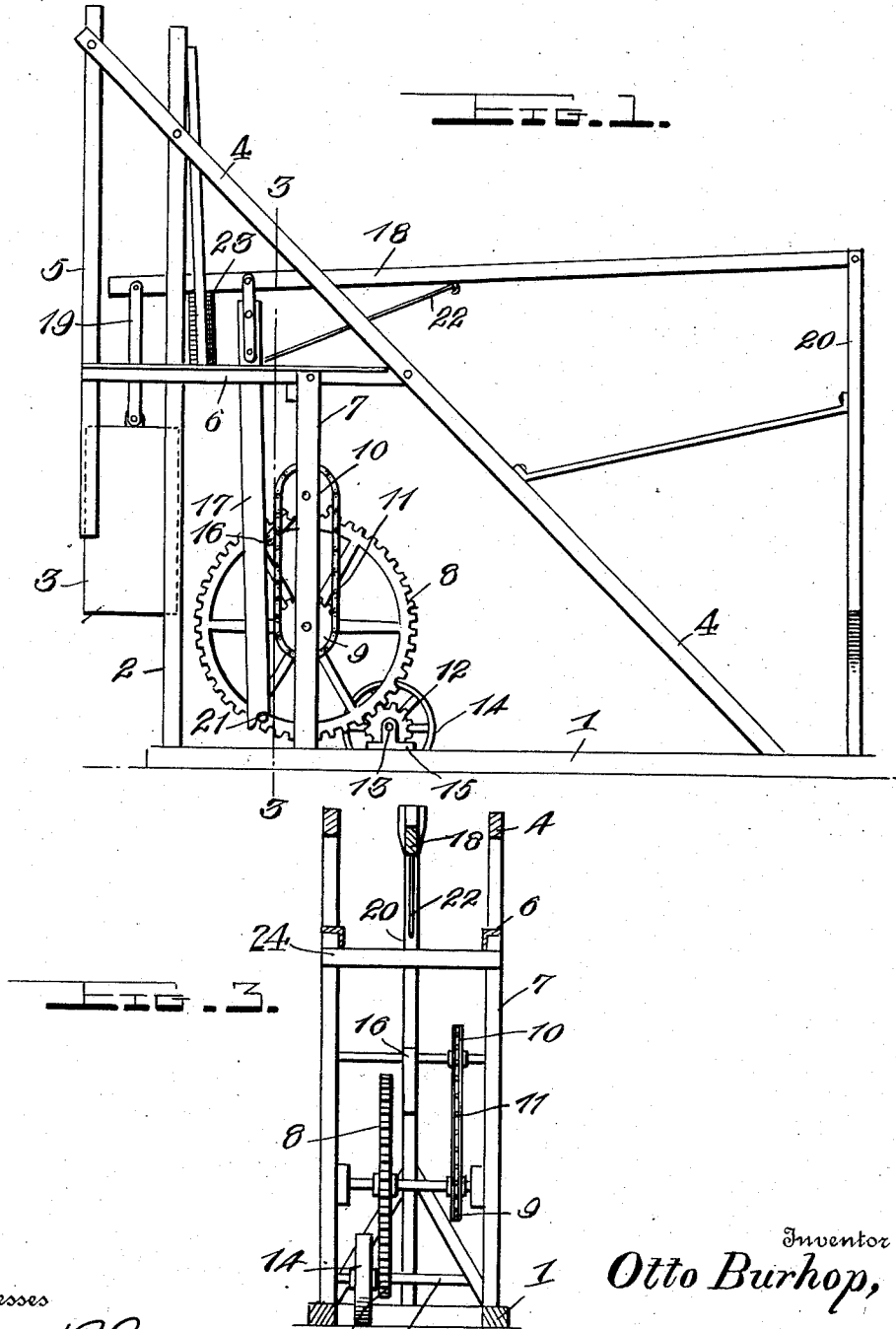


O. BURHOP.
MACHINE FOR DRIVING FENCE POSTS.
APPLICATION FILED AUG. 4, 1911.

1,015,421.

Patented Jan. 23, 1912.

2 SHEETS—SHEET 1.



Witnesses

Chas. L. Griesbauer.
A. B. Norton.

