

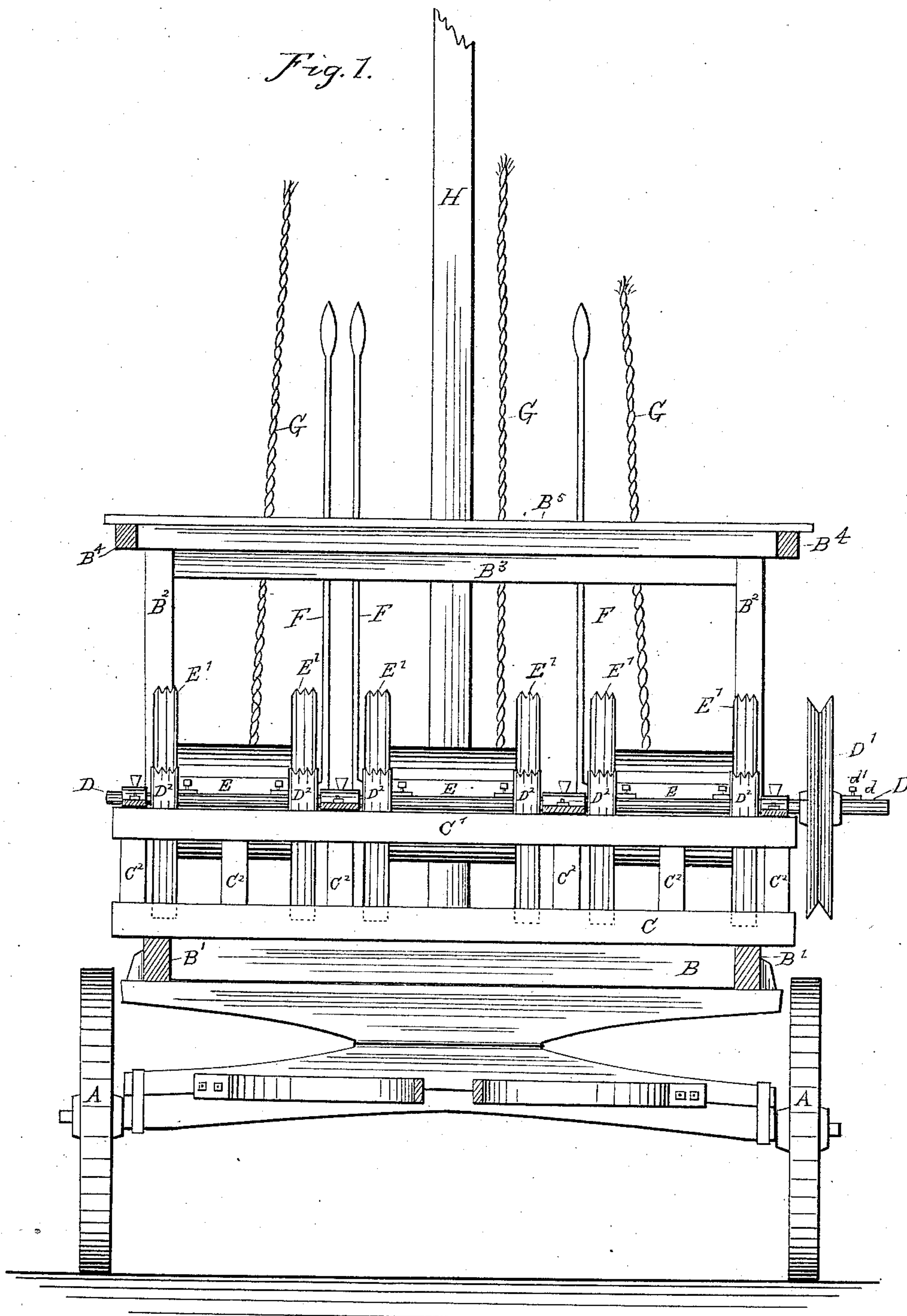
(No Model.)

4 Sheets—Sheet 1.

J. H. CARLILE.
HOISTING APPARATUS FOR THRASHING MACHINES.

No. 307,435.

Patented Nov. 4, 1884.



Witnesses.
Elihu C. Stowe.
Nathan E. Carpenter.

Inventor.
James H. Carlile.
By Joshua B. Webster Atty.

(No Model.)

