W. A. NEWTON.

POST AND PILE DRIVER.

No 188.066. Patented March 6, 1877.

Fig: 1

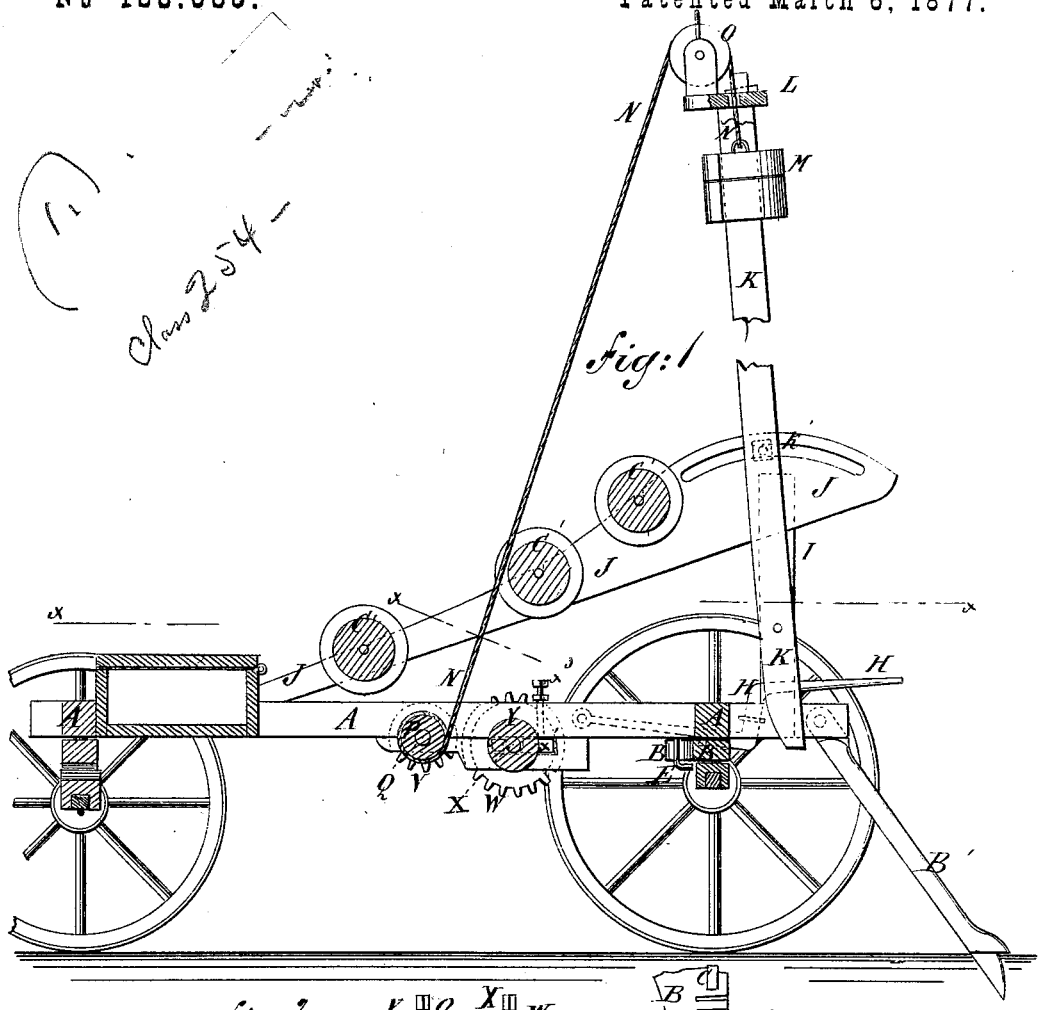
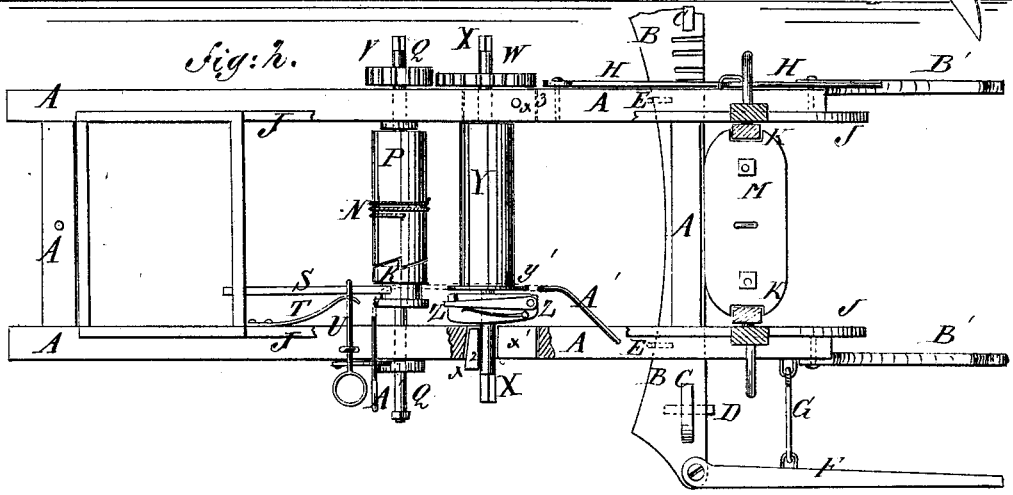


Fig: 2.



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WILLIAM A. NEWTON, OF PAPPINVILLE, MISSOURI.

IMPROVEMENT IN POST AND PILE DRIVERS.

Specification forming part of Letters Patent No. **188,066**, dated March 6, 1877; application filed September 22, 1876.

