

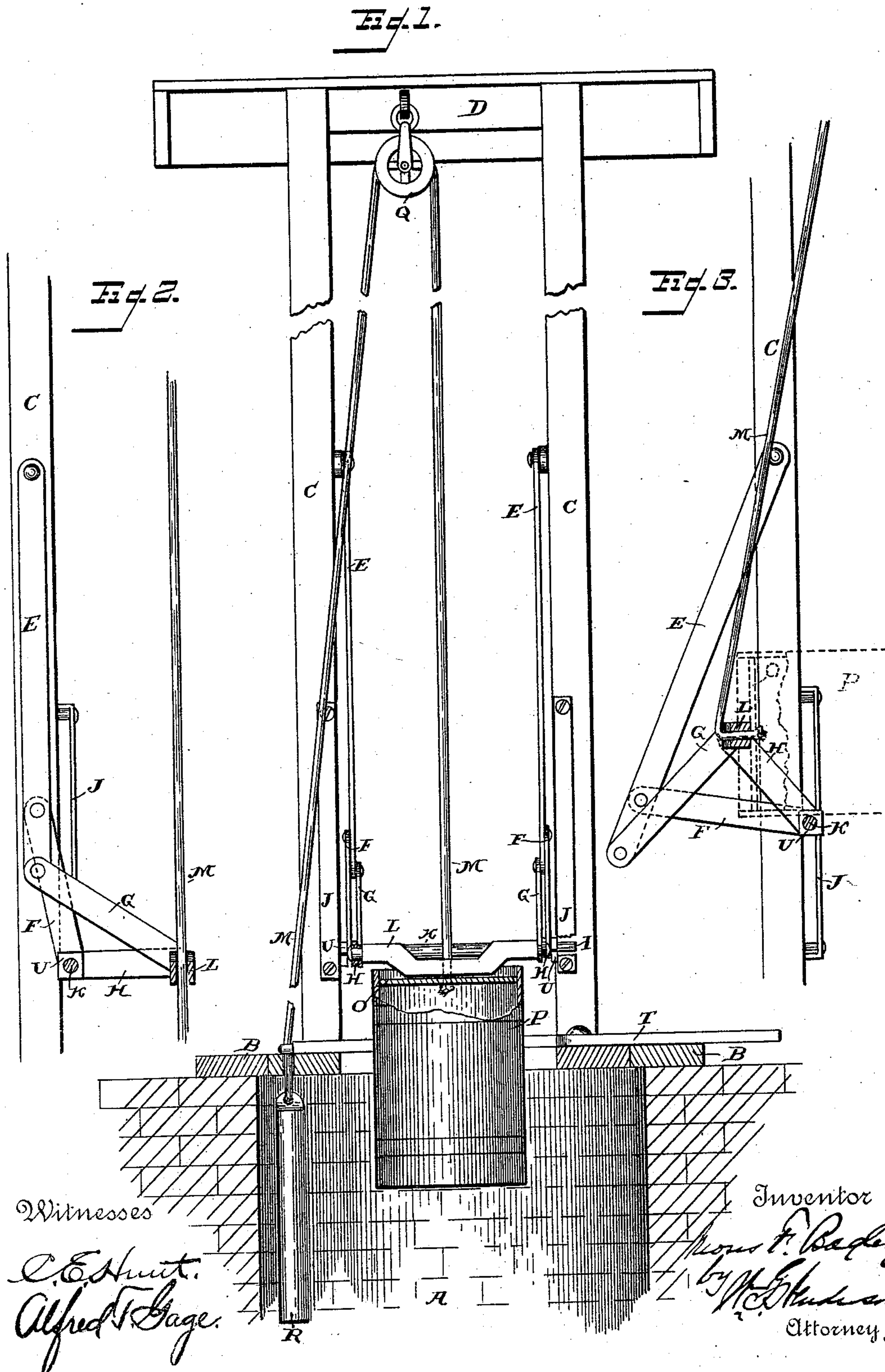
(No Model.)

M. F. BAGLEY.

DEVICE FOR TILTING BUCKETS IN WATER ELEVATORS.

No. 456,255.

Patented July 21, 1891.



UNITED STATES PATENT OFFICE.

MOSES F. BAGLEY, OF EVANSVILLE, INDIANA.

DEVICE FOR TILTING BUCKETS IN WATER-ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 456,255, dated July 21, 1891.

Application filed April 14, 1891. Serial No. 388,867. (No model.)

To all whom it may concern:

Be it known that I, MOSES F. BAGLEY, a citizen of the United States, residing at Evansville, in the county of Vanderburg and State of Indiana, have invented certain new and useful Improvements in Devices for Tilting Buckets 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.

My invention relates to water-elevators, and has for its object to devise simple and efficient means for automatically tilting the bucket as it is raised to the top of the well after being filled with water so as to discharge water from the bucket.

It has further for its object to so construct such means that when the water has been discharged from the bucket the means for tilting the same will automatically assume its normal position and return the bucket to its place above the well in readiness to be again filled.

