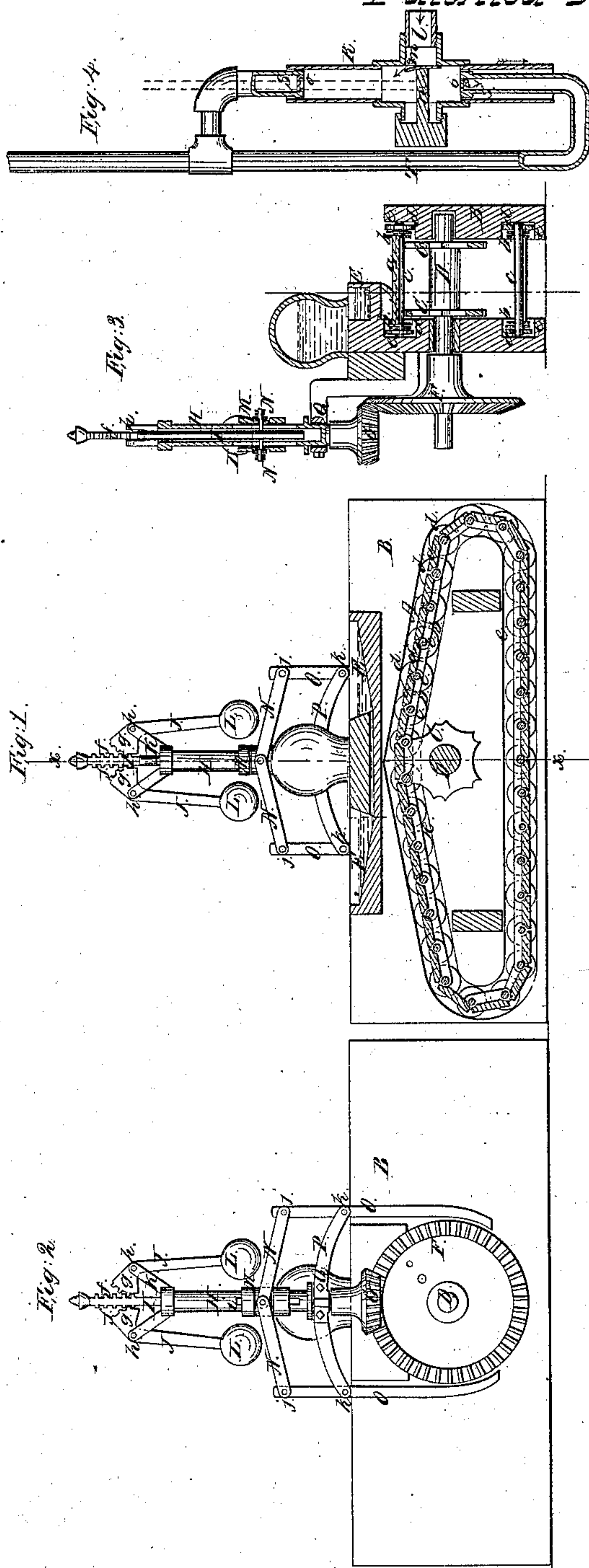


M. D. Wilder,

Cattle Pump,

N^o 33,166.

Patented Aug. 27, 1861.



Witnesses:
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UNITED STATES PATENT OFFICE.

MILO D. WILDER, OF LA PORTE, INDIANA.

IMPROVEMENT IN WATER-ELEVATORS.

Specification forming part of Letters Patent No. 33,166, dated August 27, 1861.

To all whom it may concern:

Be it known that I, MILO D. WILDER, of La Porte, in the county of La Porte and State of Indiana, have invented a new and Improved Water-Elevating Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal central section of my invention. Fig. 2 is a side view of the same. Fig. 3 is a transverse section of the same taken in the line *xx*, Fig. 1. Fig. 4 is a detached view of the pump.

Similar letters of reference indicate corresponding parts in the several figures.