Inventor
Otto Burhop,

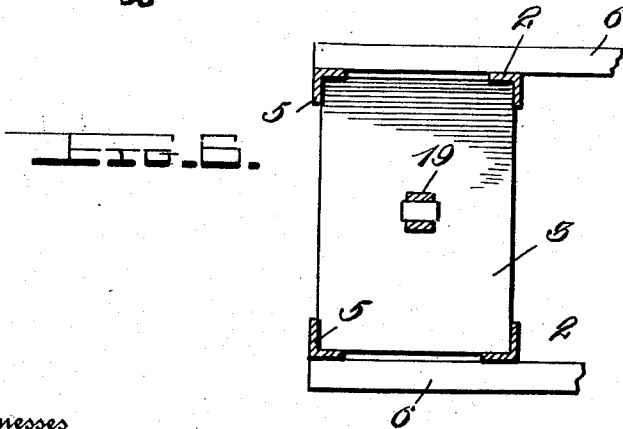
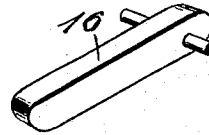
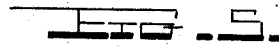
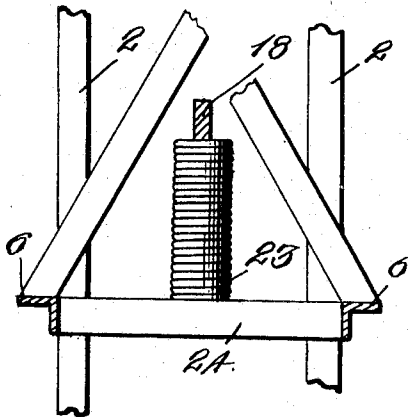
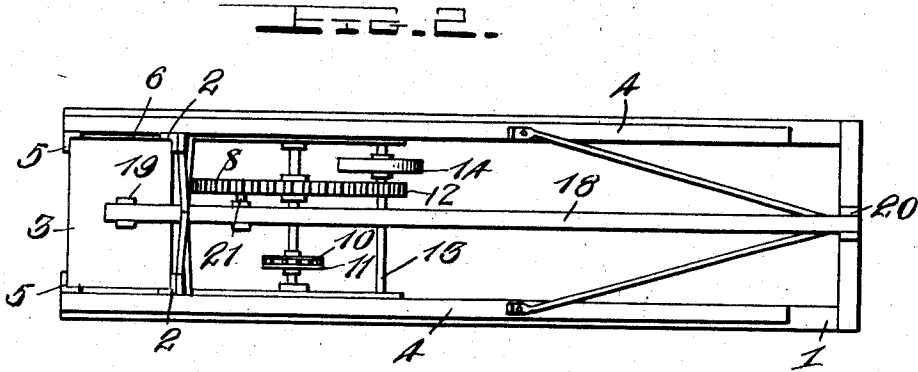
By Watson E. Coleman,
Attorney

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By

Inventor
Otto Burhop,

Watson E. Coleman,
Attorney

UNITED STATES PATENT OFFICE.

OTTO BURHOP, OF GRAFTON, WISCONSIN.

MACHINE FOR DRIVING FENCE-POSTS.

1,015,421.

Specification of Letters Patent.

Patented Jan. 23, 1912.

Application filed August 4, 1911: Serial No. 642,266.

To all whom it may concern:

Be it known that I, OTTO BURHOP, a citizen of the United States, residing at Grafton, in the county of Ozaukee and State of Wisconsin, have invented certain new and useful Improvements in Machines for Driving Fence-Posts, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to post drivers and more particularly to a machine for driving posts for fences and the like.

The object of this invention is to provide a machine for driving posts for fences, which will do the work readily and quickly, and arranged so as to be easily mounted on a wagon or other portable structure, so that the machine can be taken from one location to another to be used for the purposes intended.

20 Another object of this invention is to reduce the number of parts to a minimum so that the cost of manufacture will be low, and the machine such that it can be readily taken care of by an ordinary workman.

25 A further object of this invention is to have it arranged so that it can be operated by hand or power.

30 A still further object of this invention is to have the design of the various parts and their location such that a ready inspection and repair can be made whenever the same is necessary.

