# J. CHANDLER.

## Water-Elevator.

No. 166,500. Patented Aug. 10, 1875.

Fig. 1

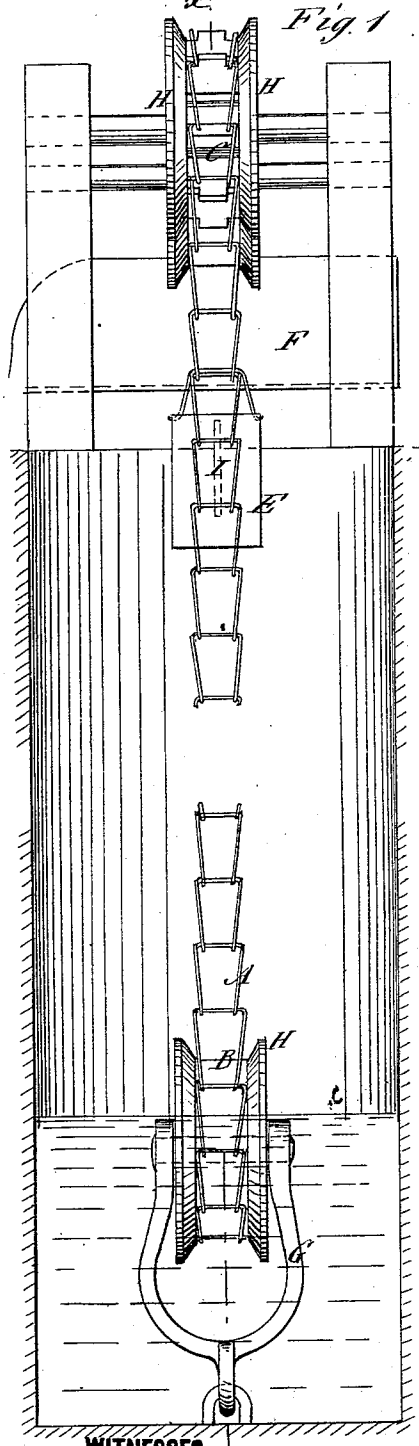
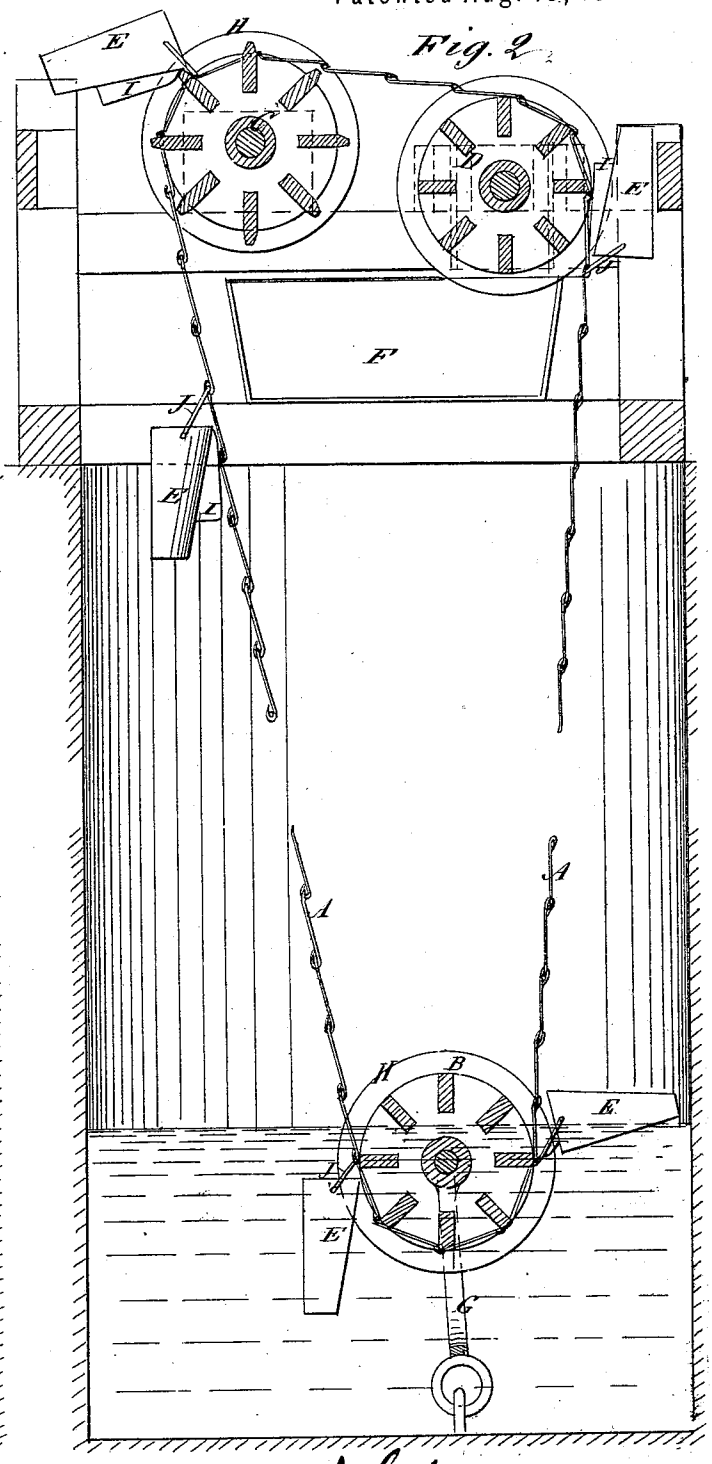



