

(No Model.)

J. A. NEWMAN.

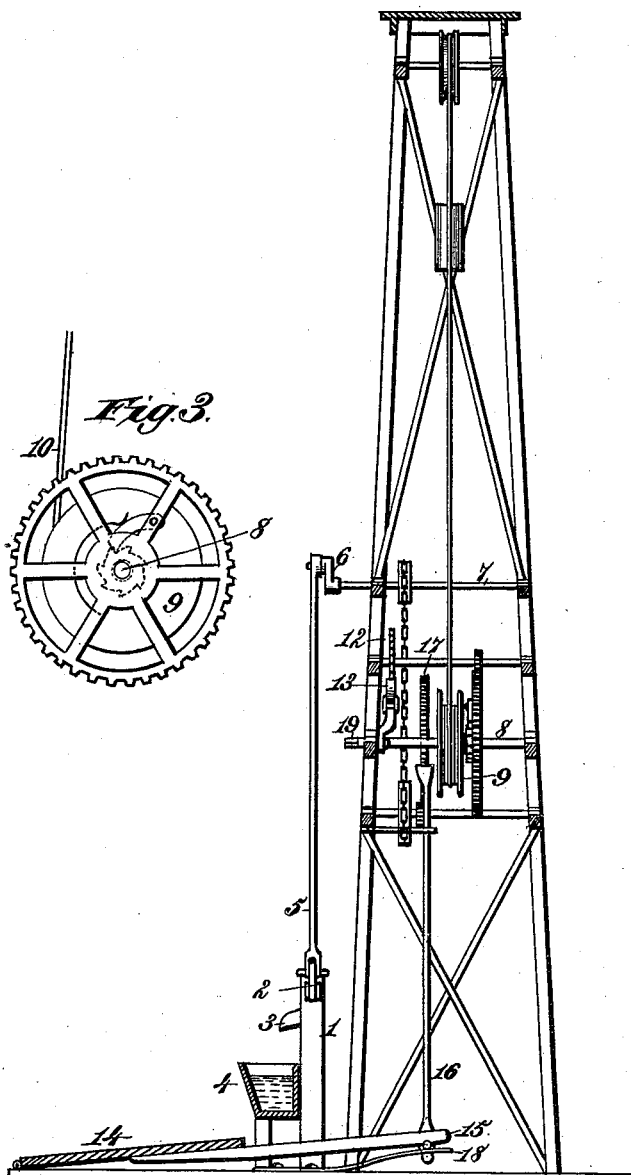
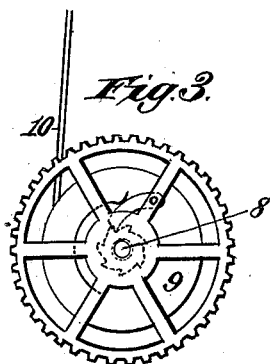
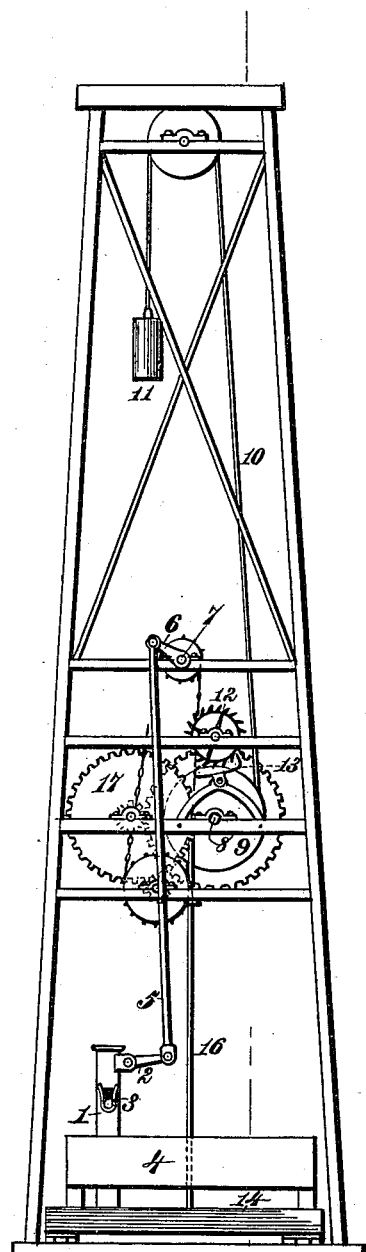
CATTLE PUMP.

No. 342,627.

Patented May 25, 1886.

Fig. 1.

Fig. 2.



Witnesses:
 J. H. Swett,
 Geo. W. Rea

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By
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UNITED STATES PATENT OFFICE.

JAMES A. NEWMAN, OF GREENFIELD, OHIO.

CATTLE-PUMP.

