

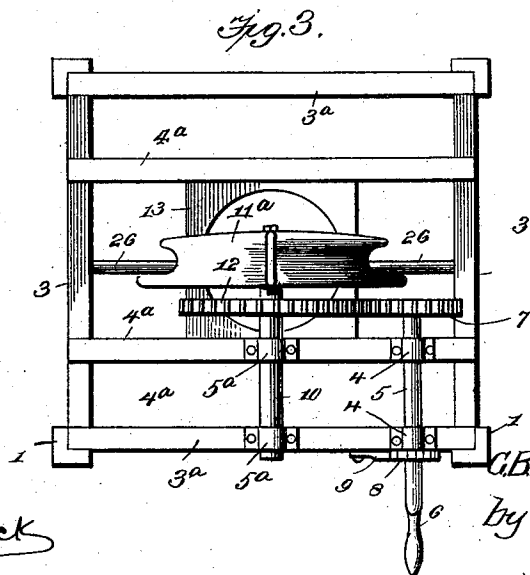
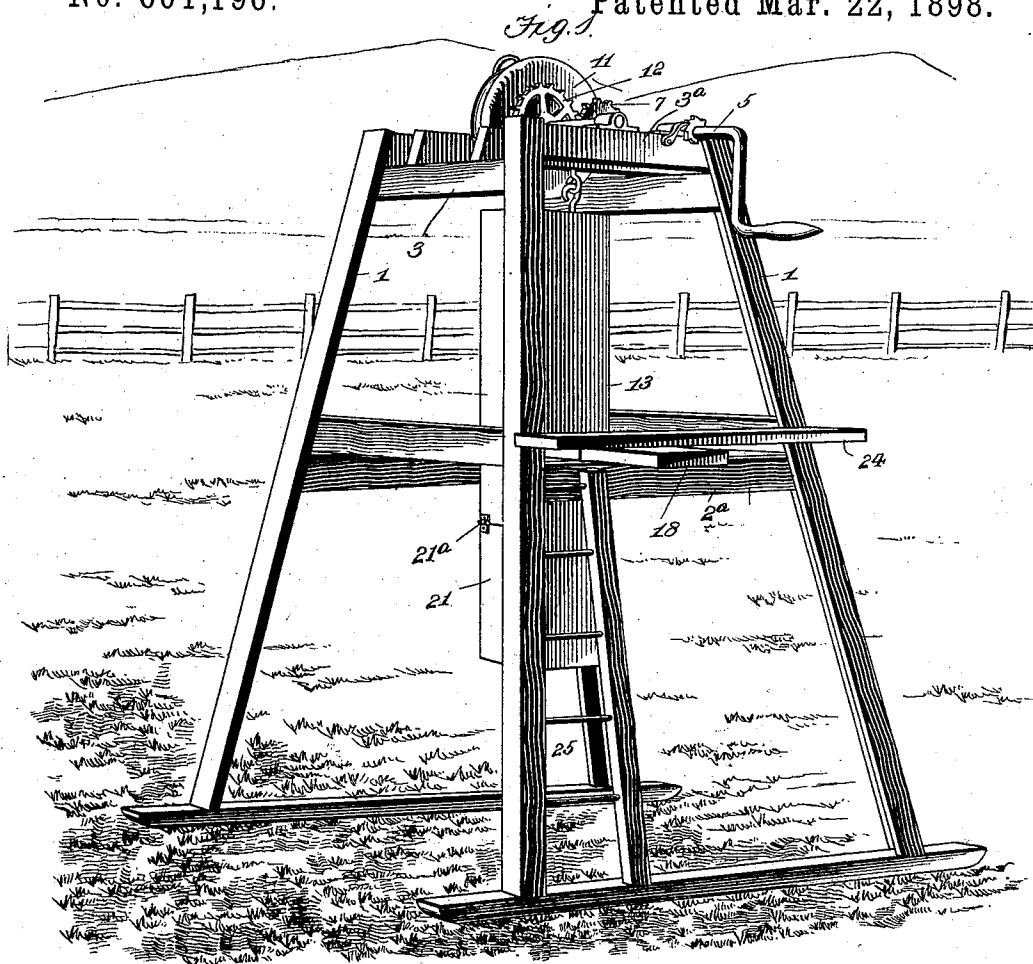
(No Model.)

