William Deering's Horse Engine.

No. 121,932. Patented Dec. 19, 1871.

Fig 1.

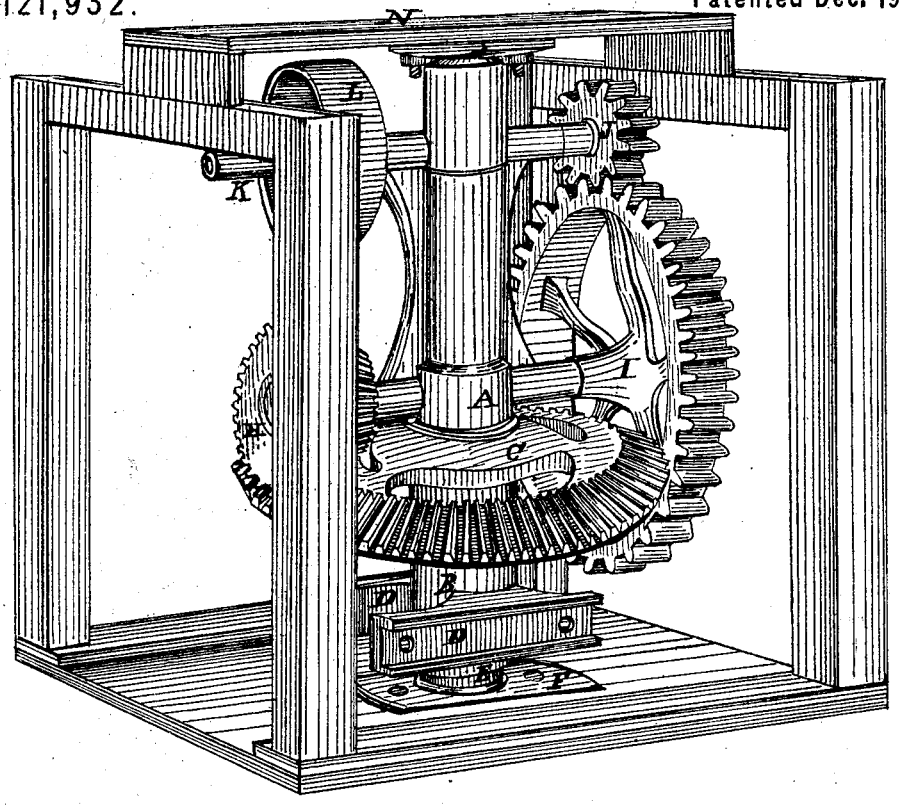
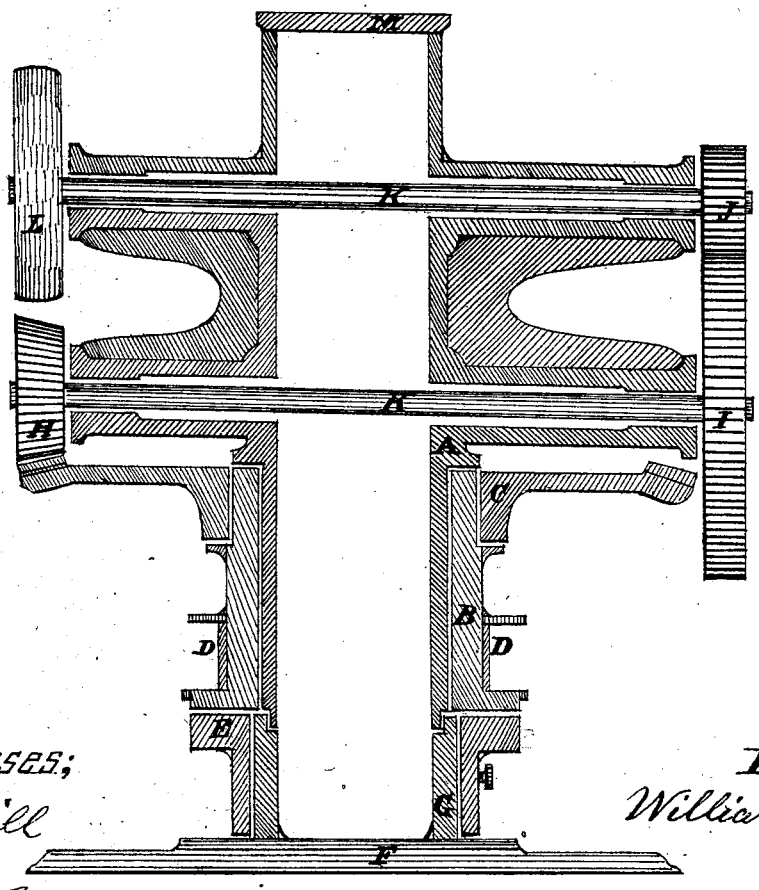


Fig 2.



