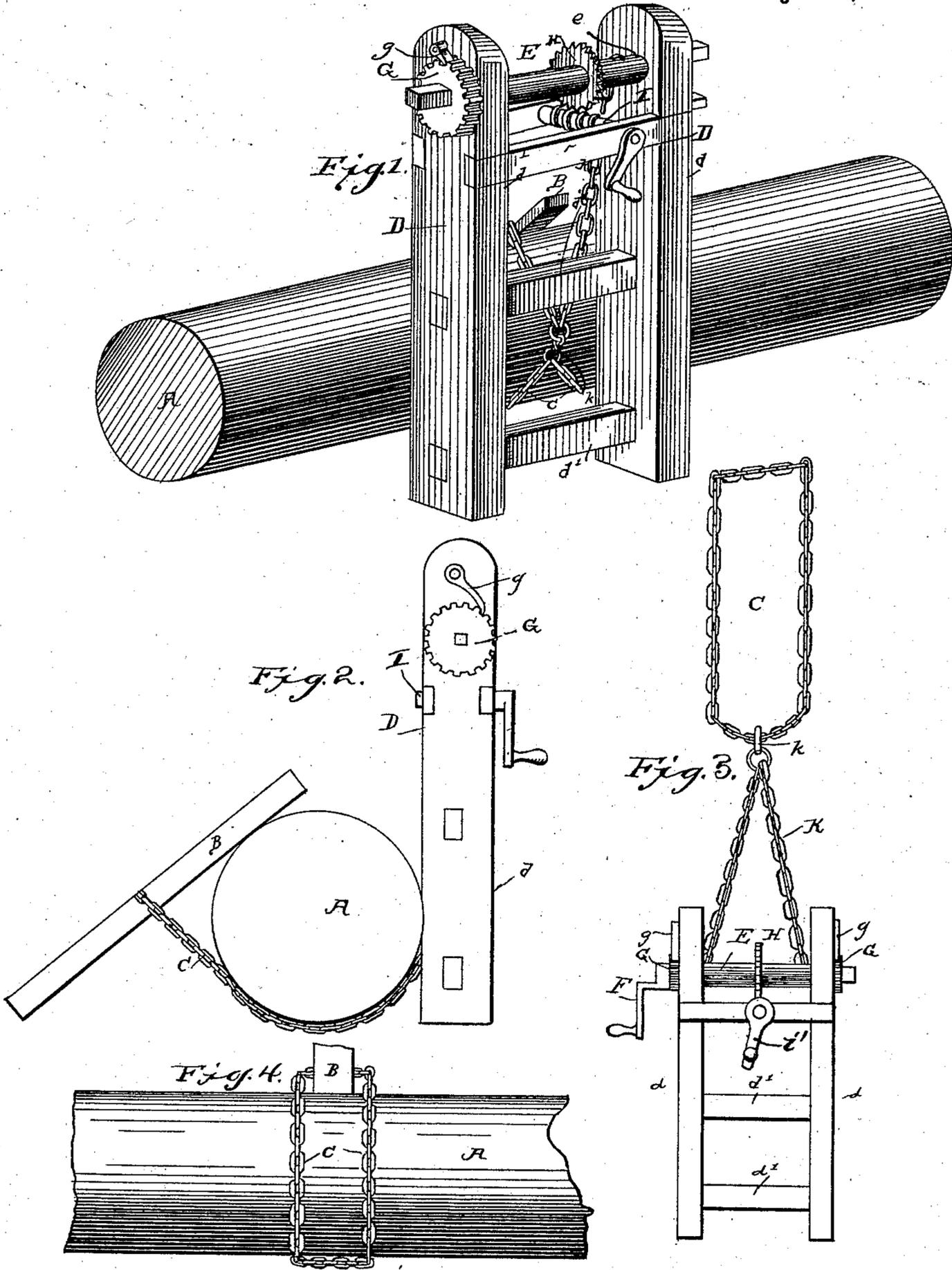


(No Model.)

W. CALHOUN.
LOG HOISTING MACHINE.

No. 366,201.

Patented July 12, 1887.



Witnesses
Henry S. Dietrich
John H. Siggers

Inventor
Wilson Calhoun

By his Attorneys,

C. Snowden

UNITED STATES PATENT OFFICE.

WILSON CALHOUN, OF PORT ROYAL, PENNSYLVANIA.

LOG-HOISTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 366,201, dated July 12, 1887.

Application filed March 4, 1887. Serial No. 229,719. (No model.)

To all whom it may concern:

Be it known that I, WILSON CALHOUN, a citizen of the United States, residing at Port Royal, in the county of Juniata and State of Pennsylvania, have invented a new and useful Improvement in Log-Hoisting Machines, of which the following is a specification.

The invention relates to improvements in hoisting-machines, and while it may be used to lift almost any kind of material is more particularly adapted for lifting large logs and lumber.

The invention has for its object to produce a very powerful machine of simple and durable construction; and it consists, mainly, in the combination, with the hoisting-frame, of a supporting or brace bar, hereinafter described.