G. B. McC. DEIHL.
POST DRIVING MACHINE.

2 Sheets—Sheet 1.

No. 601,196.

Patented Mar. 22, 1898.



Witnesses

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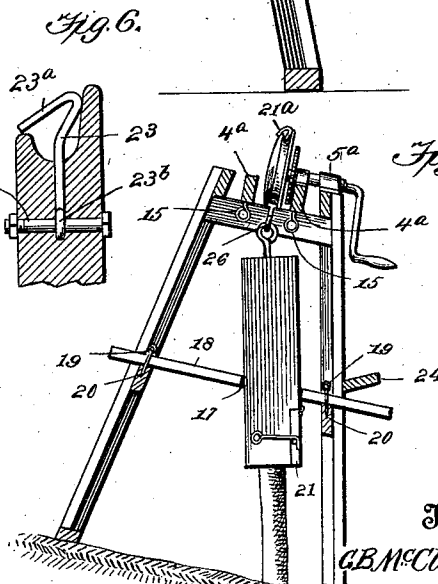
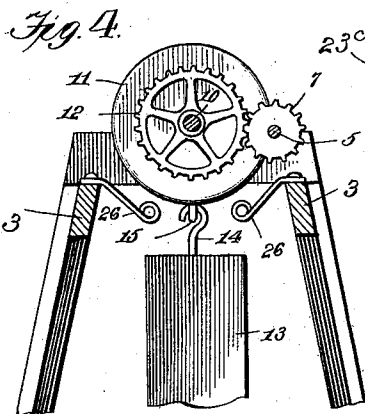
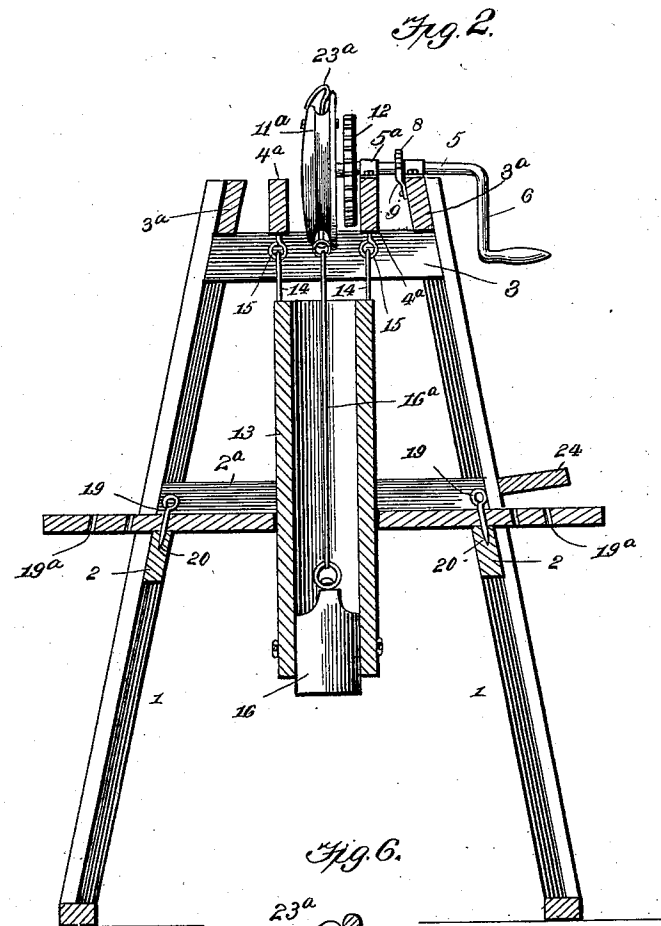
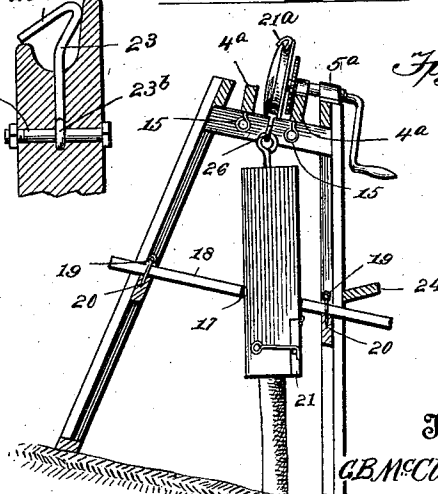


Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE B. McC. DEIHL, OF WASHINGTONVILLE, PENNSYLVANIA.

POST-DRIVING MACHINE.

SPECIFICATION forming part of Letters Patent No. 601,196, dated March 22, 1898.

Application filed February 24, 1897. Serial No. 624,657. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. McCLELLAN DEIHL, residing at Washingtonville, in the county of Montour and State of Pennsylvania, have invented a new and useful Post-Driving Machine, of which the following is a specification.

This invention relates to machines for driving piles or posts, and more particularly to that class of machines adapted to drive fence-posts; and the object of my invention is to provide a portable machine which is simple and effective in operation and especially adapted for use on uneven ground or upon an incline.

My invention consists of a suitable tower or framework upon which the operating mechanism is mounted, and a suitable box or trough hinged to the tower in which the post is placed. The driving-weight, which is intermittently raised or dropped by the operating mechanism, is also placed in the trough, so that it will always be guided onto the post.

My invention also consists in providing a novel construction of operating-wheel by means of which the weight is intermittently raised or dropped while the said wheel is continually revolved in one direction.

My invention also consists of certain other details of novel construction and arrangement that will be hereinafter fully described, and pointed out in the claims.

In order that my invention may be more fully understood, I will proceed to describe the same with reference to the accompanying drawings, in which—

Figure 1 is a perspective view of my invention. Fig. 2 is a vertical sectional view thereof. Fig. 3 is a top plan view. Fig. 4 is a detail view of the guide-box connection and the hoisting mechanism. Fig. 5 is a vertical sectional view, showing my invention in use upon an incline. Fig. 6 is a detail view of a portion of the pulley, showing the throw-off.

In the said drawings, 1 represents the uprights of the tower or framework, which are secured together in the position shown by the top cross-pieces 3^a, and by the lower cross-pieces 2^a, and supported on the cross pieces or braces 3 are the parallel supporting-beams 4^a.

5 represents the power-shaft, suitably journaled in the boxes 4, and it is provided at

one end with the crank 6 and at its other end with the gear-wheel 7.

8 represents a ratchet on the shaft 5, and 9 a pawl, which is for the purpose of holding the shaft when the driving-weight 16 is raised to any height.

10 represents a shaft suitably journaled in boxes 5^a, and it has fixed to it the gear 12, which engages with the gear 7, and the grooved pulley 11, which has one flange preferably higher than the other, and a convex face 11^a, which permits the rope or chain to pass easily over that side when thrown out of the groove by the cam or throw-off 21^a.

16 represents the driving-weight and is suspended from the pulley by means of a rope or chain 16^a, which has a swivel connection both with the weight and pulley. The weight may be of any desired shape and may be as heavy as desired, and it is preferably almost as large in circumference as the interior of the box or trough, so that it will be guided in its descent by the box or trough. It will be understood that the weight is intermittently raised and dropped, and this is accomplished by the cam or throw-off 21, placed in the pulley-groove. It is formed by the bolt 23, which is bent at one end, as shown, so as to form the incline 23^a, which guides or throws the cord out of the groove and allows the weight to drop upon the post. The other end of the bolt fits in an opening in the pulley and is provided with an eye 23^b, through which the bolt 23^c is passed for keeping the throw-off in position.

