

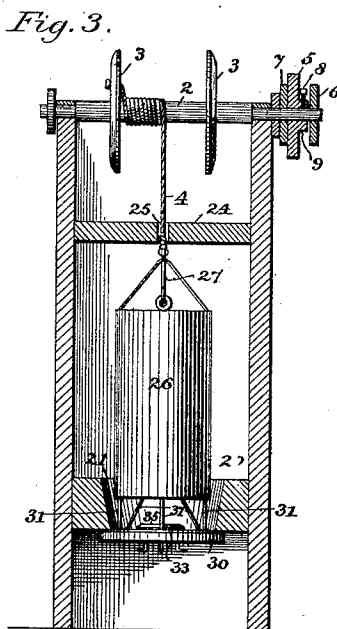
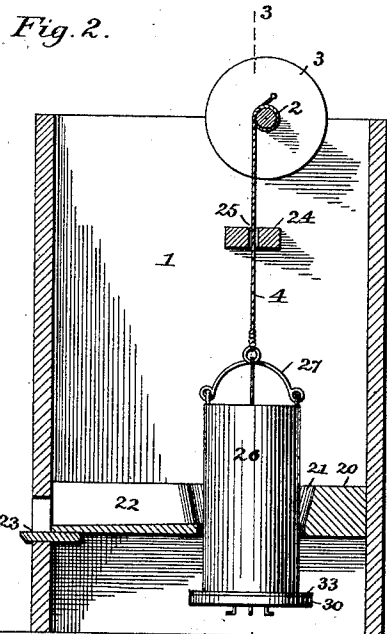
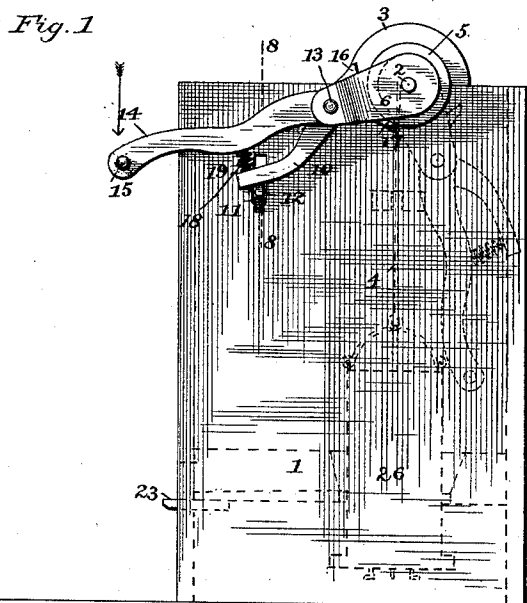
(No Model.)

2 Sheets—Sheet 1.

W. C. JONES.
WATER ELEVATOR.

No. 465,062.

Patented Dec. 15, 1891.



Witnesses

Chas. H. Curran

Wm. Bagger

By his Attorneys,

Wesley C. Jones

Inventor

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

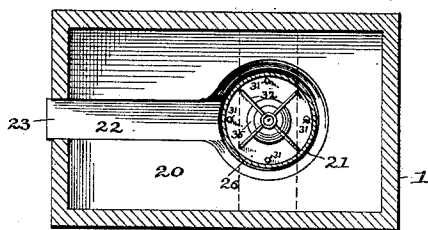
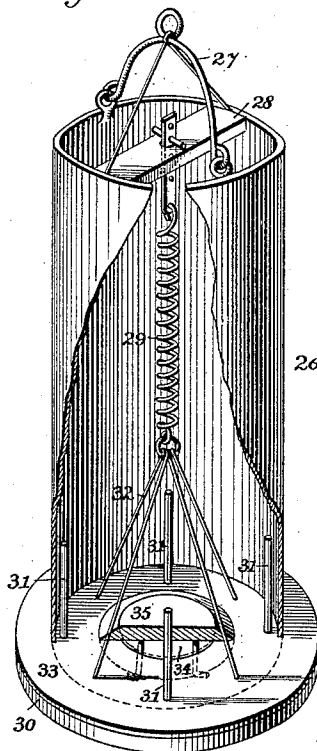


Fig. 5.



Witnesses

Chas. H. Ourand

Wm. Bagges

By his Attorneys,

Ca Snow & Co.

Inventor

Wesley C. Jones

UNITED STATES PATENT OFFICE.

WESLEY CORRY JONES, OF WARRENSBURG, MISSOURI.

WATER-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 465,062, dated December 15, 1891.

Application filed May 15, 1891. Serial No. 392,882. (No model.)

To all whom it may concern:

Be it known that I, WESLEY CORRY JONES, a citizen of the United States, residing at Warrensburg, in the county of Johnson and State of Missouri, have invented a new and useful Water-Elevator, of which the following is a specification.

This invention relates to water-elevators; and it has for its object to provide a device of this class which shall possess superior advantages in point of simplicity, durability, and general efficiency.

With these ends in view the invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a side elevation of a water-elevator constructed in accordance with my invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a vertical sectional view taken longitudinally through the operating-shaft on the line 3 3 of Fig. 2. Fig. 4 is a horizontal sectional view taken through the curb or casing and through the bucket, the latter being shown in a raised position. Fig. 5 is a perspective detail view of the bucket with parts of the same broken away for the purpose of showing the construction more clearly.