SPECIFICATION forming part of Letters Patent No. 342,627, dated May 25, 1886.

Application filed February 20, 1886. Serial No. 192,635. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. NEWMAN, a citizen of the United States, residing at Greenfield, in the county of Highland and State of Ohio, have invented new and useful Improvements in Cattle-Pumps, of which the following is a specification.

My invention relates to cattle-pumps—that is to say, pumps for raising water from wells—wherein the pumping mechanism is set in motion and operated by suitable automatic devices, the movement of the latter being initiated by the approach of the cattle to the trough and checked by their departure, whereby waste of water or the heating of a large body of previously-accumulated water is avoided.

My invention consists in the mechanism, hereinafter set forth, for starting and stopping the pumping mechanism, and in the several novel features of construction and combinations of parts fully shown and described herein, and definitely pointed out in the claims annexed to this specification.

In the accompanying drawings, Figure 1 is a front elevation of the pumping mechanism, together with the starting and stopping devices. Fig. 2 is a vertical section of Fig. 1, taken in the plane of the main shaft. Fig. 3 is a detail view showing the manner of connecting the cord-drum and the main gear.

In the said drawings, the reference-numeral 1 designates a pump of any suitable form, having a pump-lever, 2, which reciprocates the ordinary pump-rod whereby the water is raised. The water is delivered from a spout, 3, to a trough, 4, which may be conveniently placed at any point for the accommodation of the cattle.

Connected with the pump-lever is a pitman, 5, which is operated by a crank, 6, upon a crank-shaft, 7, which is driven through an ordinary train of gearing from a main shaft, 8, having a drum, 9, upon which is wound a cord, 10, sustaining a weight, 11, from which the motive power is derived.

An escapement-wheel, 12, which engages with an escapement-lever, 13, regulates the revolution of the crank-shaft in the manner usual in motors of this character.

Within convenient distance from the trough is placed a pivoted platform, 14, having an

arm, 15, projecting from its forward edge and engaging with a vertical rod, 16, having a tooth upon its end, which is adapted to engage with the teeth of the gear 17, which is intermediate between the main gear upon the shaft 8 and the crank-shaft 7. This rod is normally thrown upward by a spring, 18, to bring its end into engagement with said gear and check its revolution. The end of the arm 15 is connected with the rod 16—a convenient construction being that shown, wherein the end of the arm is forked to straddle the rod and rest upon the spring 18. This spring is of sufficient tension to raise the forward edge of the platform 14 and engage the stop-rod with the gear, thereby arresting the action of the pumping mechanism. The rear edge of the platform may either rest upon or be pivotally connected with or hinged to a suitable support.

The operation of the mechanism is as follows: The cord-drum being wound up by a key, which fits upon the post 19, the apparatus is ready for action. As the stock approach the trough they step upon the platform 14, and the weight depressing the arm 15 withdraws the stop-rod 16 from its engagement with the gear 17, whereupon the pumping mechanism begins to act, the weight causing rotation of the crank-shaft, whereby the pitman 5 is reciprocated. The water raised is delivered directly to the trough, whence it is consumed by the stock, and the instant the demand has been supplied the removal of weight from the platform 14 permits the stop-rod to rise and arrest the action of the pumping machinery. By these means no more water is drawn than is used, and when drawn it is fresh and cool, and therefore more likely to promote the health of the cattle.

It is evident that I may employ a spring as a motor instead of a weight, and the train of driving-gears may be modified in various ways without departing from my invention, and the construction and arrangement of parts may also be varied in several particulars.

The pitman 5 may be attached to the sucker-rod direct, or to the handle 2 of the pump, as may be desired, and the mechanism may be used with any kind or construction of pump for raising water. The cord-drum 9 is connected with the main gear-wheel upon the

same shaft by means of a spring-actuated pawl mounted on the gear and engaging with a ratchet rigidly mounted on the shaft carrying both the gear and the drum. This construction is precisely similar to that adopted in clock-gearing or motors deriving their motive power from a weight.

What I claim is—

1. In a cattle-pump, the combination, with a train of actuating mechanism connected with the pump, of a pivoted platform depressed by the weight of the stock, a brake-rod or stop connected to said platform to rise and fall therewith, and having an end adapted to engage one of the gears of the mechanism, and a spring directly connected with the rod and raising both rod and platform to arrest the operation, substantially as described.

2. In a cattle-pump, the combination, with a platform pivotally mounted at one edge upon a suitable support, of an arm extending from the other edge, a stop-rod or brake to which said rod is connected, a spring normally raising said rod and platform, and pumping mechanism having automatic operation, which is arrested or permitted by said rod, substantially as described.

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

JAMES A. NEWMAN.

Witnesses:

OLIVER SLAGLE,
DANIEL A. COPE.