J. B. COMSTOCK & W. NIEMANN,

WATER-PUMPING APPARATUS.

No. 185,298. Patented Dec. 12, 1876.

Fig. 1.

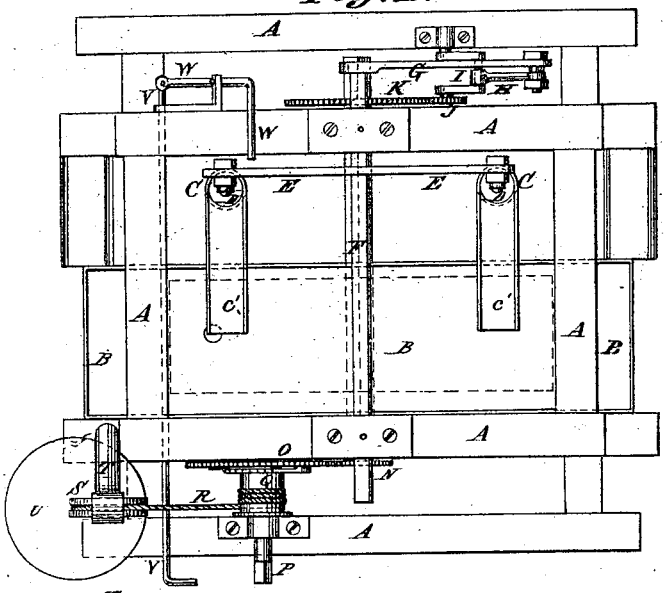
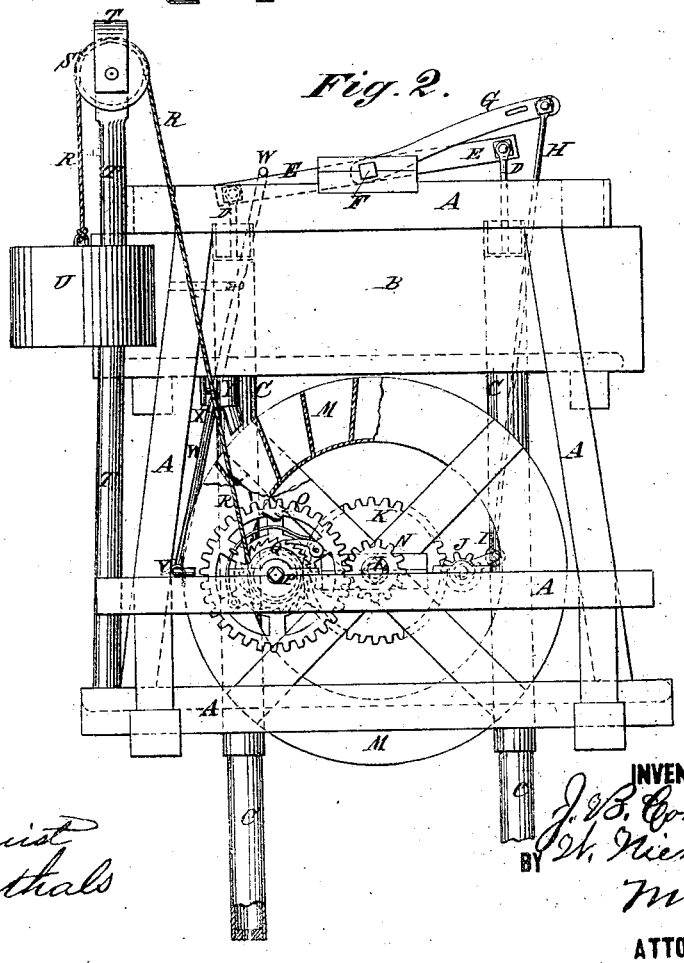


Fig. 2.



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JOHN B. COMSTOCK AND WILHELM NIEMANN, OF NEW ORLEANS, LA.

IMPROVEMENT IN WATER-PUMPING APPARATUS.

Specification forming part of Letters Patent No. **185,298**, dated December 12, 1876; application filed September 30, 1876.

To all whom it may concern:

Be it known that we, JOHN B. COMSTOCK and WILHELM NIEMANN, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and useful Improvement in Water-Pumping Apparatus, of which the following is a specification:

Figure 1 is a top view of our improved pumping apparatus. Fig. 2 is a side view of the same, part being broken away to show the construction.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved apparatus for pumping water, to drain and to irrigate land, and for other purposes, and which shall be so constructed that the pumped water may assist in working the pump, and which shall be simple in construction and effective in operation.

The invention consists in the combination of the tank, the water-wheel, the weight and its rope, pulley, and drum, and a connecting-gearing with each other and with the pump or pumps, as hereinafter fully described.

A is the frame-work of the machine, in the upper part of which is secured a large tank, B. To the frame A, at the side of the tank B, are secured two ordinary pumps, C, the barrels of which extend down to the place from which the water is to be drawn, or are connected with pipes extending to said place. The discharge-spouts *c'* of the pumps C project over the tank B, so as to discharge the water into said tank. The ends of the piston-rods D of the pumps C are pivoted to the opposite ends of a walking-beam, E, which is attached at its center to a shaft, F. The shaft F works in bearings attached to the top bars of the frame A, and to its end is rigidly attached a crank-arm, G, the outer end of which is slotted, or has a number of holes formed in it, to receive the bolt that pivots the upper end of the pitman H to said crank-arm, so that the stroke of the pump may be lengthened or shortened by adjusting the said pivoting-bolt.

The lower end of pitman H is pivoted to a crank, I, the shaft of which revolves in bearings attached to the lower part of the frame A, and to said shaft is attached a small gear-wheel, J. The teeth of the gear-wheel J mesh into the teeth of a larger gear-wheel, K, attached to the end of the shaft L, which revolves in bearings in the lower part of the frame A, and to the middle part of which is attached a water-wheel, M. To the other end of the shaft L is attached a gear-wheel, N, the teeth of which mesh into the teeth of a larger gear-wheel, O, placed upon the shaft P. The shaft P revolves in bearings attached to the lower part of the frame A, and to it is attached a drum, Q, to which is attached the end of a rope, R. The rope R passes over a pulley, S, pivoted to the upper end of a post or standard, T, attached to the frame A or to the ground. To the other end of the rope R is attached a weight, U.

The gear-wheel O is connected with the shaft P and the drum Q by a pawl-and-ratchet wheel, so that the said shaft and drum cannot be turned forward without carrying the said gear-wheel O with it, but may be turned back, to wind up the rope R and raise the weight U, without turning the gear-wheel O and the mechanism connected with it.

V is a rod, which slides in guides attached to the lower part of the frame A, and the other end of which is pivoted to the lower end of the lever W. The lever W is pivoted to a stud attached to the frame A, and its other end is bent forward to project over the top of the frame A, so that when the rod V is pushed back the upper end of the lever W may be pushed forward to pass above the working beam E and stop the machine.

With this construction, when the weight U has been wound up and released its downward pressure will work the pumps C, which discharge their water into the tank B. When the tank B is full, or nearly full, the stop-cock X in the discharge-pipe Y, secured in a hole in the bottom of the said tank, is opened, and the water is discharged upon the buckets of the wheel M, so that the pumps may be worked by the water raised by said pumps, the weight U assisting and regulating the motion.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

The combination of the tank B, the water-wheel M, the weight U and its rope, pulley, and drum R S Q, and a connecting-gearing with each other and with the pump or pumps C, substantially as herein shown and described.

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Witnesses:
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