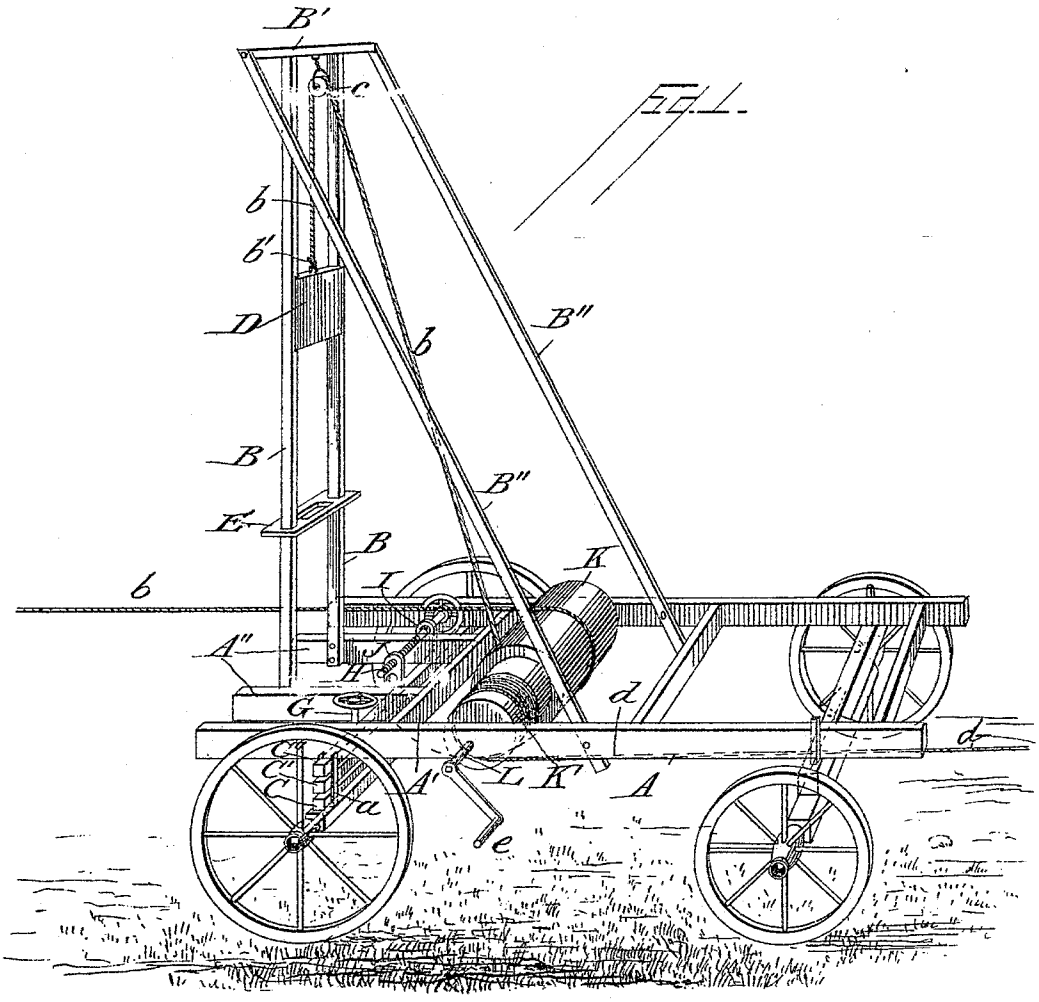
(No Model.) 2 Sheets—Sheet 1.

J. G. & A. WEBER.

POST DRIVING MACHINE.

No. 412,006. Patented Oct. 1, 1889.



Attest:
F. H. Scholl
G. Burroughs.

Inventor
John G. Weber
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By W. C. Langan Atty.

