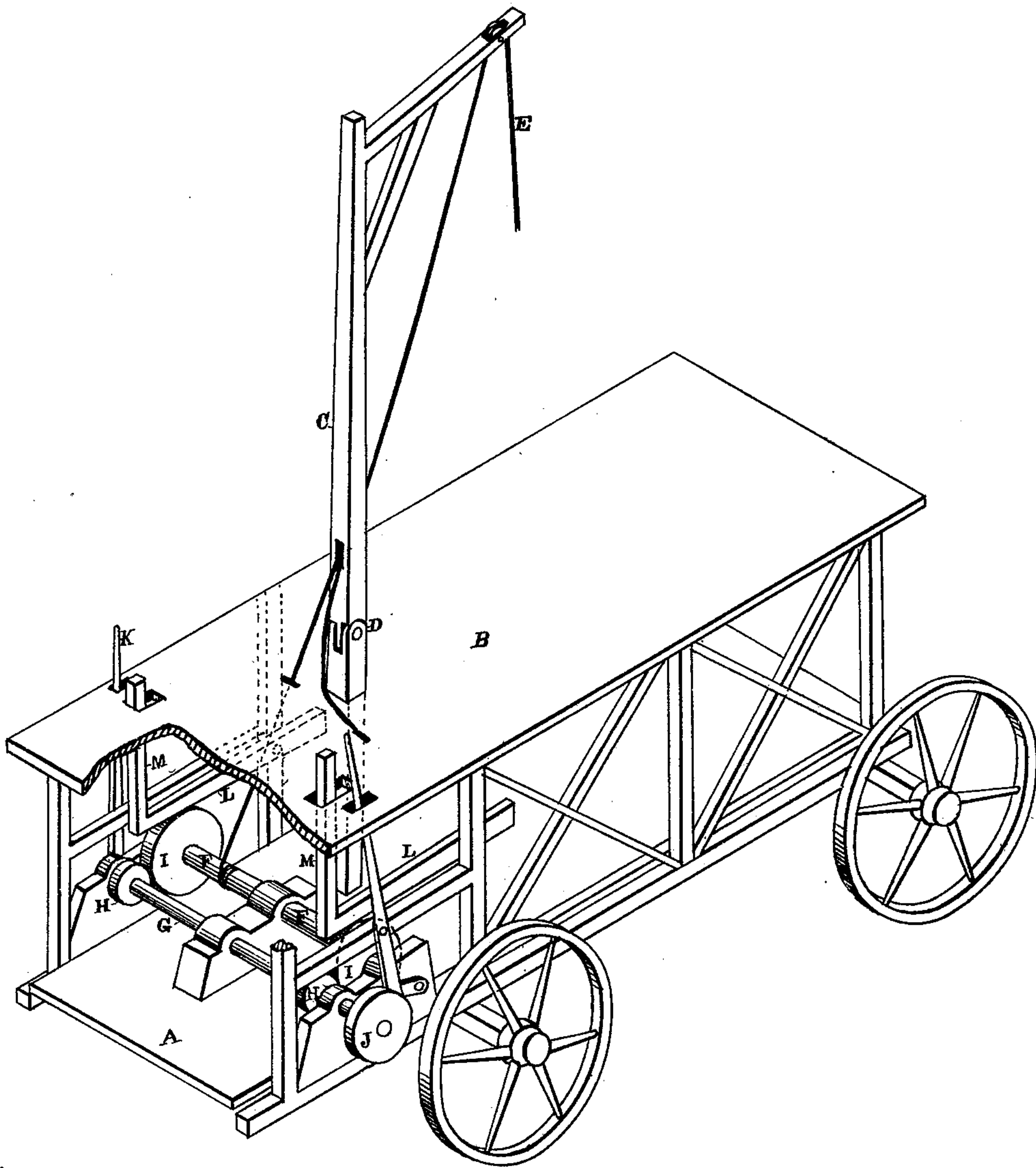


W. W. CARLILE.
 Portable Hoisting Apparatus or Wagon Derrick.
 No. 198,506. Patented Dec. 25, 1877.



Witnesses
Geo. H. Strong.
Oswyn J. Stacy.