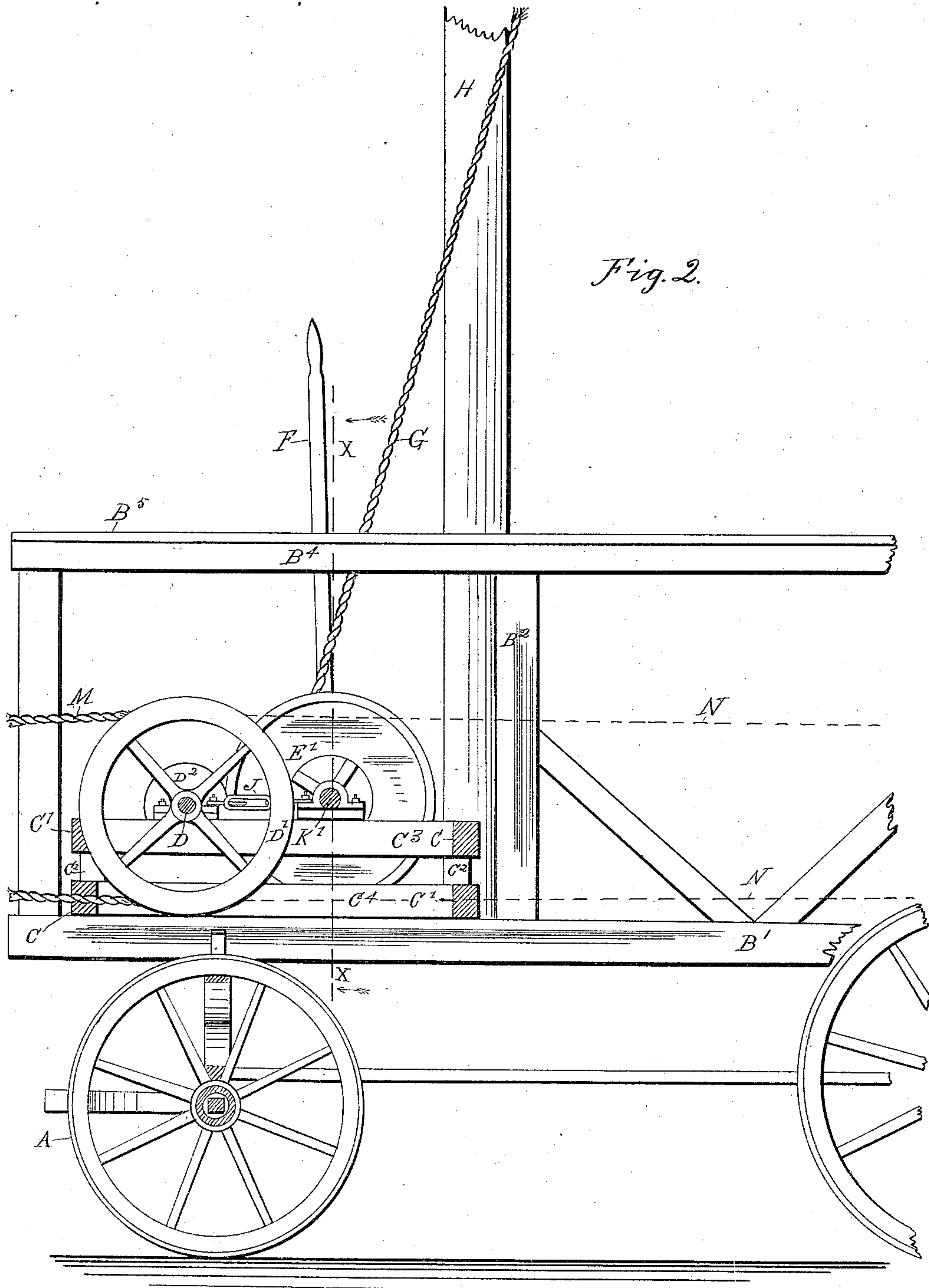
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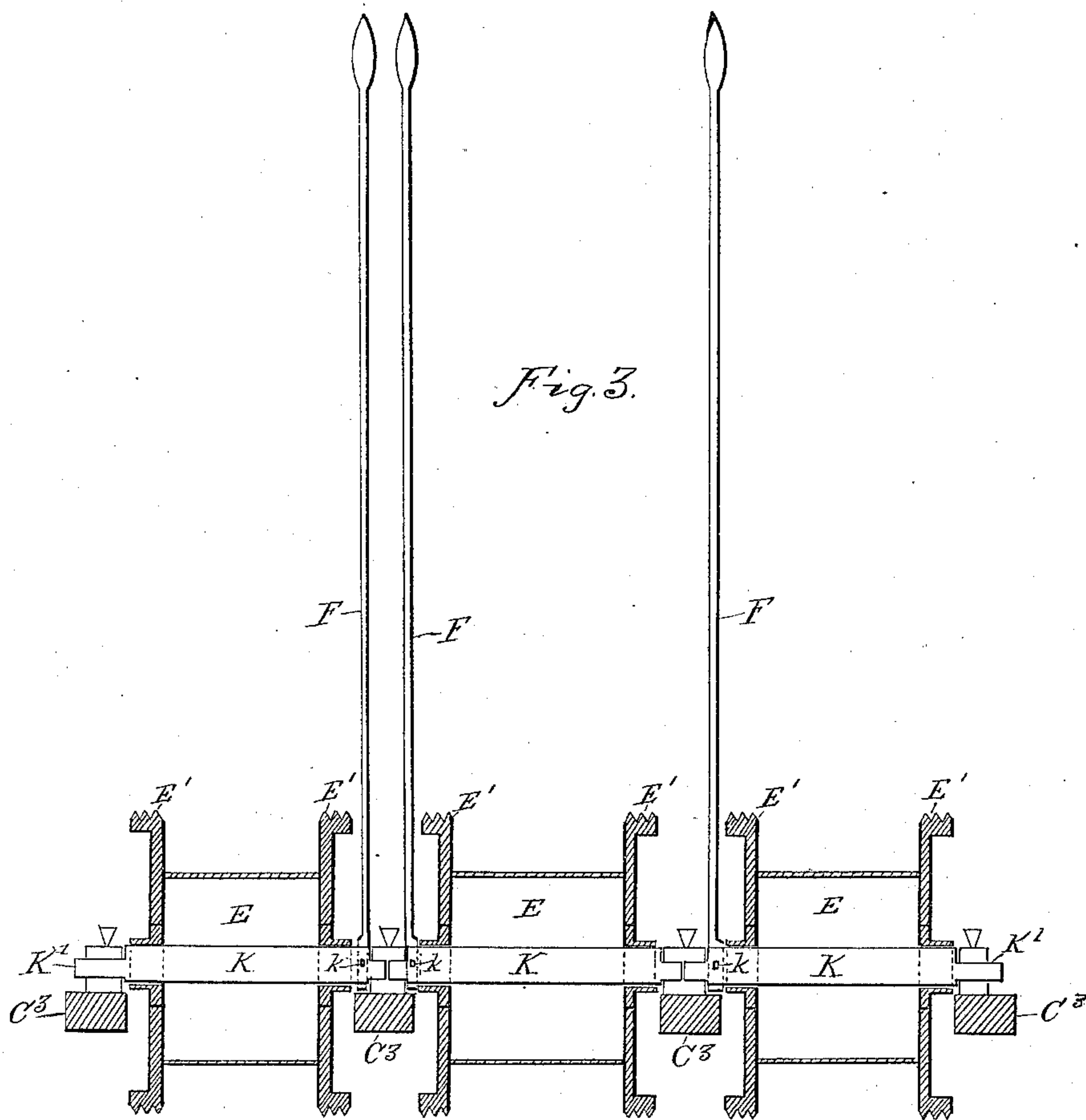