To all whom it may concern:

Be it known that I, WILLIAM A. NEWTON, of Pappinville, in the county of Bates and State of Missouri, have invented a new and Improved Post and Pile Driver, of which the following is a specification:

In the accompanying drawing, Figure 1 is a side view of my improved machine, partly in section, to show the construction. Fig. 2 is a top view of the same, partly in section, through the line X X X, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish a machine for driving the posts and piles, and which shall be simple in construction, convenient in use, and effective in operation.

The invention consists in the combination of the false bolster provided with the stakes and keys, and having its forward edge concaved and its upper side notched, the two levers, the hook-rod, and the hooks, with the base-frame of the machine; in the combination of the uprights and inclined slotted and notched bars with the base-frame; in the combination of the drum, the shaft, the clutch, the clutch-lever, the spring, and the rod with the frame for applying power to the rope; in the combination of the gear-wheels, the shaft, the drum, the clutch, and the trip-lever with the frame and the shaft to which the power is applied; in the combination of the adjustable standards, the clamping-bolts, the cross-bar, the hammer, and the pulley with the uprights, the inclined slotted bars, and the rope.

In the drawing, A is the base-frame of the machine, the forward end of which rests upon the forward bolster of an ordinary wagon, where it is secured in place by the king-bolt. The rear part of the frame A rests upon the false bolster B, which is secured to the rear axle of the wagon by the short stakes C and keys D. The frame A is kept from rising from the false bolster B by the hooks E, attached to the side bars of the said frame, and which underlap the said bolster. The forward edge of the false bolster B is concaved upon the arc of a circle having its center at the king-bolt, so that the rear end of the frame A may be moved laterally to properly adjust it to the post to be driven. The frame A is adjusted by the lever F, the end of which is pivoted to the end of the false bolster B, and which is connected with the frame A by the hook-rod G. The frame A is secured in place, when adjusted, by the lever H, which is pivoted to the side bar of the frame A, and enters notches in the false bolster B. To the rear parts of the side bars of the frame A are attached two uprights, I, to the upper ends of which are securely attached the rear parts of the bars or plates J. The forward ends of the bars J are attached to the forward parts of the side bars of the frame A. To the uprights I are pivoted the lower ends of two standards, K, the upper ends of which are connected by a cross-bar, L. The standards K are secured in place, when adjusted, by clamping-bolts *k'*, which pass through them, and through curved slots in the upper rear parts of the inclined bars J.

This construction enables the standards K to be adjusted into a vertical position when the surface of the ground into which the posts are to be driven is inclined. The standards K also serve as ways for the hammer M, which may be made in parts securely bolted together, so that its weight may be increased or diminished, as required.

To the top of the hammer M is attached the end of a rope, N, that passes through the cross-bar L, around the pulley O, attached to the upper side of said bar L, and down to the drum P, to which its other end is attached. The drum P revolves loosely upon the shaft Q, the journals of which work in bearings attached to the side bars of the frame A, and its ends are squared off to receive the cranks, by means of which power is applied to it. The shaft Q is made to carry the drum P with it in its revolution by the clutch R, which slides upon the said shaft, and engages with the end of the said drum. S is a lever, one end of which is forked to fit in a groove in the clutch R, and its other end is connected with the frame A, or with a support attached to said frame. The clutch R is pressed against the end of the drum P by a spring, T, interposed between the lever S and the side bar of the frame A, and is withdrawn from said drum by a rod, U, attached to the lever S, and passing out through a guide-hole in the side bar of the frame A. To one journal of the shaft Q

is attached a gear-wheel, V, the teeth of which mesh into the teeth of the gear-wheel W, attached to a journal of the shaft X. The shaft X revolves in long or slotted bearings attached to the side bars of the frame A, and is adjusted to throw the wheel W into and out of gear with the wheel V by adjusting the blocks x^1 upon one or the other side of said shaft, and securing them in place by wedge-keys x^2. The blocks x^1 are further secured in place by the pins x^3, passed through them and through the side bars of the frame A. Y is a drum, which revolves loosely upon the shaft X, and to the end of which is attached a plate, y', having a number of holes formed in it near its edge to receive the catch of the clutch Z. The clutch Z is formed by attaching a plate to the shaft X, and pivoting to said plate a catch held forward by a spring. The clutch Z is thrown out of gear with drum Y by a lever, A′, pivoted to the side bar of the frame A, in such a position that it may be adjusted so that the spring-catch of the clutch Z will strike against it and be drawn outward.

When a heavy hammer, M, is to be used for pile-driving and other heavy work, the end of the rope N is detached from the drum P, and attached to the drum Y.

To the rear ends of the side bars of the frame A are pivoted the upper ends of two braces, B′, the lower ends of which are pointed to enter the ground, and thus brace the wagon against a rearward strain. Upon the upper edge of the inclined brace-bars J are formed notches to receive the journals of the spools C′, upon which the fence-wires are wound.

In using the machine for driving posts or piles, it is backed up to the place where the post or pile is to be driven, and the hammer is raised and allowed to drop upon its upper end until it has been driven to a sufficient depth. The post or pile is adjusted and steadied while being driven.

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

1. The frame A, bolster B, and rear axle, secured together by the stakes C, keys D, and hooks E, arranged as shown and described.

2. The lever F, connected by a pivoted rod, G, with movable frame A, and pivoted at its front end to the bolster B, as and for the purpose specified.

3. The combination of the false bolster B, provided with the stakes C and keys D, and having its forward edge concaved and its upper side notched, the levers H F, the hook-rod G, and the hooks E, with the base-frame A of the machine, substantially as herein shown and described.

4. The combination of the gear-wheels V W, the shaft X, the drum Y, the clutch Z, and the trip-lever A′ with the frame A and the shaft Q, substantially as herein shown and described.

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Witnesses:

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