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UNITED STATES PATENT OFFICE.

WILLIAM W. CARLILE, OF IONE CITY, CALIFORNIA.

IMPROVEMENT IN PORTABLE HOISTING APPARATUS OR WAGON-DERRICKS.

Specification forming part of Letters Patent No. **198,506**, dated December 25, 1877; application filed June 26, 1877.

To all whom it may concern:

Be it known that I, WILLIAM W. CARLILE, of Ione City, county of Amador, and State of California, have invented an Improved Portable Hoisting Apparatus; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings.

My invention relates to certain improvements in that class of machines known as "wagon-derricks," which are employed to operate horse-forks and deliver unthrashed straw to thrashing-machines.

These machines usually consist of two floors, placed a short distance apart, and united by suitable frame-work. This frame is mounted permanently upon wheels, for the purposes of transportation, and supports a derrick-mast, from which the forks are operated.

The mast has pulleys at the top, and ropes lead down from the head to the wagon-body, where they pass beneath guide or direction pulleys, and thence to the horse or other power by which they are operated.

This arrangement is bad, because the operator or table-man has no control over the forks, and they are often dragged up to the table or wagon, so as to catch, or they deliver their load at the wrong time.

My invention consists in mounting operating-drums and controlling-levers directly upon the derrick-wagon, so that a person standing upon the upper floor can see the forks at all times, and can control the movement of the drums at will, the drums being driven directly from the engine by a belt.

Referring to the accompanying drawings for a more complete explanation of my invention, the figure is a perspective view of my machine, with a part of the upper floor removed.

A is the lower floor, and B the upper floor, of my wagon, these floors being united by a frame-work of timber, so as to be stiff. The mast C is stepped in the lower floor, and passes up through the upper one.

I have made a hinge-joint, D, close to the upper floor, so that the mast may be laid down when traveling. When it is in position it

is stayed by guy-ropes, in the usual manner, and the fork-ropes E lead over pulleys at the top.

In order to operate these ropes and the forks, I place two independent drums, F, upon the lower floor, so that their shafts or axes are supported in a line with each other, as shown.

Parallel with these drums, and at a short distance in front of them, is another shaft, G, and this shaft carries a small friction roller or pulley, H, at each end, corresponding with the pulleys I upon the ends of the drums F.

Upon the outer end of this shaft G is the driving-pulley J, from which a belt extends to the engine which drives the separator.

Two levers, K, extend up through the upper floor of the wagon, and stand within easy reach of the operator. At their lower ends they have their fulcrums and are connected with the boxes of the drum-shafts, so that either one or both levers may be operated to throw the friction-pulleys H and I into contact, and by this means either drum may be operated, so as to raise its fork at will.

Brake-beams L are hinged above the drums I, and a foot-lever, M, from each extends up just through the upper floor, so that they may be within reach of the operator's foot.

It will be seen that by a movement of the lever K either fork may be drawn from the outer side of a wide stack, where it takes its load to the side of the table, and may be allowed to remain at that point until the table is clear or more straw is needed.

Either of the forks with its load may be hoisted to any point, and then held in suspension by simply releasing the lever K, and at the same time placing the foot upon the brake-lever M, the operator thus having absolute control of the supply to the feeding-table.

No surplus rope will be needed to be dragged back and forward upon the ground, and the rope which is used will freely uncoil from the drums, so as to allow the fork to drop after depositing its load, and it can be easily carried to the back of the stack and fixed for another load.

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

1. The drums F and the driving-shaft G, with their intermediate friction-pulleys, in combination with the wagon A B and mast C, the whole forming a portable derrick and feeding apparatus, substantially as herein described.

2. The wagon A B, with its mast C, drums

F, and driving-shaft G, in combination with the operating-levers K and brake-levers M, constructed and operating substantially as herein described.

In witness whereof I have hereunto set my hand and seal.

WILLIAM W. CARLILE. [L. S.]

Witnesses:

OLWYN F. STACY,

FRANK A. BROOKS.