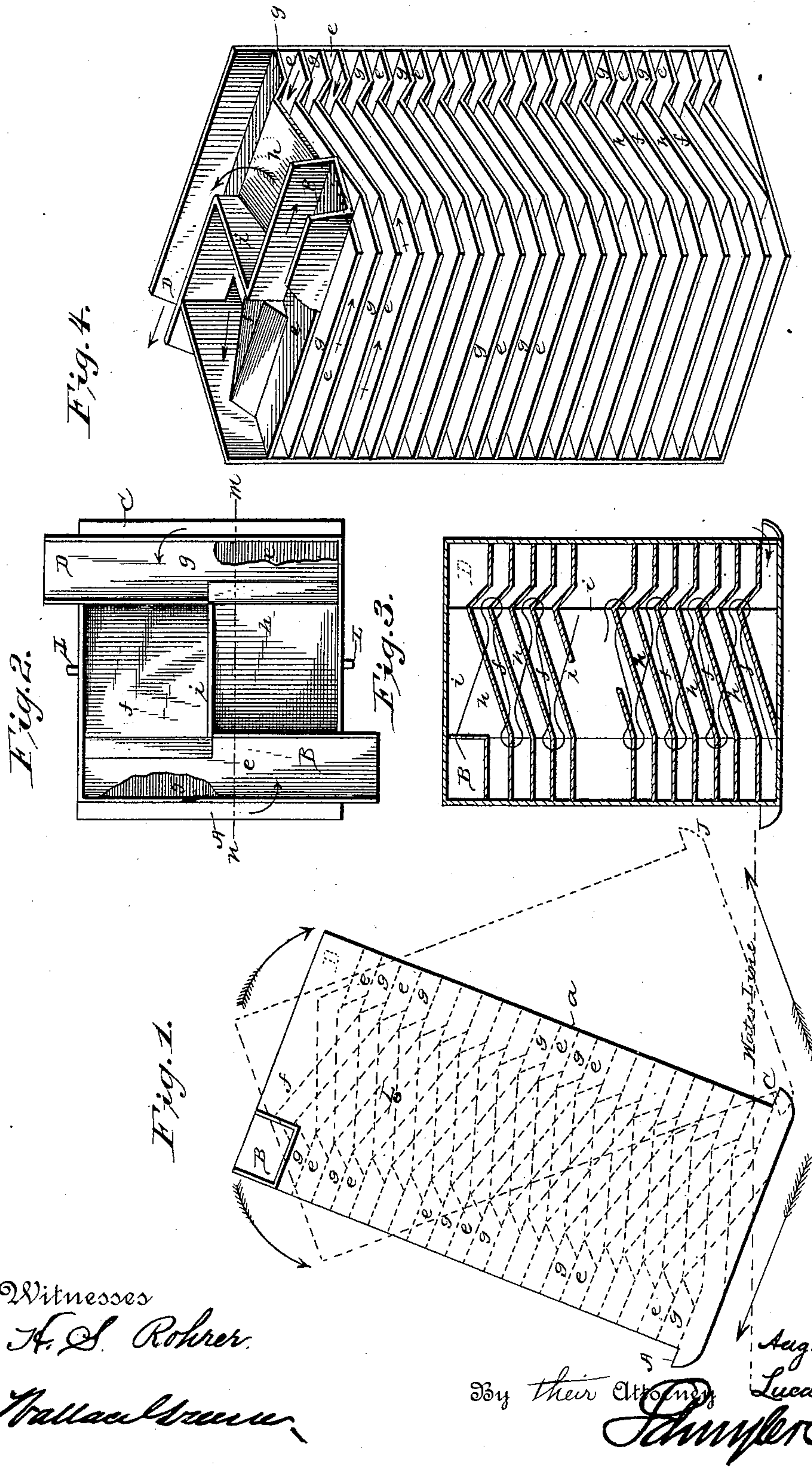


(No Model.)