Fig. 2




WITNESSES:

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# UNITED STATES PATENT OFFICE.

JESSE CHANDLER, OF BARRY, ILLINOIS.

## IMPROVEMENT IN WATER-ELEVATORS.

Specification forming part of Letters Patent No. **166,500**, dated August 10, 1875; application filed July 3, 1875.

*To all whom it may concern:*.

Be it known that I, JESSE CHANDLER, of Barry, in the county of Pike and State of Illinois, have invented a new and Improved Water-Elevator, of which the following is a specification:

My invention relates to endless chain and bucket elevators; and it consists of improvements in the construction and attachment of the buckets, also the construction and arrangement of the wheels which carry the chain, and also the arrangement of the lower chain-wheel, all as hereinafter described, whereby it is designed to simplify and cheapen the elevators of this class and increase their efficiency and durability.

The drawing represents my improved elevator in two sectional elevations taken at right angles to each other.

A is the chain; B, the lower wheel; C and D, the upper wheels; E, the buckets, and F the trough into which the water is discharged from the buckets. The lower wheel has a yoke, G, suspended from its pivots, by which to attach a weight in case the well is too deep, or the bottom otherwise unsuitable for fastening the pulley. The wheels have a deep groove in the face, formed by bevel-flanges H, to receive the buckets between them, and the buckets are beveled to correspond with the shape of the grooves on the side running in them. The buckets have also a block, I, on the under side to throw up the bottom, when passing over the wheel C, high enough to discharge readily. The second top wheel D is placed a little lower than the first, also to tilt the buckets so as to empty readily. The flanges of the wheels are also employed to utilize those of the wheel C, to conduct the water first emptying from the buckets over sufficiently to run into the trough F. The second wheel has its bearings arranged to allow it side play, so as to be free to run as the chain may require. The buckets are attached to the chain by a bail, J, so contrived that they strike bottom down, and then, by tilting onto the side, so fill as not to gather air in the bottom, as when they enter top down, the bails being contrived to allow the buckets to swing down suitably for this purpose. The tension of the chain may be regulated by adjusting one of the upper wheels.

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

1. The combination of the lug I with the buckets and wheel C, for tilting the bucket, in the manner described.

2. The wheel D, arranged in a lower plane than wheel C, and in combination with the chain and buckets, to incline the buckets down, in the manner described.

3. The wheel D, having lateral play in its axle-bearings, in combination with chain A and wheel C, substantially as specified.

4. The buckets connected to the chain by a bail, allowing them to strike the water bottom downward, substantially as specified.

JESSE CHANDLER.

Witnesses:

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