35 Other objects of this invention will become apparent as it is more fully set forth.

Owners of large estates usually experience difficulty in installing posts for fences around their lands, because of the difficulty in properly placing the posts in their proper relation around the ground to be fenced in. This difficulty is caused by the time required to place the posts within the ground and the cost of the labor in general. In addition, the usual method of placing these posts in the ground takes up much time, and is not done as satisfactorily as desired. This invention avoids these objections because it readily places the posts within the ground at a predetermined distance and does the work quickly, cheaply and efficiently, and at the same time the cost of the machine for doing this work is comparatively low, while the power required to operate it can be readily obtained from a small motor.

55 In the construction shown in the drawings; Figure 1 represents a view in elevation

of a post driver embodying this invention; Fig. 2 is a plan view of Fig. 1; Fig. 3 is a sectional view along the line 3—3, Fig. 1. Figs. 4, 5 and 6 are details of the various parts of the machine.

Similar reference characters refer to similar parts throughout the drawings.

In the drawings which illustrate by way of example the construction of this invention 1 represents the base portion which preferably consists of two pieces of material to which is fastened at its front or head portion a pair of angles 2 which are arranged to form guides for the weight 3, arranged to drive posts within the ground. Secured to the back portion of the base 1 are a pair of angularly disposed pieces 4 which have their upper portions secured to the angles 2, and which project beyond them and connect to another pair of angles 5 arranged to form the outer guides for the weight 3. These guides are secured at their lower portions to the horizontally disposed angle pieces 6, which in turn are secured to the pieces 4 and a pair of uprights 7. The uprights are drilled so as to serve as supports for a main gear 8 and the subgears 9 and 10. These last mentioned gears are connected by means of a transmission chain 11, and the gear 9 is keyed to the shaft that supports the gear 8, so that it will move in unison with the latter. The gear 8 is arranged to engage with a smaller gear 12 that is keyed to a shaft 13, that is arranged to be actuated by a pulley 14. This pulley being adapted to be actuated by power or by hand. 15 is a suitable journal secured to the base 1 and arranged to hold the shaft 13. Mounted on the shaft that supports the gear 10 is a cam-like member 16 that is arranged to engage with an arm 17 that is secured to a lever 18 at a suitable point thereof. The outer portion of this lever is provided with a swinging link 19 that has its lower portion secured to the weight 3 so as to provide means to raise the same. A post 20 pivotally supports the end of the lever 18. This post is suitably braced to the pieces 4.

Provided on the wheel 8 is a projection 21 that is adapted to engage with the lower end of the portion of the arm 17, and to afford the means of raising the lever 18, and thereby the weight 3. When the arm 17 has been raised a certain amount the shaft which supports the cam arm 16 rotates and causes the latter to push off the member 17 which per-

mits the weight to fall downwardly on the post disposed beneath it, and at the same time the lever 18 and the arm 17 will assume a lower position, the latter being so disposed as to engage with the projection 21 when it is disposed suitably under the arm 17. 22 is a suitable arm secured to the lever 18 in order that the arm 17 will be prevented from being turned out too far by the cam 16, and also to form a means for bringing the arm in a suitable position to engage with the projection 21 when the same is rotated on the wheel 8, that is, the arm or link 22 is arranged to permit the cam 16 to move the arm 17 outwardly, sufficiently to disengage it from the projection 21 at the desired time, and, when the projection is moving adjacent to the gear 10, but restricts the movement of the arm 17 enough to keep its lower end and toe in the line of movement of the projection 21, so that the same will actuate and raise the arm 17 when it comes in contact therewith. At the same time the arm 22 will prevent the arm 17 from slipping off the projection until the cam member strikes it.

In operation, the wheel 14 is turned and its shaft 13 with the gear 12 which in turn rotates the gear 8, which thereby causes the projecting part 21 to move in a circular direction, and which engages with the lower portion of the arm 17. The latter rises in turn and moves the lever 18, link 19 and weight 3, so that the latter is arranged for hammering a post in the ground. The post being suitably disposed on the ground beneath it. As the wheel 8 rotates farther it in turn rotates the gears 9 and 10 together with their intervening chain 11, and causes the cam 16 to rotate until it strikes the arms 17, which makes the latter slip off the projection 21, and permits the weight 3 to fall, because there is no means of holding the same nor its link nor the lever 18 nor the arm 17 in the upper position. As the weight falls, it is kept in proper alinement by means of the guides 2 and 5.