It further consists in certain details of construction and arrangement, hereinafter described, illustrated in the drawings, and pointed out in the appended claims.

In the accompanying drawings, Figure 1 represents a perspective view of the machine taken from the side of the hoisting-frame and with a log partially lifted. Fig. 2 represents a side view of the machine showing the log endwise. Fig. 3 represents a plan of the hoisting-frame and the other parts of the machine detached from the log to show more clearly their construction and arrangement. Fig. 4 is a detail view of a portion of the under surface of the log to show the position of the chain.

Referring to the drawings by letter, A designates some heavy article—in this case a log—which it is desired to lift.

B is a strong and inflexible supporting or brace bar, the upper part of which is placed on top of the log transversely thereto, and as near as possible over its center of gravity. The foot of the bar preferably rests against some strong support to prevent it from slipping; but unless the ground is slippery this is not absolutely necessary. The bar B is retained in contact with the log and prevented from slipping laterally thereon by the chain C, which passes under the log. The said chain runs over the supporting-bar B, and its ends at the opposite side of the log are firmly secured together, the chain being tightened upon the surface of the log, and holding the supporting-bar firmly thereto. Thus, as the log

lies on the ground, the supporting-bar will incline downward from a point of its top over its center of gravity, the lower end of the bar being fulcrumed upon the earth, or a suitable support thereon.

D is the hoisting-frame, of rectangular shape, and composed of the side beams, $d d$, and transverse beams $d' d'$, connecting the same. The said frame, when placed in position, is erect against the log on the side opposite the supporting-bar, as shown.

E is a strong transverse shaft journaled in bearings $e e$, made in or secured upon the beams $d d$, near the upper ends thereof, and preferably detachable from its bearings. The extended journals of the shaft are squared at their ends for the attachment of the cranks F, by means of which the shaft is rotated.

G G are ratchet-wheels secured on the shaft E just outside its bearings, and $g g$ are the pawls pivoted to the beams $d d$, which pawls respectively engage said wheels and prevent the shaft from turning in the wrong direction.

H is a worm-wheel secured centrally upon the shaft E and meshing with the worm i of the transverse shaft I, journaled in the side beams, $d d$, below the shaft E. The outer ends of the shaft I are squared for the attachment of the cranks i' to rotate the shaft.

K is a strong chain, having its ends secured to the shaft E immediately inside the bearings thereof, and having a strong hook, k , secured to its central part.

The operation of the machine is as follows: The log and supporting-bar resting as described, the hook k is attached to the chain C. The shaft E is then rotated by means of the handle F, and the chain K winds inward thereon from both ends, lifting the log or other heavy substance by means of the hook k and the chain C. The lower end of the supporting-bar B is the fulcrum upon which the log rises and which sustains the weight of the same, the said bar increasing its angle at that point as the log is drawn up.

The machine makes a very strong, simple, and durable hoisting device, and as the chain runs inward from both ends it cannot wind on and interfere with itself, as in many hoisting-machines.

When the load is not very heavy, only one

crank F need be used. For heavier loads both cranks can be used, and in lifting the heaviest loads the worm shaft and wheel, as well as the cranks, may be brought into action.

5 If desired, the chain C might be omitted and the chain K run from the shaft E over the supporting-bar B; but I prefer the construction shown and hereinbefore described.

10 The brace-bar B and chain C may be omitted, the frame made so as to straddle the log, and the chain K passed around it. Then by operating the machine the log will rise between the legs of the frame.

15 My device may be employed in a variety of ways, but will be found especially advantageous for loading heavy logs into a wagon, or lifting them to the top of a pile.

Having thus described my invention, I claim—

20 1. In a hoisting-machine, the combination of the hoisting frame, the shaft journaled in the side beams thereof and provided with cranks, the supporting-bar having its upper part resting on the log, and the chain connect-
25 ingsaid shaft and supporting-bar, substantially as specified.

30 2. In a hoisting-machine, the combination of the hoisting-frame, the shaft journaled in the side beams thereof and provided with cranks, the ratchet-wheels on said shaft, the

pawls thereof pivoted to the side beams of the hoisting-frame, the supporting-bar having its upper part resting on the log, and the chains connecting said shaft and the supporting-bar, substantially as specified. 35

3. In a hoisting-machine, the combination of the supporting-bar and chain C with the hoisting-frame, the shaft journaled in the side beams thereof, the cranks and ratchet-wheels on said shaft, the pawls pivoted on the side
40 beams of the hoisting-frame, the chain K, secured at its ends to said shaft immediately inside its bearings, and the hook k, secured to the central portion of said chain and engaging the chain C, substantially as specified. 45

4. In a hoisting-machine, the combination of the supporting-bar and chain C with the hoisting-frame, shaft E, provided with cranks F, ratchet-wheels G, controlled by the pawls
50 g, worm-wheel H, worm-shaft I, provided with crank-handles i', chain K, and hook k, all constructed and arranged substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in
55 presence of two witnesses.

WILSON CALHOUN.

Witnesses:

JOHN H. PATTERSON,
GEO. S. McCURDY.