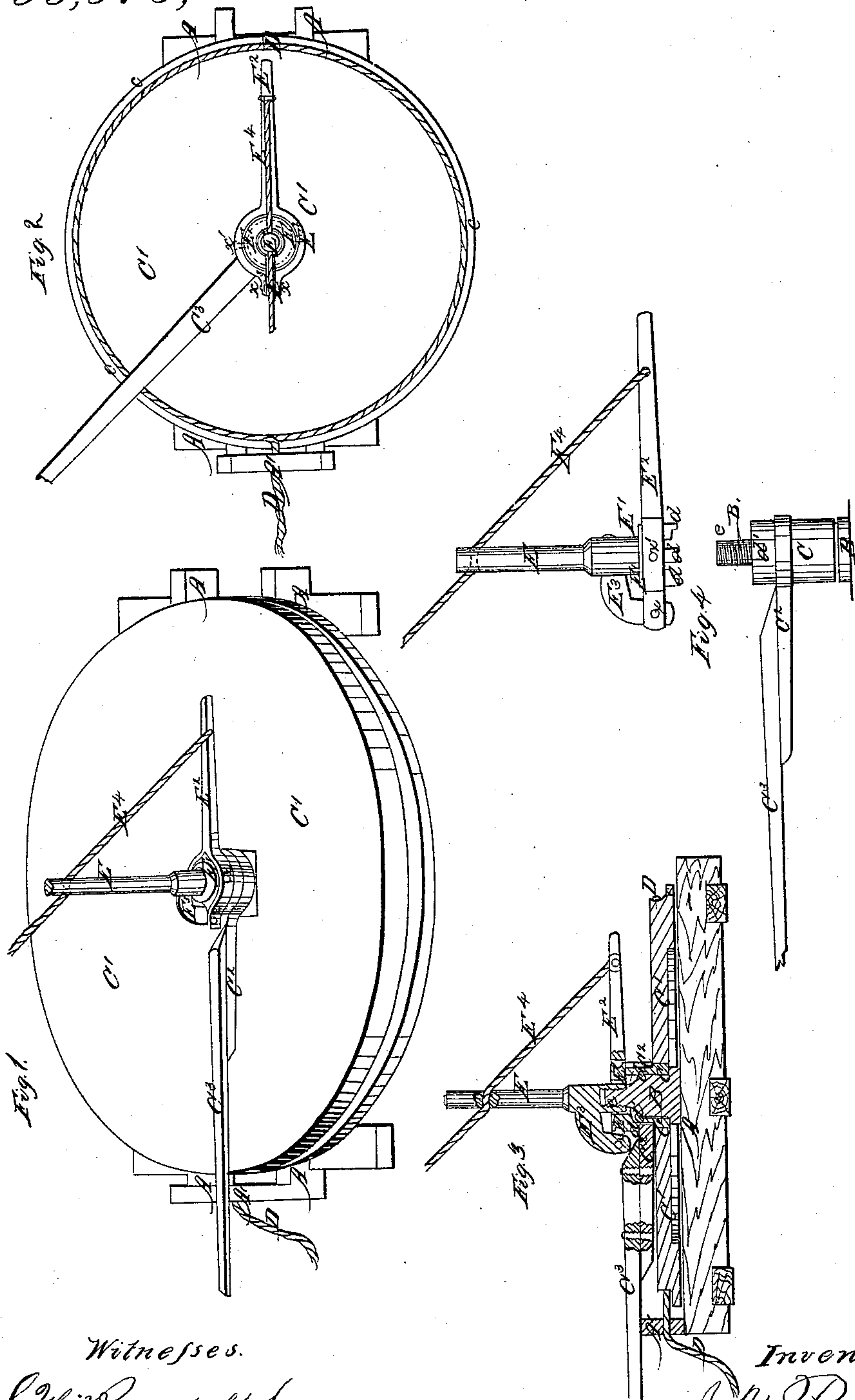


J. M. Randle,

Horse Power,

No. 53,378,

Patented Mar. 20, 1866.