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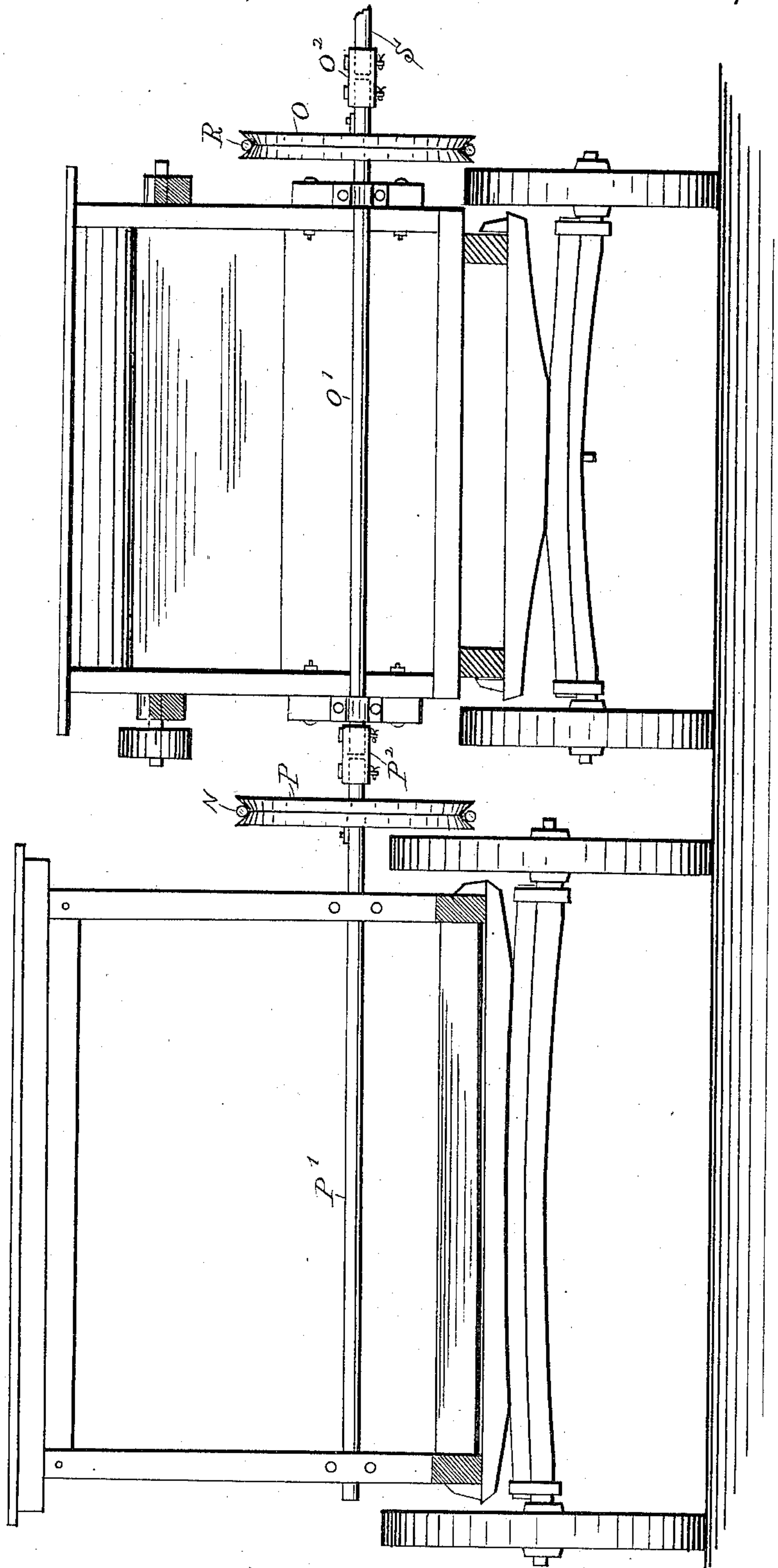
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Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES H. CARLILE, OF TULARE, CALIFORNIA, ASSIGNOR OF ONE-HALF TO
EZEKIAL W. S. WOODS.

