(No Model.) 2 Sheets—Sheet 1.

W. B. PARRISH.

WINDLASS WATER ELEVATOR.

No. 493,180. Patented Mar. 7, 1893.

Fig. 1.

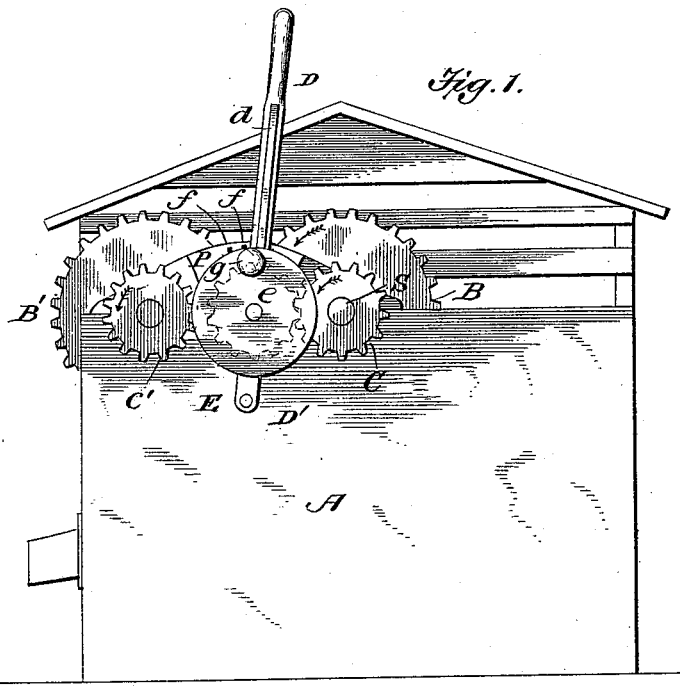


Fig. 2.

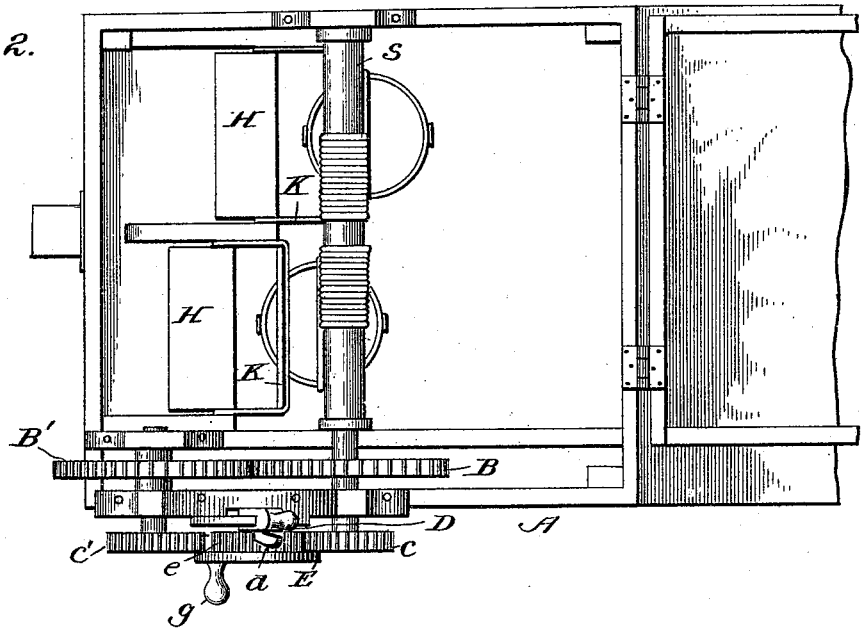
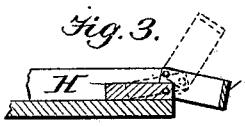


Fig. 3.



