D. Woodbury.

Horse Power.

No. 45,890. Patented Jan. 10, 1865.

Fig: 1.

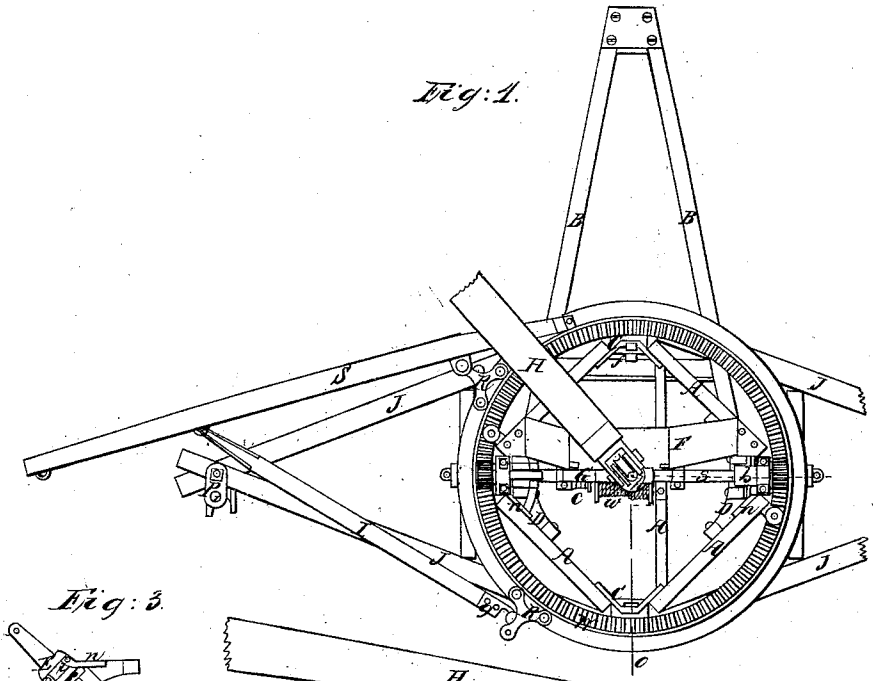


Fig: 3.

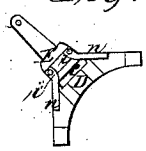
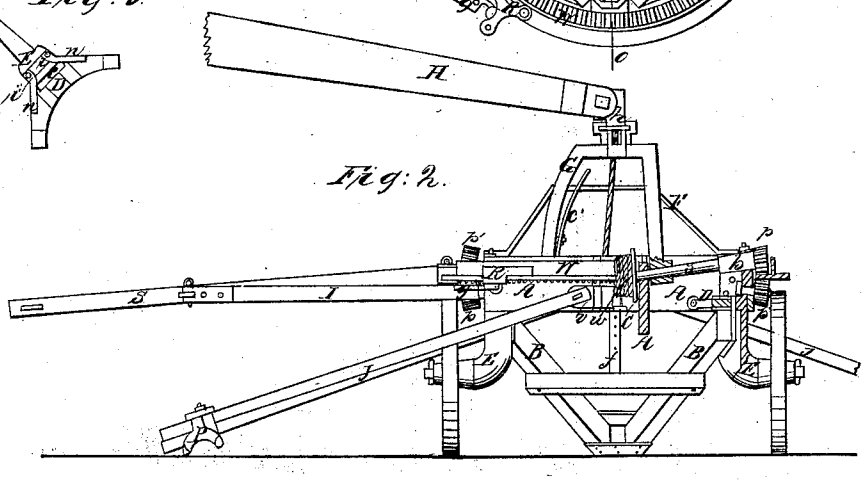


Fig: 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

DANIEL WOODBURY, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN DERRICKS AND HORSE-POWERS.

Specification forming part of Letters Patent No. **45,890**, dated January 10, 1865.

To all whom it may concern:

Be it known that I, D. WOODBURY, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Mounted Horse-Powers and Derricks; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan or top view of the machine. Fig. 2 is a rear elevation of the same, the right-hand portion (indicated by the red line *o* in Fig. 1) being broken away and showing a vertical section of those parts. Fig. 3 is a detached view of the angle-iron D, and showing its construction and relative arrangement with the joint-plate E, to which the wheels are attached.