The invention relates to an improved water-elevating apparatus, which is chiefly designed to be operated by stock, so that they may raise their own supply of water. It, however, is capable of being operated by horse-power, so as to be used as a force-pump when required.

The invention consists in the employment or use of an endless platform of slats applied to or connected with a horizontal shaft, to which a governor is applied, and all arranged substantially as hereinafter shown and described.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents an endless platform of slats. These slats, which are designated by *a* and may be of wood, have metal links *b* secured to their ends, the links being connected by rods *c*, which extend the whole width of the platform at the inner sides of the slats *a*, the rods *c* connecting the links at both sides of the platform. The rods *c* have a pulley or roller *d* on each end, and these rollers are fitted and work in grooves *e*, made in a suitable box or framing B, the grooves *e* and rollers *d* serving to support the endless platform A and keeping it in proper position. The upper part of the endless platform A is of double-inclined form, as shown clearly in Fig. 1, and this elevated part rests on two flanges C C, which are secured to a shaft D, that passes horizontally through the box or framing B. The flanges C C are notched at a suitable distance apart to receive the rods *c*, and said rods therefore perform two functions—viz., they

connect the links *b* of the endless platform and serve as cogs to rotate the flanges C C and shaft D as the endless platform is operated.

On the box or framing B at one side there are placed troughs E E, which have inclined bottoms, the inner ends of the troughs being the deepest. These troughs are placed one over each inclined surface of the endless platform, as shown clearly in Fig. 1.

On the shaft D there is placed a bevel-toothed wheel F, into the upper part of which a bevel-pinion G gears. The pinion G is on the lower end of a shaft H, which is hollow and has a rod I fitted in it, the upper end of I having racks *f f* at its sides, into which toothed segments *g g* gear, said segments being at the inner ends of arms or levers J J, the fulcrum *h h* of which are at the ends of a curved bar K; said bar K being attached to the upper end of the shaft H. At the lower end of each arm J there is attached a ball L.

M is a collar or slide which is placed on the shaft H and allowed to work freely thereon. This collar is connected to the rod I by pins which pass through vertical slots *i* in the shaft H, the slots admitting of the collar working a requisite distance on shaft H as the rod I works up and down. To the collar M the inner ends of two levers N N are attached, the outer ends of which are connected by pivots *j j* to levers O O, which have their fulcrum *k k* at the outer ends of a bar P, said bar being attached to the bearing Q of the shaft H. The lower parts of the levers O O extend down at opposite sides of the wheel F, as shown clearly in Fig. 2.

R is a pump, which is formed of a vertical sliding tube provided with an induction-passage *l*, and a double valve *m* at the end of a horizontal partition *n*. The tube R works on two stationary tubes S S, which form the pistons, each piston being provided with a valve *o*, opening within its tube, as shown in Fig. 3. Both of these tubes S S communicate with a vertical discharge-tube T. The tube R may be operated by means of a pitman from shaft D.

The shaft H and the sliding rod I and loaded arms J form the ordinary ball-governor, which, in connection with the levers N N O O, which form a brake, insures a uniform operation of the pump. The endless platform A of course

is operated by the stock passing upon either of its inclined surfaces to the troughs above, the discharge-tube T being so placed or arranged as to discharge the water into the troughs E E.

The application of the ball-governor to the endless-platform power is important, as the speed of the platform and pump can be regulated and an undue rapid motion prevented. The platform-power is frequently immoderately driven, especially by animals unaccustomed to it. This contingency is effectually prevented by the governor arranged as shown.

When it is desired to force water, a horse may be placed on the endless platform, which is used in precisely the same way as the ordinary endless-platform horse-powers.

I do not claim, broadly, an endless platform of slats; nor do I claim, separately or in the abstract, any of the parts herein described; but

I do claim as new and desire to secure by Letters Patent—

The endless platform of slats A, in combination with a pump R and a ball-governor provided with a brake formed of the levers N N O O, operating on a wheel F, all arranged for joint operation, as and for the purpose set forth.

MILO D. WILDER.

Witnesses:

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