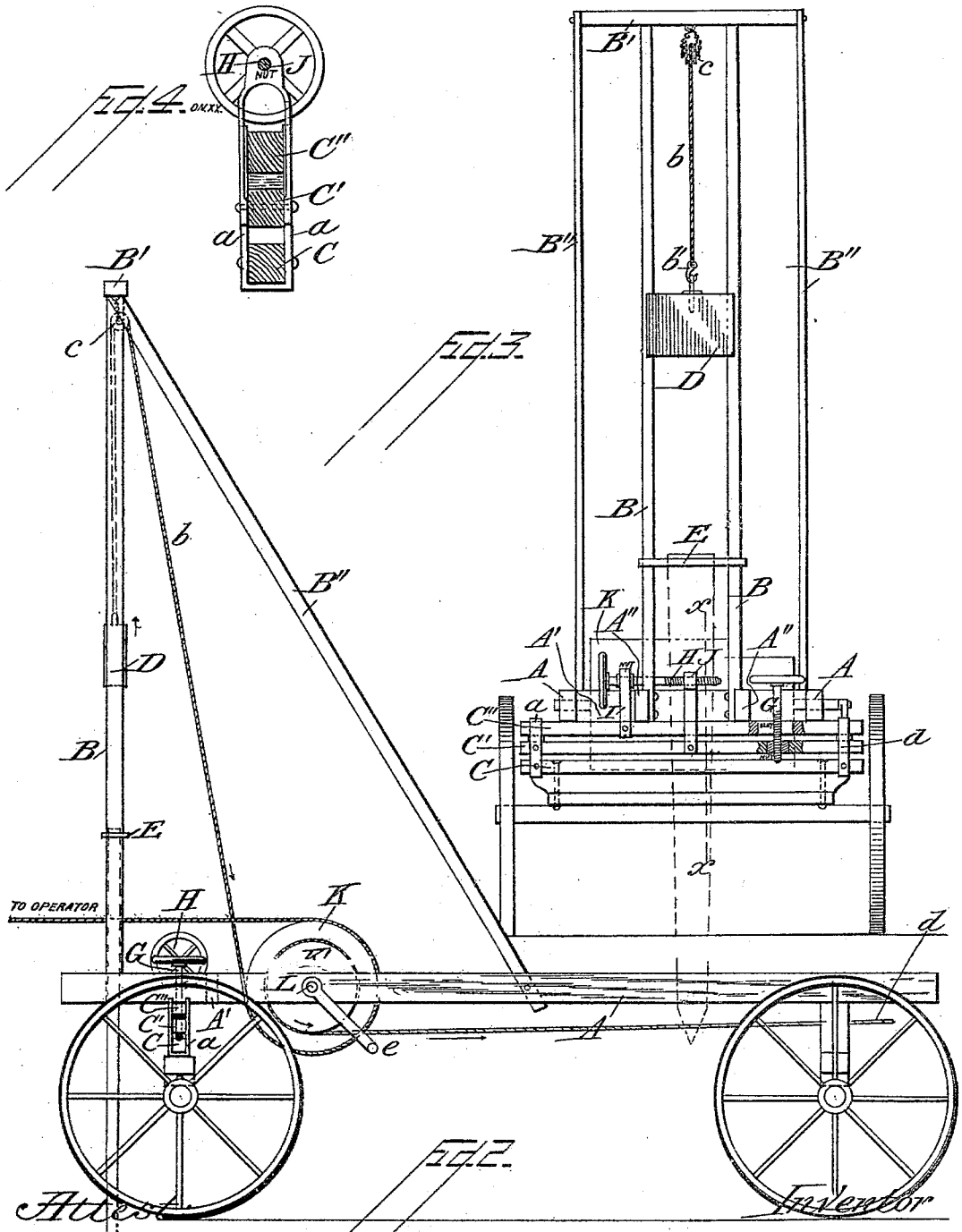
N. PETERS, Photo-Lithographer, Washington, D. C.

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UNITED STATES PATENT OFFICE.

JOHN G. WEBER AND ALBERT WEBER, OF DEFIANCE, OHIO.

POST-DRIVING MACHINE.

SPECIFICATION forming part of Letters Patent No. 412,006, dated October 1, 1889.

Application filed March 25, 1889. Serial No. 304,593. (No model.)

To all whom it may concern:

Be it known that we, JOHN G. WEBER and ALBERT WEBER, citizens of the United States, residing at Defiance, in the county of Defiance, State of Ohio, have invented certain new and useful Improvements in Post-Driving Machines, of which the following is such a full, clear, and exact account as will enable others skilled in the art to which the invention appertains to construct and operate the same.

The invention relates especially to the devices employed in adjusting the position of the driving apparatus, and to the method of operating the weight or hammer employed in driving the posts.

In constructing this machine a rectangular frame is made of suitable dimensions to be carried upon a wagon-bed. At one end of this frame is erected two uprights, which serve as guides for the driving-weight and carry at their ends the cross-piece which supports the sheave over which the hoisting-rope runs. A horizontal drum has its bearings in the sides of the frame and around this drum the rope is carried, the whole being so arranged that the revolution of the drum may be made to hoist the weight. Devices for adjusting the frame both laterally and vertically are placed beneath the same upon the rear bolster of the wagon, all the parts being arranged as shown in the accompanying drawings and the detailed description thereof which follows.

In the drawings, Figure 1 is a perspective view of the machine mounted upon a wagon. Fig. 2 is a side elevation of the machine. Fig. 3 is an end view. Fig. 4 is a detail view of the adjusting mechanism.

In the several figures, A represents the rectangular frame, which is composed of two longitudinal pieces that rest one upon each side of the wagon-bod. These side pieces are connected by suitable cross-pieces, that keep the two sides in position. One of these cross-pieces A′ is placed a short distance back from that end of the machine which projects beyond the rear axle. Two short additional longitudinal pieces A″ are connected with this cross-piece between the outer pieces and extend over the rear axle in the same manner.