Similar letters of reference indicate corresponding parts in each figure.

This invention relates more especially to my portable or mounted horse-power; and it consists in the application thereto of side stake-braces for the purpose of relieving the wheels from the lateral or twisting strains to which they have heretofore been subjected, and in the employment of angle or brace irons to the angles of the frame under the driving-shaft, which cause the frame to preserve its proper shape under any strain; also, in applying a windlass to the driving-shaft, and a vertical jack-frame having a pivoted head, to which may be attached the arm of a derrick, thereby constituting a portable horse-power and swinging or revolving derrick.

To enable others to work my invention, I will describe its construction and operation.

The several letters A in the drawings represent the frame-work of the power; B, the hounds to which the tongue is attached for transportation; C, the front and rear joint-irons; D, the angle-irons or braces for the side joints, to prevent the frame from being forced out of square by any unusual strain; E, the side joint-plates, which extend below the frame and terminate in the arms to which the wheels are applied.

F is a metal arch, *b*, which the jack G is held upright, being attached to it by bolts or otherwise.

H is a short section of a crane or derrick arm having a swivel-head, and, in connection with the jointed head *h* of the jack G, constitutes a universal joint.

I is the brace-bar of the sweep S, and is provided at the front end with a metallic hook, *g*, which is inserted in the eyelets made on the lower side of the sweep-bracket R, or the eyelet may be made on the under side of the rim of the wheel W. This allows each sweep to pass over the brace of the next rear sweep, and by connecting the brace to the bracket or to the wheel, instead of to the next sweep, each sweep and brace is entirely independent of all the others, and either pair may be removed at any time without disturbing the others, which could not be done with my former power. Any desired number of sweeps may be applied to the driving-wheel W.

The angle or joint irons C are both cast with a projecting lip, *v*, on each side, to which the brace-bars J are bolted or otherwise secured, and their lower ends cross, as seen in Figs. 1 and 2, and are firmly coupled together by the stake-irons P. The stake is driven into the earth through the eyelet, (seen in Fig. 1,) which holds the bars securely in position.

The windlass *w* is fitted loosely upon the shaft *s*, and is made to revolve with it by means of an ordinary feathered clutch-coupling, *c*, and lever *c'*, Fig. 1, the latter being held in position by notches in the edge of the arch-plate F, or otherwise.

The derrick arm or beam H may be extended to any desired length and supported at the outer end by suitable shears or truss, which may be mounted upon caster-wheels, and provided with a circular track, if necessary.

The liability of the wings *n* to burst off in consequence of the box *b* cramping between them, caused by the straining of the frame A out of square, is entirely obviated by making the face next the journal-box *b* circular, as seen at *i*, Fig. 3, as that only affords a line of bearing vertically between the wings and the box; or the box may have curved enlargements on each side, which is probably more desirable.

This horse-power may be used for driving machinery by removing the windlass *w* and substituting a band or a spur wheel; or said wheel may be keyed upon the shaft near one end of the rope-cylinder and remain permanently attached.

The shaft *s* may be arranged at right angles from its present position, if desired.

The jack-frame G may be attached so as to swing under the power if necessary.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. The employment of side braces, J, they being constructed, arranged, and applied to mounted powers substantially in the manner shown and described, and for the purpose set forth.

2. The peculiarly-constructed stake-iron P, in combination with the double brace-bars J, for the purpose of holding the stake when driven more securely in position.

3. Attaching the inner end of the sweep-brace I to the bracket R, or to the rim of the wheel W, as and for the purposes shown and described.

4. The combination and arrangement of the angle-iron D with the joint-plate E and the frame A of this class of horse-powers, as shown and described, and for the purpose specified.

5. Fitting the box *b* between the jaws or wings *n* of the joint-plate E, so as to have but a line of bearing vertically between the parts, as and for the purpose specified.

6. The combination and arrangement of the rope-spool or windlass and the jack G, constructed, as shown and described, with the mounted power, as and for the purposes herein set forth.

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