

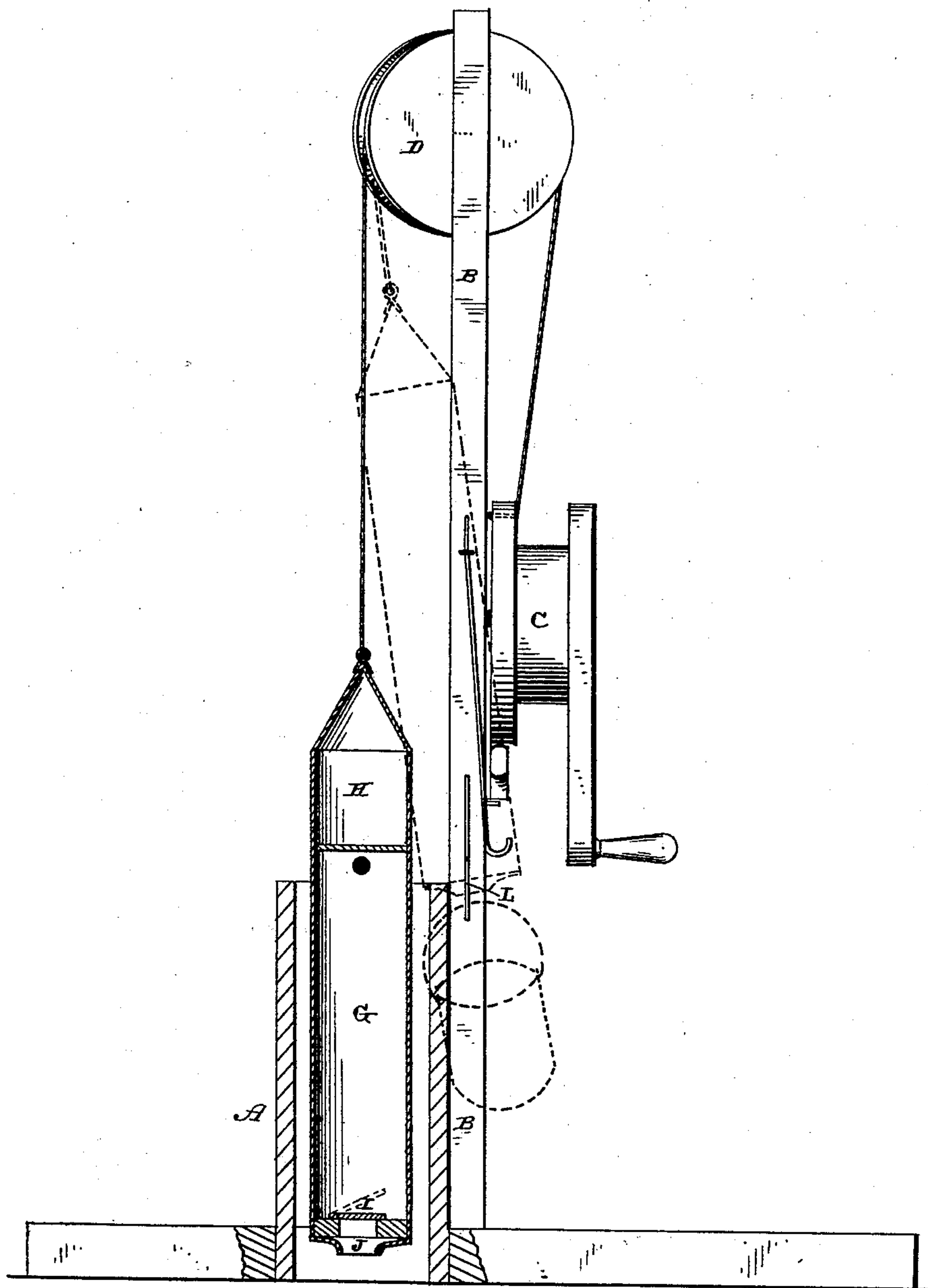
(No Model.)

J. HOULGATE.

WATER ELEVATOR.

No. 349,254.

Patented Sept. 14, 1886.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOSHUA HOULGATE, OF FAIRFIELD, NEBRASKA.

WATER-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 349,254, dated September 14, 1886.

Application filed July 9, 1886. Serial No. 207,576. (No model.)

To all whom it may concern:

Be it known that I, JOSHUA HOULGATE, of Fairfield, in the county of Clay and State of Nebraska, have invented certain new and useful Improvements in Water-Elevators; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawing, which forms part of this specification.

My invention relates to an improvement in water-elevators; and it consists in a bucket provided with an air-chamber, and which is covered over at its top.

The object of my invention is to provide the bucket with an air-chamber, so as to prevent it from sinking to the bottom of the well, and thus bringing up sand and gravel; to cover it over at its top, so as to prevent dirt from falling into the bucket while being raised, and to form a funnel-shaped discharge at the bottom of the bucket, so that the whole volume of water will be discharged into a pail of ordinary size.

The accompanying drawing represents a side elevation of an apparatus embodying my invention, partly in section.

A represents a well-curb, from one side of which rises the standard B. Upon this standard are journaled the windlass C and the guiding-pulley D. The descent of the bucket is controlled by a friction-lever, which is made to bear against the circumference of the drum whenever so desired. The bucket G is made long and tubular, and instead of being left open at its top, in the usual manner, is covered over entirely by means of the air-chamber H. This air-chamber is made perfectly air-tight, and is of sufficient size to prevent the bucket from sinking to the bottom of the well, unless in very shallow water. Through the side of the bucket, just below the air-chamber, are made suitable air-holes, through which the air displaced by the incoming water escapes. Through the bottom of the bucket is made a suitable opening, which is controlled by the valve I, of any suitable construction. This valve opens upward as the bucket descends into the water, so as to allow the water to freely enter the bucket, but instantly closes when the bucket begins to rise, in order to

prevent the escape of the water until so desired. Below the opening in the bottom of the bucket is formed the funnel-shaped guide J, which serves to direct the whole volume of water directly into a pail of the ordinary size instead of having it splash around in being discharged, as would otherwise be the case.

Where a bucket is lowered into the well and no special care is taken to prevent it from sinking, and especially a bucket which has an opening through its bottom, as here shown, the bucket will descend to the bottom of the well and draw in sand and gravel. In order to prevent this, the air-chamber has been placed upon the top of the bucket, as is here shown, so as to prevent the bottom of the bucket sinking deep enough to catch any of the impurities of the water from the bottom of the well. This air-chamber also serves to cover over the top of the bucket, and thus prevents any dirt or impurities falling into the bucket while it is being raised upward, as is generally the case where the bucket strikes against the side of the well in being raised. After the bucket has been raised above the top of the well-curb its lower end is allowed to settle upon the hook L, secured to the standard, and upon which the water-pail is hung. The water flows from the bucket into the pail in one solid stream and without splashing around, as is generally the case where no guide is employed, as here shown, to prevent the splashing. After a sufficient amount of water has been drawn from the bucket it can be raised upward from the hook, when the valve will automatically close, and thus prevent the escape of any more water.

Having thus described my invention, I claim—

1. A well-bucket provided with an air-chamber in its top to prevent the bucket from sinking.

2. A well-bucket provided with an air-chamber, and which chamber forms a covering for the top of the bucket, substantially as described.

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

JOSHUA HOULGATE.

Witnesses:

C. F. SHEDD,
IRA TITUS.