Witnesses:
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Wm. G. Griffin

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

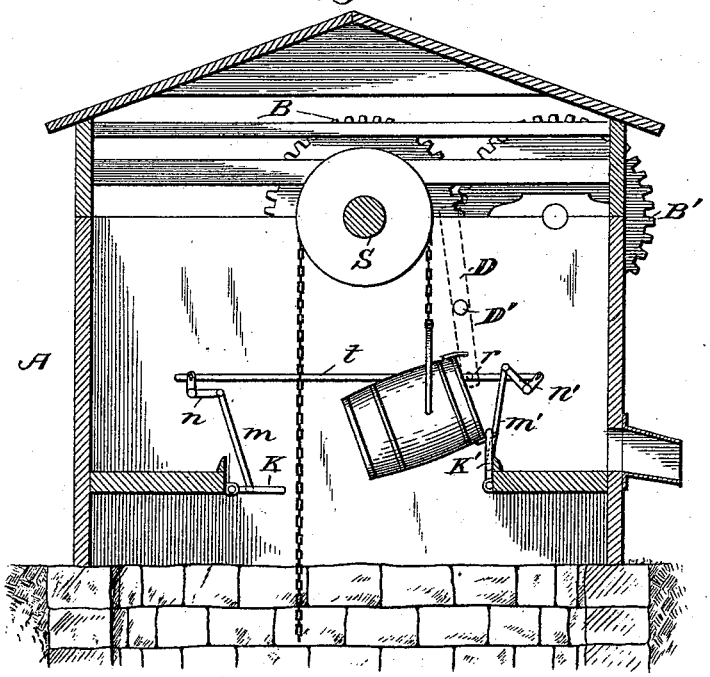
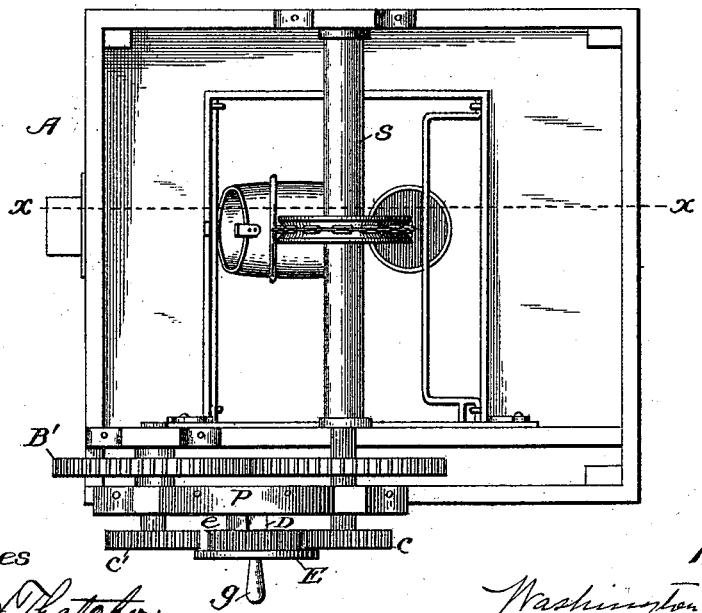


Fig. 5.



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UNITED STATES PATENT OFFICE.

WASHINGTON BEAUREGARD PARRISH, OF ORAL OAKS, VIRGINIA.

WINDLASS WATER-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 493,180, dated March 7, 1893.

Application filed April 26, 1892. Serial No. 430,666. (No model.)

To all whom it may concern:

Be it known that I, WASHINGTON BEAUREGARD PARRISH, a citizen of the United States of America, residing at Oral Oaks, in the county of Lunenburg and State of Virginia, have invented certain new and useful Improvements in Windlass Water-Elevators, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to water elevators; and belongs to the class of windlasses; and it consists in the novel means employed for reversing the rotary movement of the windlass shaft without changing the crank movement.

In the accompanying drawings: Figure 1 is a side elevation showing the well curb and gear mechanism. Fig. 2 is a plan view showing the gear mechanism, windlass and buckets, and tripping bails attached to the water basin or trough. Fig. 3 is a detail, partly in section, showing how the tripping bails operate sliding-boards to bring them under the buckets while they are being emptied. Fig. 4 is a vertical section taken on the line *x*—*x* Fig. 5. Fig. 5 is a plan view with the curb cover removed.