13 represents the guide box or trough open at both ends and provided at one end with the hooks 14, by which it is suspended from the top of the tower, and at its other end with the hinged door 21, through which the posts are inserted in the trough or box. The door is held in closed position by means of a hook and pin. As above stated, the trough or box is suspended from the top of the tower by means of the hooks 14, which engage with the hooks 15, depending from the supports 4^a, or with the hooks 26, carried by the supports 3. I prefer this manner of suspending the trough or box, as it permits it to be swung or tilted, as the case may require, according to the nature of the ground on which the machine is standing. The two sets of hooks are pro-

vided so that the trough or box can be tilted in directions at right angles to each other.

In order to steady the box or trough and also to provide for an adjustment in certain directions, I employ the board 18, having the opening 17, through which the trough or box passes, and the series of openings 19^a. A pin 19 is adapted to be passed through any of these openings and into one of a similar series of openings provided in the cross-pieces 20. This arrangement is particularly advantageous when the machine is used on an incline (see Fig. 5) or upon uneven ground.

24 represents a platform fixed to the side of the tower upon which the operator stands, and 25 represents a ladder by which the tower is reached.

In Fig. 5 I have shown the machine in use on an incline. This is permitted by reason of the connection between the trough and supports which permit the trough to swing or be tilted. The advantage of the board 18 and its means of adjustment are apparent when the machine is used on an incline or uneven ground, for it is always possible to get the trough in a vertical position, and also, if desired, the trough could be tilted, so that the post will be driven at an angle. The whole machine is mounted upon runners or upon wheels or rollers, as preferred, so that it can be easily moved from place to place.

The operation of my machine is as follows: The machine is placed to straddle the line of fence and the post inserted in the trough or box 13 through the door 21, which is afterward secured by the hook and pin. The weight is then raised by the mechanism shown, which is continually operated, and as the cord or chain is wound upon the pulley the cam or throw-off guides or throws the cord or chain off and allows the weight to fall upon the post. This operation is continued until the post is driven to the desired depth, when the machine is moved to the next position for a post.

Changes in the form, proportion, and minor details of construction and arrangement may be made without departing from the spirit and scope of my invention. Therefore I do not wish to be understood as limiting myself to the exact construction and arrangement as herein shown and described.

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

1. In a post-driving machine, the combination of the framework, the driving-weight, a guide box or trough movably suspended from

said framework, suitable means in connection therewith for steadying said box or trough, consisting of a suitable board provided with an opening through which the trough or box passes, and a series of openings, a pin adapted to fit in said openings and similarly-formed openings in the framework, and suitable mechanism for operating the driving-weight, substantially as shown and described.

2. In a post-driving machine, the combination of the framework or tower, a guide box or trough suspended from said tower, a driving-weight, suitable mechanism having a pulley connected by a cord or chain with said weight for raising it and a cam or throw-off for said cord or chain carried by said pulley and formed from a bolt secured in the pulley and having an inclined part which engages the cord, substantially as shown and described.

3. In a post-driving machine, the combination of the framework or tower, the driving-weight and mechanism in connection therewith for operating it, a guide box or trough provided with hooks adapted to be movably suspended from said framework or tower, two sets of hooks arranged at right angles to each other carried by said frame and adapted to be engaged by the hooks of the box or trough, and suitable means for holding said adjusting box or trough, substantially as shown and described.

4. In a post or pile driving machine, a pulley wheel or drum having a groove, the walls of which are continuous, provided with a throw-off arranged in said groove, inclined inward from the top of the outer wall, substantially as described.

5. In a post or pile driving machine, a pulley provided with a groove with continuous walls, one of which is higher than the other, and having an inclined throw-off in said groove reaching from the outer edge of one wall to the outer edge of the other wall, substantially as described.

6. In a post or pile driving machine, a pulley having a groove whose walls are continuous, provided with a throw-off in said groove, consisting of a wire or rod secured in the body of the pulley, projecting radially therefrom into the groove, and having its outer end bent to cross the groove in an inclined position, substantially as described.

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Witnesses:

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