Witnesses.
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UNITED STATES PATENT OFFICE.

J. M. RANDLE, OF BRIGHTON, ILLINOIS, ASSIGNOR TO HIMSELF AND
J. W. HILL, OF SAME PLACE.

IMPROVED HORSE-POWER.

Specification forming part of Letters Patent No. 53,378, dated March 20, 1866.

To all whom it may concern:

Be it known that I, J. M. RANDLE, of Brighton, in the county of Macoupin and State of Illinois, have invented a new and useful Improvement in Horse-Powers for Hay-Derricks or other similar uses; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 of the annexed drawings is a perspective view of one of the improved horse-powers. Fig. 2 is a plan of the same. Fig. 3 is a transverse vertical section of the machine through its axis, and Fig. 4 is a sectional elevation of the clutch-post which forms the journal for the rim-wheel.

This invention consists in making a horse-power in such a manner that it can be unshipped by a man at some distance from it—for instance, on top of a load of hay in the case of a hay-derrick.

A is a foundation frame-work, upon which the other parts are erected. B is a vertical journal erected upon A, upon which the metallic hub C rests and around which it revolves.

C' is a horizontal wheel firmly attached to the hub C, and provided with a flange, c, around the lower edge of its periphery, to keep the draft-rope D from running off at the bottom.

E is a vertical post, in the lower end of which is a cylindrical cavity, with the threads of a female screw cut therein that fit the screw-threads e on the upper end of the journal B.

E' is a ring, with clutch-joints d on the lower end of it, that fit into the clutch-joints d' on the upper end of the hub C when all the parts are together and in operation. The clutch-ring E' is placed on the lower end of the post E in such a manner that it may receive a slight vertical motion sufficient to raise the clutches d out of the clutches d'.

The curved metallic arm E³, projecting from one side of the post E near its lower end, furnishes at x a fulcrum for the lever E², which is connected with the clutch-ring E' by means of two pins, x', that enter a groove made around the periphery of the clutch-ring, so that said ring may revolve around the post E without the pins x' stopping its rotary motion.

A cord, E⁴, is fastened to the lever E² near

its outer end, from which point of attachment it passes up in a diagonal direction to a mortise made for its passage through the top end of the post E, and from thence it passes on to the location of the operator, which, in the case of a hay-derrick, will be on top of the load of hay.

When the operator draws up the cord E⁴ it will raise the long arm of the lever E² high enough for the pins x' to elevate the ring E' sufficiently to allow the clutches d to become disconnected from the clutches d', thereby affording a very economical and effective shipping and unshipping arrangement for that class of horse-powers which are suitable for hay-derricks.

An iron arm, C², has an annular end which surrounds the upper end of the hub C, and there are clutch-openings d', similar to those in the upper end of the hub C, made in the upper part of this annular end.

When the clutches d are down they enter the clutches d' in both the lever C² and the hub C, and so couple all these parts together.

The motive power is to be attached to the outer end of the lever C³, the inner end of which is firmly secured to the arm C².

One end of the draft-rope D is firmly fastened to the periphery of the wheel C', from which point the other end is conducted out through the timber-head A', where it should pass over a sheave, (not shown,) and then be attached to the weight to be raised.

The machine, constructed as above described, and the horses attached to the outer end of the lever C³, when the team has turned the wheel C' far enough around to take up a sufficiency of the rope D to raise the weight (not shown) attached to its outer end to the required elevation, the operator will draw the cord E⁴, which will, as has been shown, disconnect the clutches d and d', and so stop the motion of the draft-rope D instantly, although the team may continue to advance.

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

The combination of the wheel C', arm C², lever C³, and journal B with the post E, clutch-ring E', lever E², and ropes D and E⁴, when constructed and arranged as and for the purpose set forth.

Witnesses:

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