A. LATHROP & L. A. HEARD.
WATER ELEVATOR.

No. 404,849.

Patented June 11, 1889.



UNITED STATES PATENT OFFICE.

AUGUSTUS LATHROP AND LUCAS ALLEN HEARD, OF MAYBELL, COLORADO.

WATER-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 404,849, dated June 11, 1889.

Application filed June 27, 1887. Serial No. 242,699. (No model.)

To all whom it may concern:

Be it known that we, AUGUSTUS LATHROP and LUCAS ALLEN HEARD, citizens of the United States, residing at Maybell, Routt county, State of Colorado, have invented a new and useful Elevator, of which the following is a specification.

Our invention relates to an improvement in water-elevators, designed specially for raising water for irrigating purposes; and it consists in the peculiar construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a water-elevator embodying our improvements. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical sectional view of the same. Fig. 4 is a perspective view of the same with two of the sides removed, so as to disclose the interior construction and arrangement of the parts.

The case *a* is rectangular in form and is hung on pivots *L*, and thereby adapted to be oscillated, the letters *J K* indicating the terminals of the oscillating movements of the case. A pair of scoops *A C* extend across the entire width of the bottom of the case, open on opposite sides thereof, and each connects with an opening into the same to admit the entrance of water. A vertical partition *i* is arranged in the center of the case, extends part way across the same, and divides the same into two compartments of equal size, the scoops *A C* communicating with the said compartments, respectively. Arranged in the said compartments are a series of inclined planes *f h*, which are arranged in opposite directions in the respective compartments, and are provided at their ends with horizontal extensions *e g*, constituting receivers. The receiver at the higher end of each inclined plane is arranged at the lower end of the communicating inclined plane on the opposite side of the partition, and thereby the said inclined planes and receivers constitute a pair of channels running around the four sides of the case, and ascending the same by a series of successive gradations. One of the said channels has its lower end communicating with the scoop *C*, and its upper end communicating with a discharge-spout *B* at

the top of the case, and the other channel communicates at its lower end with the scoop *A*, at its upper end with a discharge-spout *D*. The said spouts *B D* are arranged on opposite sides of the top of the case, and open on the intermediate opposite sides thereof, as shown in Fig. 4.

The lower end of the case is partially submerged in the source of water, and when the elevator moves from *J* to *K* the scoop *A* dips water, and as it nears *K* this water from the scoop runs into the case, as indicated by the arrows. When the elevator reaches *K*, the first incline *f* is then in a position with its opposite end from entrance *A'* below a true level, and consequently the water dipped by the scoop *A* flows over the incline *f* with the receiver *e* opposite entrance *A'*. When the elevator returns to *J*, the water flows over the second incline *f* (which is on the opposite side of the case) into the second receiver *e* in the second space above, where the water originally entered. In the meantime the scoop *C* dips water, which flows over its lowermost incline *h* into the lowermost receiver *g*.

The water dipped by the scoop *A* flows over the inclines *f* into the receivers *e* and is discharged by the spout *B*, and the water dipped by the scoop *C* flows over the inclines *h* into the receivers *g* and is discharged at the spout *D*.

No means are here shown to oscillate the elevator, as any suitable means, such as will readily suggest themselves to persons skilled in this art, may be employed for this purpose, and such means form no part of our present improvement.

Having thus described our invention, we claim—

The water-elevator comprising the oscillating case having the vertical partition *i*, the inclines *f h* on opposite sides of said partition and extending in opposite directions, and provided at their ends with horizontal extensions *e g*, constituting receivers, the receiver at the higher end of each inclined plane being arranged at the lower end of the communicating inclined plane on the opposite side of the partition, whereby said inclined planes and receivers constitute a pair of chan-

nels running around the four sides of the case and ascending the same by a series of successive gradations, one of said channels having a scoop A at its lower end on one side of the case, and the other having the scoop C at its lower end on the opposite side of the case, and the discharge-spouts at the upper ends of said channels, substantially as described.

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Witnesses:

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