Like numerals of reference indicate like parts in all the figures.

1 designates the curb or casing, which is provided with bearings for the transverse shaft 2, which is provided with flanges 3 3 to form a drum, upon which the hoisting-rope 4, one end of which is attached to said shaft, may be wound. The shaft 2 is provided near one end with a friction wheel or disk 5, adjacent to the sides of which are journaled the arms 6 and 7, said friction-disk being secured firmly to the shaft 2 by means of a set-screw 8, mounted in a collar 9 upon the said friction-disk. The arms 7, which are arranged adjacent to the inner side of the friction-disk, has an extension 10, adapted to engage a latch 11, pivoted in a slot 12 in the side of the casing. This latch or detent, which operates by gravity, will permit of the free passage of the arm 10 when the shaft is rotated to elevate the bucket; but it will obstruct the passage of the said arm in a reverse direction,

as will be clearly seen in Fig. 1 of the drawings.

Pivoted upon a bolt 13, which connects the arms 6 and 7, is a handle 14, the outer end of which has a crank 15, and the inner end of which is provided with a cam or eccentric 16, adapted to engage the face of the friction-disk 5. The inner end of the arm 14 is also provided with a downwardly-extending brake-shoe 17, which is normally out of contact with the friction-disk, but which may be thrown into engagement with the latter by depressing the free end of the handle. The latter and the extension-arm 10 are provided with teats 18, adapted to hold in position a spring 19, which is interposed between the said arm and handle for the purpose of forcing them apart from each other. The windlass just described is a preferable form employed by me; but it is to be understood that I do not claim nor limit myself to such, for other windlasses or hoisting-drums may be advantageously used with my invention.

The curb or casing is provided with a horizontal partition or diaphragm 20, which is provided with an opening 21 for the passage of the well-bucket. Said partition is also provided in its upper side with a groove 22, leading from the opening 21 of the spout 23. A cross-brace 24, having a perforation 25 for the passage of the hoisting-rope, is secured in the curb a suitable distance above the partition or diaphragm.

26 designates the well-bucket, which consists, simply, of a tubular cylinder having at its upper end the bail 27, by which it is connected with the hoisting-rope. Said cylinder is also provided at its upper end with a cross-bar 28, which is connected by means of a spring 29 with the bottom piece or valve 30, which consists of a circular disk having upwardly-extending guide-pins 31 and a bail 32, by means of which it is connected with the lower end of the spring 29. The upper side of the disk 30 is provided with a packing-disk 33, of leather, rubber, or other suitable material, and the said bottom disk also has a central opening 34, closed by an upwardly-opening valve 35, which may be of any suitable construction.

In operation the well-bucket may be lowered by first rotating the hoisting-shaft by

means of the crank or handle 14 until the extension 10 of the arm 7 rests upon the latch 11. By slightly depressing the handle 14 against the tension of the spring 19 the cam or eccentric 16 will be thrown out of engagement with the friction-disk 5, with which latter it is normally held in engagement by the tension of the spring. The shaft will thus be permitted to rotate and the bucket will descend by gravity, the descent being regulated or stopped entirely, when desired, by depressing the handle 14 sufficiently to bring the brake-shoe 17 into engagement with the friction-disk. When the bucket reaches the water, the valve 35 is raised for the admission of water, and the said valve automatically sinks to its seat when the bucket is hoisted. This latter operation is performed by rotating the shaft by means of the handle 14, the spring 19 throwing the latter apart from the extension-arm 10, so as to hold the cam 16 in engagement with the friction-disk. It is obvious that the greater the weight to be lifted the more firmly will the cam 16 bite against the face of the friction-disk. The bucket, when it approaches the top of the curb or casing, is guided through the opening 21 in the partition 20 until the bottom disk 30 strikes the under side of said partition. The bucket or the cylindrical body of the same is slightly raised from the bottom disk, the spring 29 yielding sufficiently to admit of this, until the water is permitted to escape through the groove 22 to the spout, the packing-disk 33 meanwhile forming a practically water-tight joint between the bottom disk and the partition 20.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a water-elevator, the combination of

the hoisting-shaft, the well curb or casing, a horizontal partition in the latter having an opening for the passage of the well-bucket and a groove connecting said opening with the spout, the hoisting-rope and the well-bucket having a bottom disk connected loosely with the body thereof by means of an elastic connection, said bottom disk being provided with an upwardly-opening valve, substantially as set forth.

2. In a water-elevator, the combination, with the curb or casing having the horizontal partition provided with an opening, and a groove connecting said opening with the spout, of the hoisting mechanism and the well-bucket, the latter consisting of a tubular body, a bottom disk connected loosely with said tubular body by an elastic connection, and an upwardly-opening valve seated upon said bottom disk, the latter being provided with a packing-disk upon its upper side, substantially as set forth.

3. The herein-described well-bucket, comprising the tubular body, the cross-piece at the upper end of the same, the bottom disk having upwardly-extending guide-pins and an upwardly-extending bail, a spring connecting the latter with the cross-piece at the upper end of the tubular body, a packing-disk upon the upper side of the bottom disk, and an upwardly-opening valve seated upon the latter, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WESLEY CORRY JONES.

Witnesses:

MAX PETHICK,
R. E. JONES.