HOISTING APPARATUS FOR THRASHING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 307,435, dated November 4, 1884.

Application filed March 2, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. CARLILE, a citizen of the United States, residing at Tulare city, in the county of Tulare and State of California, have invented certain new and useful Improvements in Steam Hoisting Apparatus for Thrashing-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of harvesting-machines known as "steam hoisting apparatus for thrashing-machines," the object of which is mainly to supply the grain-straw to the cylinders of thrashing-machines by forks operated by steam-power.

It consists, in its essential features, of an appropriate wagon having a frame and platform thereon, and carrying spools, shafting, pulleys, tackle, mast-forks, and levers constituting the requisite mechanism, which receives its motion from an engine direct or indirect, as hereinafter shown.

Referring to the accompanying drawings, Figure 1 is a front end elevation of a complete derrick-wagon with a hoisting apparatus thereon. Fig. 2 is a side elevation of the same. Fig. 3 is a sectional view of the spools and their immediate companion parts, as seen through line *x* of Fig. 2. Fig. 4 is a view of the rear wheels of the derrick-wagon and sectional view of rear of frame and a front view of a thrasher, together with the shafting and coupling connecting the two machines.

Let A represent the wheels of the derrick-wagon; B and B', the lower timbers of derrick-wagon frame; B², the standards of derrick-wagon frame, and B³ and B⁴ and B⁵ the upper part of derrick-wagon frame or body.

Resting upon the frame-timbers B and B' is the apparatus for operating the forks, consisting of C, the lower, and C', the upper, timber of its frame; C², the standard-braces; C³, the cross-timbers upon which rest the shaft-boxings; D, the main driving-shaft, having D', the grooved V-faced driving-pulley; D²

the grooved-faced friction-rollers of the said shaft D.

E are spools or drums having side friction-flanges, E', with grooved faces which engage with rollers D².

F are levers attached to a shaft, K, which carries the spools E, and are attached near the smaller portions of the said shaft K, (indicated as K',) which portions are turned down and form eccentrics, so as to engage or disengage, as may be desired, the flanges E' from the friction-rollers D² by means of the levers F. The bearings of shafts K and D are boxes resting upon timbers C³, the former of which have slotted bolt-holes. The levers F are fastened to the shaft K by set-screws *k*.

J are turn-buckles, by which the boxes of shaft K, having slotted bolt-holes, may be drawn forward, so that flanges E' shall engage more closely with friction-rollers D².

G are ropes encircling spools E and passing to top of derrick H, from whence they descend and are attached to large "horse-forks," as usual.

M is a rope encircling pulley D', when it is desired to connect and run the hoisting apparatus direct from the engine, as shown in Figs. 1, 2, and 3, and simply operate the forks from stack of grain-straw to derrick-platform near cylinder of thrasher; but it may be desired to also apply power to operate a grain-cleaner or small saw-mill, in which event the mechanism and apparatus as illustrated in Fig. 4 are employed, the rope M in such event being dispensed with, and a rope, N, (see Fig. 2 also,) connects pulley D' with a pulley, P, which is located on the end of a shaft, P', at the rear of the derrick-wagon frame, and is connected by a sleeve-coupling, P², to a shaft, O', in front of the thrasher, having a pulley, O, and being connected by a sleeve-coupling, O², to a shaft, S, which may in its turn be connected with and operate a grain-cleaner or saw-mill. A rope, R, engaging with pulley O, connects it with the engine and operates the entire last-described apparatus. The rope N, of course, engaging with pulleys P and D', furnishes the requisite motion to the hoisting apparatus so that it may perform its functions.

The construction, &c., thus explained, the

balance of the *modus operandi*, which is very simple, will now be set forth, and as follows: The forks are operated, as shown, by ropes M or N, encircling pulley D'. Levers F, attached 5 to shaft K, serve to engage the spool-flanges E' with rollers D² and turn rapidly the spools E, which raise the forks with their loads by means of the rope G, encircling the spools E, and passing from thence through pulley-blocks 10 at the top of the derrick-mast H. The forks are then tripped and discharge their loads on the derrick-platform B⁵ near the cylinder of the thrasher. The levers F are then reversed, releasing the flanges E' from rollers D², and 15 the weights of the forks reverse the spools E, so that ropes G unwind and bring the forks back to the stack for a fresh load. If it is desired to use a grain-cleaner or saw-mill in connection, it is attached to shaft S, as shown in Fig. 20 4. The shafts O' and P', being connected together by sleeve-coupling P², receive their motive power from the engine by rope R, encircling

pulley O, while rope N, engaging with pulleys P and D', communicates motion to the hoisting apparatus, operating the forks. 25

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

The arrangement of the pulley O, pulley P, shaft O', shaft P', coupling O², coupling P², 30 and shaft S so that the latter may be attached to a grain-cleaner or saw-mill and all receive their motive power, in connection with the hoisting apparatus, by means of rope R, encircling pulley O, and rope N, encircling pulleys 35 P and D', substantially as shown, and for the purposes set forth.

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

JAMES H. CARLILE.

Witnesses:

JOSHUA B. WEBSTER,
ELIHU B. STOWE.