To the accomplishment of the foregoing and such other objects as may hereinafter appear the invention consists in the construction and combination of parts, hereinafter particularly described, and then specified in the claims, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 is a front elevation of the device, showing the bucket over the well, with portions of the frame-work broken away. Fig. 2 is a side elevation of a portion of the device with parts of the frame-work broken away; and Fig. 3 is a similar view of the same parts, showing the positions of the tilting levers or arms when the bucket is tilted so as to discharge its water.

In the drawings, the letter A designates a well; B, a platform placed over the same, and C uprights or standards rising from the platform and connected together at their upper ends by a cross-beam D. The frame-work composed of such parts may be of any dimensions suitable to the size of the well and the size of the structure desired. Two arms E

are pivoted at or near their upper ends to the standards C, so as to be free to move or swing back and forth. To these swinging arms E there are pivoted above their ends arms F, and to the same arms E, below the arms F, are pivoted one end of the arms G. The arms F and G cross each other, and at their ends farthest removed from the swinging arms E they are connected together by arms H, which are pivoted to arms F and G. From the point where the inner ends of the arms F and H are pivoted or jointed together there extends inwardly pins I, which bear against one face of the standards C and prevent said arms from moving at that point laterally in the direction of the standards. To prevent the arms moving laterally away from the standards at the same point, there are bolted or otherwise secured to the standards rods or bars J, against the inner side of which said pins I also bear. The bars and standards together form the vertical ways in which said pins are obliged to move up and down in the movement of the arms in accommodating themselves to the tilting of the bucket and restoration of it to its normal position. It is preferred that these pins I should form a part of a rod K, which will extend from one set of the arms F H to the other set, and will brace the same laterally. When such is the case, nuts U may be applied to the part K on each side of the arms F and H, where they connect to said bar so as to hold the arms in position against lateral play on the rod. The arms E and H next to one of the standards C are connected to corresponding arms next to the other standard by means of a curb or cross-bar L, which is preferably of the shape shown in Fig. 1, the ends of said curb preferably constituting the pins which pivot the ends of the bars G and H to each other. Through this curb is passed a chain or rope M, which has its ends connected to a bar O extending across the top of the bucket P. The rope extends up from the curb and over a sheave Q upon the frame-work, and then down and has attached to its lower end a counterbalancing-weight R.

With the parts constructed as described their normal position is that illustrated in Figs. 1 and 2 of the drawings. When the bucket has been filled and is being elevated

to the top of the well it strikes the curb L and as it is elevated higher it lifts the curb upward and forces the arms E, F, G, and H backward to the position shown in Fig. 3, the bucket following said parts as it bears against the curb, and being tilted to the horizontal position indicated by dotted lines in Fig. 3, so that its contents may be emptied. As soon as the bucket is emptied the hand is released from the elevating chain or rope, and the parts then fall by gravity to their normal position. (Shown in Figs. 1 and 2 of the drawings.)

By constructing the parts as described there is the minimum of friction between the parts, and the leverage is such that as soon as the bucket strikes the curb on its upward movement comparative slight power is required to be exerted in lifting it further and tilting it so as to discharge its contents.

The parts are few, simple, and strong, and not liable to get out of repair or working order, and can be constructed and put up at comparatively little cost.

I have described with particularity the details of construction of the several parts, but do not mean thereby to limit myself to the specific details of each part, as they may be varied without departing from the essential features of my invention.

It is preferred to use over the top of the well a platform T, which is pivoted so as to be swung out of the way when the bucket is lowered or lifted to the mouth of the well, and which after the bucket has been elevated above the mouth can be swung under the bucket, so that the bucket can rest thereon.

Having described my invention and set forth its merits, what I claim is—

1. In a water-elevator, the combination of

vertical arms pivoted at their upper ends to swing back and forth, the arms pivoted to said vertical arms and extending therefrom at different angles, and the arms connecting the lower portions of said lateral arm, whereby when pressure is applied to said arms from beneath the same they are moved upward and backward for the purpose of tilting a bucket, substantially as set forth.

2. In a water-elevator, the combination of vertical arms pivoted at their upper ends to swing back and forth, the laterally-extending arms pivoted to said vertical arms and crossing each other, the arms connecting the outer ends of said laterally-extending arms, and guide-pins extending from one of said laterally-extending arms and fitting to a guideway, whereby said arms are caused to rise as they are pressed backward, substantially as set forth.

3. In a water-elevator, the combination of the vertical arms pivoted at their upper ends to swing back and forth, the laterally-extending arms pivoted to said vertical arms and crossing each other, the arms connecting the outer ends of said laterally-extending arms, a cross-rod extending between said connecting-arms at their inner ends and projecting beyond the same to bear against a guideway, and a curb extending between the outer ends of said connecting-arms, substantially as and for the purposes set forth.

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

MOSES F. BAGLEY.

Witnesses:

CLAUDE R. SHAFFER,
F. A. GUTHRIE.