Witnesses;
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121,932

UNITED STATES PATENT OFFICE.

WILLIAM DEERING, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN HORSE-POWERS.

Specification forming part of Letters Patent No. 121,932, dated December 19, 1871.

To all whom it may concern:

Be it known that I, WILLIAM DEERING, of the city of Louisville, county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Horse-Engines with horizontal First-Movers or Master-Wheels, of which the following is a specification:

Horse-engines with horizontal first-movers or master-wheels are of two classes: first, that in which these wheels are secured to central axles which turn with the wheels; and second, that in which the wheels revolve around central pivots or spindles which are stationary.

My improvement consists in making this central part of the second class peculiarly large, projecting it through the master-wheel, and then still more peculiarly continuing it up with side branches for the support of one or more counter-shafts; and also, in adding to it the character of a column and continuing it up as a pillar for a central support for a workshop, barn, or gin-house.

My engine as now constructed contains both of these improvements. Its master-wheel turns on the lower part of a stationary iron pillar, which terminates at its upper end in a flanged horizontal table for the reception of the central beam of a house or frame-work, and which has side projections cast solidly with itself for the support of two counter-shafts. That part of the pillar which serves as a spindle for the revolution of the master-wheel is turned accurately in the lathe. The master-wheel has a long hub which is bored to fit the pillar, and which terminates at its lower end in a flange which is faced in the lathe at right angles to its bore. This flange rests on the upper and polished surface of a large collar, which is fastened on the pillar near its lower end with strong set-screws for the under or foundation support of the master-wheel. The lower part of this hub has two, though it may have but one or more projecting flanges on which to bolt the levers for the attachment of the horses. A first counter-shaft passes through the pillar about five inches above and at right angles to the vertical axis of the master-wheel, while a second passes through it parallel with the first and at a point about twenty-four inches above it. Both these shafts are supported solely by branches projecting from opposite sides of the pillar, and these branches are made sufficiently large to be bored through their outer ends for the journal-bearings. The master-wheel drives a pinion which is keyed on the first shaft. On the other end of this shaft is a gear-wheel which meshes into and drives a pinion keyed on the corresponding end of the upper shaft; and on the opposite end of this latter is keyed a band-pulley for the further transmission of the power, as may be required. In my machine as now constructed each of these pinions is one-quarter the size of its driver, which causes the band-pulley to revolve sixteen times for one time of the master-wheel and horses. These proportions, however, may be varied as required; or the band-pulley may be keyed on the end opposite the pinion on the first shaft and the upper shaft dispensed with; or a third shaft may be projected through the pillar, and the mill-work continued from the second to drive a still faster revolving band-pulley on this third, as any exigency may demand.

The objects of my invention are to make a simple and steadfast support for the counter-shaft or shafts of a horse-engine by homogeneously continuing the spindle of its master-wheel up into a mass of the proper form and size for that support; and also to add to this spindle when necessary the character of a pillar for the support of a house or frame-work; and any greater or less number of shafts, or any desired variation in the height or volume of the pillar is possible, without any injurious interference with the main objects as I have secured them, as set forth.

Having thus fully described the nature and objects of my invention, a more complete understanding of it may be had by reference to the annexed drawing.

Figure 1 is a perspective view of the machine, with a part of the frame left out in order to give a more perfect view of it. Fig. 2 is a sectional view of it, and shows the interior of the spindle of the master-wheel in its primary character as simply that spindle; in its second character as continued up into side branches for the support of the counter-shafts; and in its third character as continued up as a pillar for the support of a beam or house, as understood.

In the drawing, A is the central part of the machine, constituting the stationary spindle of the master-wheel, the support of the counter-shafts, and the pillar, as understood. B is the long hub of the master-wheel. C is the master-wheel. D

D are the projections on the hub, to which to bolt the levers for the attachment of the horses. E is the collar secured to the spindle for the under bearing of the master-wheel. F is a socket-plate, through which the lower end of the spindle passes to a foundation-block. G is a flange on the socket-plate. H is the pinion worked by the master-wheel. K is the first or lower counter-shaft, on which the pinion H is keyed. I is the gear-wheel keyed on the other end of the shaft K. J is the pinion driven by the gear-wheel I. K′ is the upper or second shaft, on which is keyed the pinion J. L is the band-pulley keyed on the other end of the shaft K′. M is the flanged horizontal table on the top of the pillar, and N is the central beam which it supports.

Having thus fully described the drawing, what I claim as new, and desire to secure by Letters Patent, is—

The stationary center or spindle of the master-wheel C, when it is projected through the master-wheel for the support of one or more counter-shafts, and when there is added to it the character of a column for the support of a house or frame-work, substantially as and for the purposes hereinbefore set forth.

WILLIAM DEERING.

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