Attached to the pieces A″ and firmly secured thereto by bolts are the side pieces or uprights of the derrick B, which are connected at the top by a cross-bar B′, extending a short distance on each side and connected at its ends with the braces B″, which extend downward at an angle, having their lower ends bolted to the side pieces of the frame. The uprights are thus held firmly in position and form the guides for the driver D, which moves freely up and down between them.

In order to change the position of the frame relatively to the wagon, a piece of timber C is placed on the bolster over the rear axle and firmly bolted thereto, or, if desired, it may take the place of said bolster, and is provided near each end with the vertical guides *a a*, between which are the pieces C′ and C″, capable of being moved both vertically and laterally by means of the screws G and H, the vertical movement being imparted by the screw G passing down through a slot in the piece C″ to a nut embedded in the piece C′, the end of the screw being journaled in the piece C. The lateral movement is produced by the screw H, placed horizontally over the piece C″ and connected therewith by the support I, which forms a bearing, within which the shaft of the screw turns, its thread engaging with the nut J, attached to the piece C′. These screws are all provided with suitable hand-wheels, by which they are readily operated. It will be evident from the construction of this shifting device that by turning the screw G the frame and derrick may be leveled should one of the wheels of the wagon upon which they are carried stand on ground lower than the other, and the frame and derrick can be shifted laterally to bring the same in perfect line with the posts already driven by turning the screw H in the proper direction.

A sliding cap E is placed between the uprights of the derrick, moving freely thereon, and serves as a guide for the top of the post which it incloses, and also to protect the same from abrasion or splitting by the blows of the driver. This driver D is operated as follows: A rope *b* is attached to the same by the hook *b′*. Said rope then passes through the sheave *c*, secured to the cross-piece B′ at the top of the derrick, and downward to the drum K,

mounted upon the shaft L, which extends across and has its bearings in the side pieces of the frame. The rope is carried downward and once around the drum, and thence extends outward to the rear of the wagon. It is evident that if the drum K be rotating a slight pull upon the end of the rope will cause the same to embrace the drum so tightly as to raise the driver; but when the tension is released the rope will lose its grasp on the drum and the driver be allowed to fall upon the post beneath it. By repeating this process the post is soon driven to the desired depth and the apparatus is ready to move forward into position to drive the next. In order to impart the desired rotary movement to the drum K, a drum of less diameter K′ is secured upon the shaft L. Upon this drum winds the rope *d*, to the free end of which a horse is attached. It will be apparent that when this rope *d* is wound upon the drum, the horse attached and started the unwinding of said rope from the drum will rotate the same, and this rotation will continue until the rope is wholly unwound therefrom. While the horses are revolving the drum by means of the rope *d*, by taking hold of the free end of the rope *b* and drawing it taut, so as to bind on the drum, causing it to wind on the same, the weight will be raised. When it has reached the desired height, and the rope *b* released and plenty of slack given to it, the weight will drop, driving the post into the ground. This can be repeated several times on one unwinding of the rope D, according to its length. To rewind the rope *d* a crank *e* is applied to one end of the shaft L, by which it is turned, the drum rotated, and the rope consequently rewound thereon.

As will be seen, the construction of the whole machine is simple and cheap, there being no multiplicity of parts or intricate devices likely to get out of order, and it may be readily and effectively operated by two men, thus producing a great saving of time in proportion to the work accomplished in comparison with the machines in ordinary use for accomplishing the same purpose.

Having thus described our invention, we claim as new and desire to secure by Letters Patent the following:

1. As an improvement in post-driving machines, the combination of the wagon-bed, the frame A, supported thereon and carrying the upright B and the braces B^2, the weight D, supported between said upright, the drum having a periphery of different diameters, the rope *b*, suspending the weight and wound on the larger periphery of the drum, the rope *d*, wound on the smaller periphery of the drum, and the crank *e*, for winding said rope *d* on the drum, substantially as and for the purpose set forth.

2. As an improvement in post-driving machines, the combination of the wagon-bed, frame A, carried thereon, supporting the uprights B, the weights suspended between said uprights, the mechanism for operating said weights, and the means for leveling the frame carrying the weight, consisting of the screw G, passing through the piece C^2 to a nut seated in the piece C′ and having its end journaled in the piece C, said pieces moving vertically in the guides *a a*, substantially as and for the purpose set forth.

3. As an improvement in post-driving machines, the devices for shifting the derrick and frame laterally, consisting in the combination, with said derrick and frame, of the supporting-piece C′ C″ and the screw H, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN G. WEBER.
ALBERT WEBER.

Witnesses:
HENRY G. BAKER,
R. H. GLEASON.