulleys are notched or serrated to receive the rods from which the water-carriers are suspended and prevent slipping. A corresponding shaft D^2 and pulleys d^2 d^2 are provided at the bottom of the well-curb. This shaft D^2 is journaled in bearings e^2 on the lower ends of the head or cross-braced frame E E, which extends across from one side to the other of the well-curb, and is adjustable vertically, being movable in ways K K in the sides of the curb. The two endless chains or cables *f f* pass around the pulleys *d* and d^2, and are provided at proper intervals with water-carriers, which are preferably barrels A. These barrels or water-carriers are mounted on rods *a*, which are supported at their ends by the endless chains or cables *f*. The rods *a* pass centrally through the barrels and have their ends inserted in openings in the clamps J, which are bolted to the said chains or cables, the clamps having two sets of openings *j* and *j'* and the clamping-bolts J through the openings *j*. The chute B is placed at the upper end of the curb, and is provided with a trip-spring *i* for engaging with the barrel and tipping the same, as shown in Fig. 2. A corresponding trip-spring i^2 is provided at the lower end or bottom of the curb to engage with the chine of the barrel and tip the same, so that it will enter the water broadside and readily fill. The head or cross-braced frame E E is adjustable in its guides K, and is held when pressed down by inserting a pin L in one of a series of openings *k* in the said guides K. In the event of the chains or cables *f f* becoming slack the head E is pressed down to take up the same. The power, which may be of any well-known form, is applied to the shaft D, which is extended at one end for the purpose. The barrels ascend at the right-hand side and are tipped, so as to discharge the water into a chute B, and descend on the left-hand side and are again tipped, so as to insure their filling, as hereinbefore more particularly described.

What I claim as new is—

The combination, with the endless cables, the barrels, and the grooved pulleys, the flanges of which are notched, of the rods *a*, passed centrally through the barrels and having their ends inserted in openings in the clamps, the clamps T, consisting each of a body portion to embrace the cables, and cor-

responding to the grooves of the pulleys, and their ends extending parallel with each other at right angles to the cables, through which ends the rods *a* pass, and the nuts on the rods *a* upon the outside of the ends of the clamps between the flanges of the pulleys, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE WASHINGTON GALE.

Witnesses:
THEO. S. HIGLEY,
E. M. MARTIN.