A. & A. I. DINGLEY.

Machine for Drilling and Pumping Oil-Wells.

No. 207,506. Patented Aug. 27, 1878.

Fig. 1

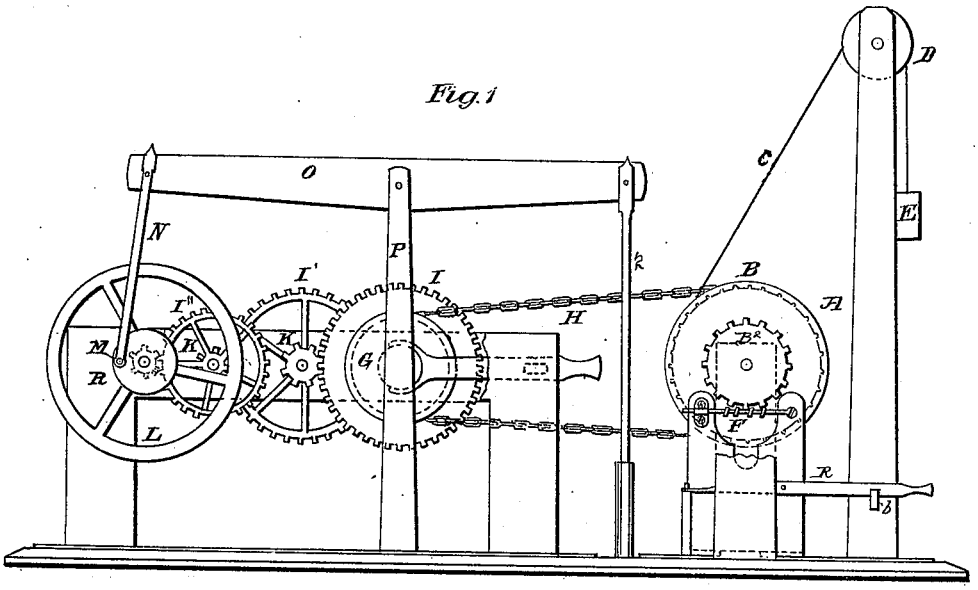
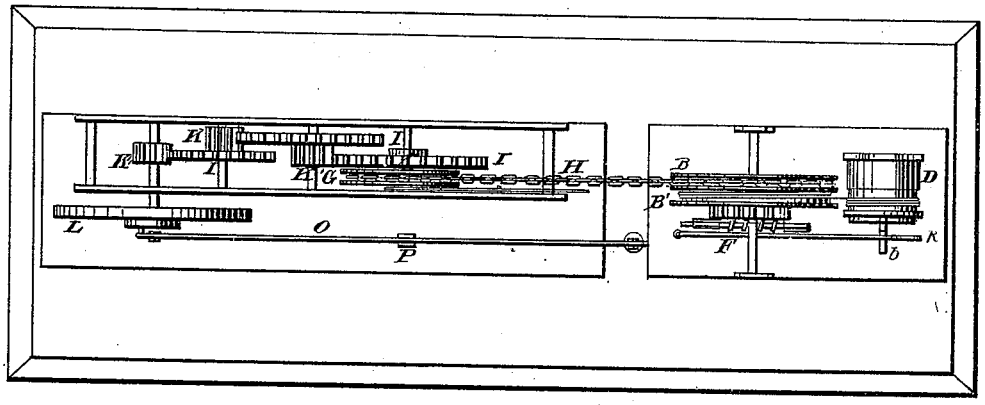


Fig. 2



Attest

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AMASA DINGLEY AND AMASA I. DINGLEY, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN MACHINES FOR DRILLING AND PUMPING OIL-WELLS.

Specification forming part of Letters Patent No. **207,506**, dated August 27, 1878; application filed May 27, 1878.

To all whom it may concern:

Be it known that we, AMASA DINGLEY and AMASA I. DINGLEY, of Brooklyn, State of New York, have invented a new and useful Improvement in Machines for Drilling and Pumping Oil-Wells, of which the following is a specification:

The object of our invention is to utilize the usual derricks to economically operate wells where it is desirable to avoid the expense of steam-power; and this we effect by combining with the same devices fully described hereinafter, whereby the drilling or pumping tools may be operated by a weight suspended from a sheave on the derrick.

In the accompanying drawing, which forms a part of this specification, Figure 1 is a side elevation of our improved machine, and Fig. 2 is a plan view.

A represents the usual derrick, having at the upper end a sheave, D, over which a rope, C, passes to a drum, B^1, on a shaft carrying also a grooved wheel, B, and pinion B^2. With the teeth of said pinion gears a worm, F, which not only serves as a means of turning the drum, but also locks the latter until removed out of gear by means of the adjustable lever R, adapted to notches in a bar, *b*.

A chain, H, extends from the pulley B round a pulley, G, of a series of reducing-gears, I I′ I″, K K′ K″, upon the shaft of the last of which is a fly-wheel, L, and crank-wheel M. The pitman N of the crank-wheel is connected to the end of a vibrating beam or lever, O, supported by a standard, P, and extending at the other end over the well to be bored or pumped.

The tools 2 are suspended from the end of the beam O, and a weight, E, constituting the motive power, propels the apparatus when the worm F is moved out of gear by the lever R.

This device is specially adapted for use where a derrick has been employed for drilling the well, the derrick then being utilized as a means of raising a heavy weight to a great height, so that the power thus stored up can be utilized at night or at times when manual power cannot be obtained or applied.

The erection of a special derrick would be expensive; but, combined with the devices set forth, the derricks already at hand can be utilized to great advantage.

We do not claim the use of a descending weight as a motive power for this purpose; but

We claim—

The combination of the derrick A, series of gears, beam O, having its pitman operated from said gears, drum-shaft carrying the drum B^1, pulley B, and pinion B^2, rope C, passing from the drum over a sheave, D, and provided with a weight, E, and worm F, adjustable by the lever R to and from the pinion B^2, as specified.

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Witnesses:
W. S. BRUMLEY,
A. H. HADFORD.