Similar letters refer to like parts in the several views.

To enable others skilled in the art to make and use my invention, I will describe it by referring to the letters of reference on the accompanying drawings, which form a part of this specification.

In the drawings, A indicates the curb upon which is mounted the windlass shaft S, on the end of this shaft is mounted two gear wheels of different diameter, B, and C. Adjacent to and meshing with the wheel B, is another wheel B′ the counter part of wheel B, upon the shaft of the wheel B′ is also secured a wheel C′ which is the counter part of wheel C. The wheels B, B′ are located inside the outer wall of the curb, which on this side is made double, to accommodate them, but the wheels C, C′ are on the outside and are secured to the ends of the respective shafts which extend beyond the curb wall far enough to receive them. Located between these wheels and pivotally secured to the curb at D′, is a lever D, to the side of which is secured a disk E, upon the face of which is a wheel *e*. It will be observed that the lever D is provided with a lock-lever *d*, which is adapted to be controlled by the hand operating the lever D. The end of the lever *d* normally engages one of the recesses *f*, *f*, *f*, in the plate P, which is secured to the wheel bearings or the edge of the curb, thus holding the lever D, and the wheel *e*, in whatever position it is placed. When not in use the buckets are adjusted so as to be out of the water and the lever D is brought to a vertical position in which case the end of the lever *d* engages the central recess *f*, when the wheel *e* will partly mesh with both the wheels C, and C′, which serves to lock the windlass and prevent the buckets from either descending or ascending. This lever mechanism is best illustrated in Fig. 2. The manner in which the rotary movement of the windlass shaft is reversed will now be apparent. If the lever is shifted to the right as illustrated in Fig. 1, the wheel *e* will gear with the wheel C and turn it in the direction of the arrow, but, if you reverse the lever it will disengage the wheel *e* from its mesh with wheel C and mesh it with C′, and by continuing to turn the crank *g* in the same direction as before it will turn wheel C′ as indicated by the arrow, but, as the large wheel B′ is meshed with B, the movement of the wheel will be reversed, and the windlass will be rotated in the contrary direction from what it was when the wheel *e* was meshed with the wheel C. If the lever is brought to a central position, the wheel *e* will mesh with both the wheels C, and C′, and the windlass will be locked. The windlass, buckets, cords or chains, are of the usual well known form and require no description, but, the tripping bails are modified so as to operate the sliding-boards H, H, see Figs. 2 and 3. The bails are pivoted to the sides of the receiving basin or trough on the inside and are adapted by a bell crank movement or a crank pin and pitman, to give the boards H, a sliding movement, so that when the tripping bails K, K, are raised they will draw the boards out under the buckets and prevent the water from falling back into the well.

Figs. 4 and 5 show my machinery so modified as to work the shifting mechanism automatically by the buckets, instead of by hand. In this case the buckets are preferably emptied from opposite sides of the curb, and the

basin on the inside connected so as to deliver the water on one side as shown in Fig. 5. When this construction is used the tripping bails are connected by the pitmen *m m'* to bell cranks *n*, *n'*, the bell cranks being connected by the rod *t*, connecting at *r*, to the lever D, which in this case extends downwardly as indicated in dotted lines in Fig. 4. It will thus be seen that the shifting may be done either by hand or automatically.

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

1. In a windlass water elevator, the windlass having upon its shaft the large and small wheels B, C, in combination with the wheels B' and C', and the interposed lever carrying the disk E and shift-wheel *e*, adapted to mesh with both of the wheels C, C', and alternately with each, substantially as described.

2. In a windlass water elevator the tripbails K, K', bell cranks *n*, *n'*, the connecting rod *t*, and the shift-lever D connecting mechanism, whereby the buckets alternately cooperate to reverse the movement of the windlass, substantially as described.

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

WASHINGTON BEAUREGARD PARRISH.

Witnesses:

W. J. WALTHALL,

J. W. FOWLKES.