In order to provide means for preventing the various parts of the falling mechanism from being jarred too much, there is provided a plurality of springs 23 which are disposed on the lower portion of the lever 18, and are arranged to engage with the cross piece 24 disposed on and secured to, the cross pieces 6, as is clearly shown in the drawings. These springs are preferably disposed within each other in order to keep down the amount of space they will take up on the cross piece 24. However, it is understood that the springs can be spaced side by side under the arm 18 and on the cross piece 24, if desired, in which case the diameters will have to be regulated accordingly. In the drawings, only the outermost spring is apparent, as the others are concealed within it. These

springs and cross pieces take up the jar as the weight falls on the post, and enables the lever to more readily return to its upper position, and at the same time reduces the amount of power required in the operation of this device, because it will assist the wheel 8 in raising the arm 17 when the projection 21 comes in engagement with the arm. This under normal conditions will be very soon after the weight has fallen, so that the effect of the resilient means returning from its compressive action will be utilized.

Obviously, while there is shown but one modification of the construction of this invention in the drawings, it is not desired to limit this application for a patent, in any way, otherwise than it is necessitated by the prior art, as many modifications of the construction of this invention may be made without departing from the principles thereof.

Having thus described this invention it is claimed:

1. A machine for driving posts comprising in combination a base, a plurality of uprights disposed on said base, a plurality of gears forming a train and disposed between said uprights, braces disposed on the upper portion of said uprights, a plurality of guides secured to said braces, a weight movable in said guides, said weight being arranged to drive posts in the ground, a link attached to said weight, a lever attached to said link for lifting the same, an arm for raising said lever, means disposed on said gears arranged to lift said arm vertically and outwardly through a portion of their rotary travel, a support secured to the end portion of said lever, said support being mounted on said base.

2. A machine for driving posts comprising in combination a base, a plurality of uprights disposed on said base, a plurality of gears forming a train and disposed between said uprights, braces disposed on the upper portion of said uprights, a plurality of guides secured to said braces, a portion of said guides extending downwardly and attached to said base so as to be reinforced thereby, a weight movable in said guides, said weight being arranged to drive posts in the ground, a link attached to said weight, a lever attached to said link for lifting the same, an arm for raising said lever, means disposed on said gears arranged to lift said arm vertically and outwardly through a portion of their rotary travel, a support secured to the end portion of said lever, said support being mounted on said base, and braces for reinforcing said guides, said braces and said support.

3. A machine for driving posts comprising in combination, a base, a plurality of uprights disposed on said base, a plurality

of gears one being relatively large and engaging with a relatively small gear, which is arranged to be actuated by power or hand, so that the first mentioned gear will move at a relatively slow rate of speed, a projecting arm disposed on the periphery of said large gear, a plurality of sub gears moving in unison with said large gear, one of said sub gears being provided with a cam arm, braces disposed on the upper portion of said uprights, a plurality of guides secured to said braces, a weight movable in said guides, said weight being arranged to drive posts in the ground, a link attached to said weight, a lever attached to said link for lifting the same, an arm for raising said lever, said arm being arranged to be moved upwardly by means of said projecting arm on said large wheel, and to be tripped therefrom by means of said cam arm when the same is in its uppermost position, a support secured to the end portion of said lever, said support being mounted on said base.

25 4. A machine for driving posts comprising in combination, a base, a plurality of uprights disposed on said base, a plurality of gears one being relatively large and engaging with a relatively small gear which

is arranged to be actuated by power or hand, 30 so that the first mentioned gear will move at a relatively slow rate of speed, a projecting arm disposed on the periphery of said large gear, a plurality of sub gears moving in unison with said large gear, one of said 35 sub gears being provided with a cam arm, braces disposed on the upper portion of said uprights, a plurality of guides secured to said braces, a weight movable in said guides, said weight being arranged to drive 40 posts in the ground, a link attached to said weight, a lever attached to said link for lifting the same, an arm for raising said lever, said arm being arranged to be moved 45 upwardly by means of said projecting arm on said large wheel, and to be tripped therefrom by means of said cam arm when the same is in its uppermost position, a support secured to the end portion of said lever, said support being mounted on said base, and 50 resilient means arranged to take up the jar of the lever when the weight has fallen.

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

OTTO BURHOP.

Witnesses:

G. CLAUSING,
JOSEPH LORENZ.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."