

J. D. HARNER & C. A. FARGO.  
Horse-Powers.

No. 154,604.

Patented Sept. 1, 1874.

Fig. 1.

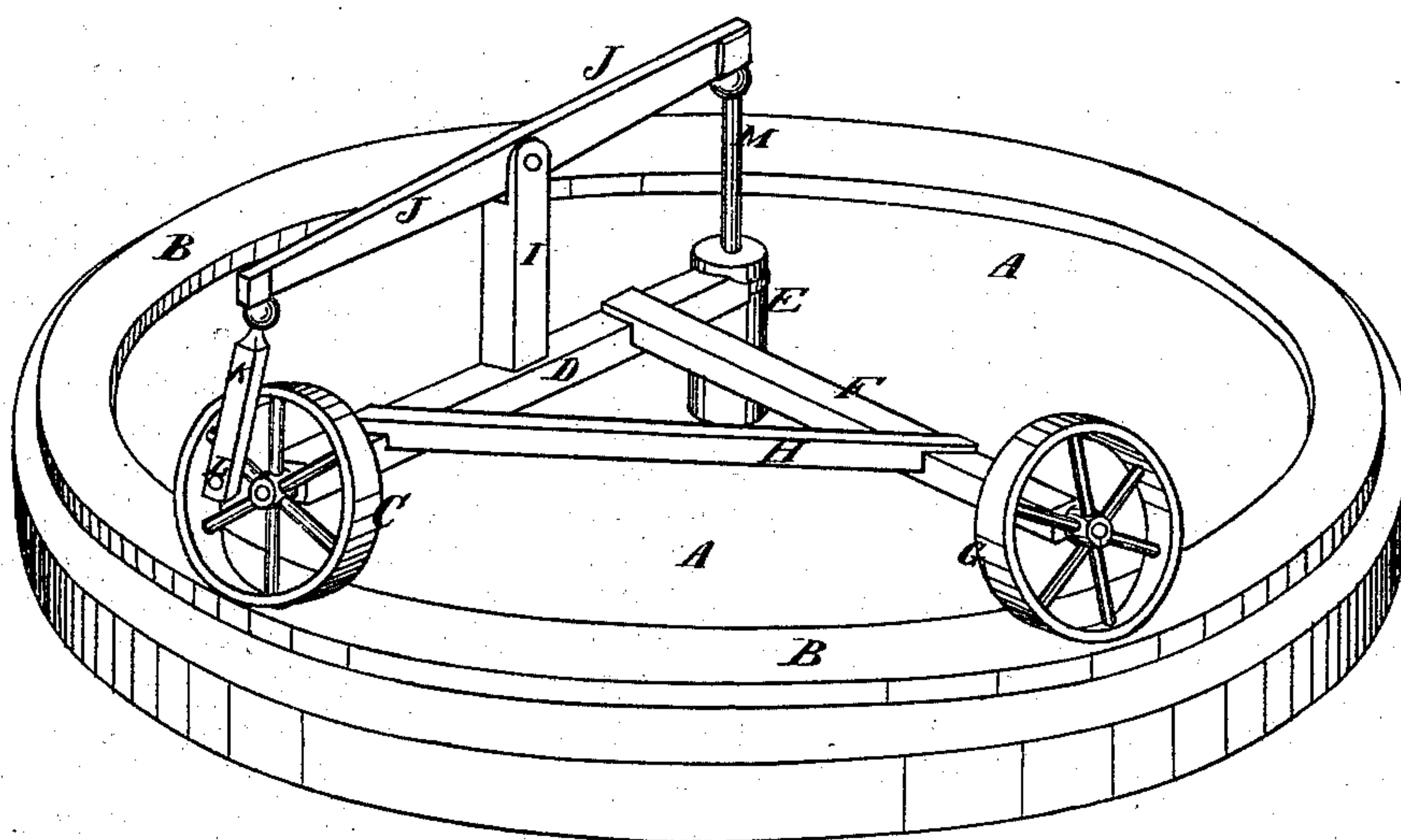
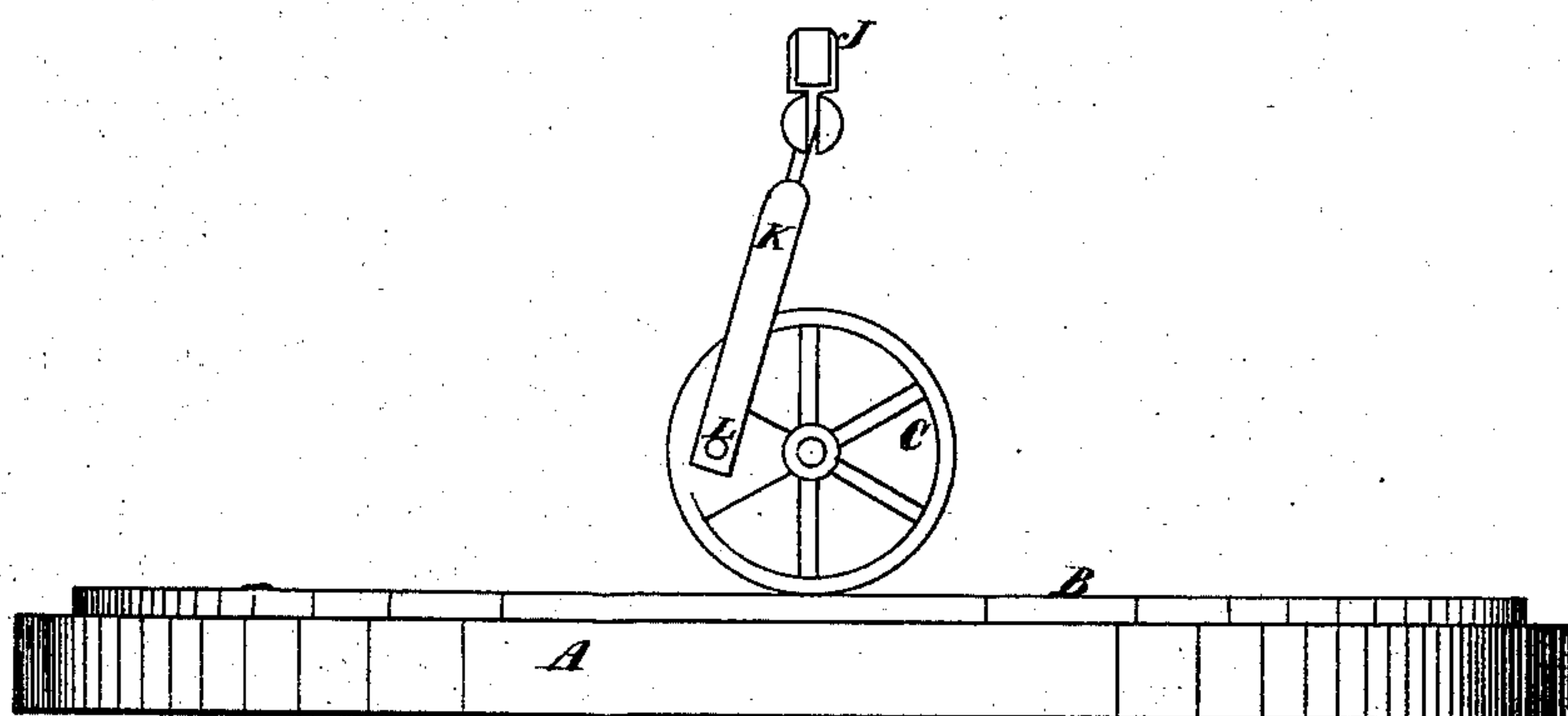


Fig. 2.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

JOHN D. HARNER, OF SAN FRANCISCO, AND CORYDON A. FARGO, OF STOCKTON, CAL.; SAID HARNER ASSIGNOR TO SAID FARGO.

## IMPROVEMENT IN HORSE-POWERS.

Specification forming part of Letters Patent No. **154,604**, dated September 1, 1874; application filed May 23, 1874.

*To all whom it may concern:*

Be it known that we, JOHN D. HARNER, of San Francisco, in the county of San Francisco, and CORYDON A. FARGO, of Stockton, in the county of San Joaquin, both of the State of California, have invented an Improved Horse-Power, chiefly adapted to the pumping of water; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters marked thereon.

Our invention relates to a combined horse-power and pumping apparatus; and it consists of two arms standing at an angle with each other, and so mounted as to move in a horizontal plane around a central post or well.

A wheel is mounted at the outer end of each of the arms, and these wheels run upon the track constructed for them. Upon one of the arms a post is set, and a lever-arm is pivoted to the top of this post, so as to extend along above the arm. A connecting-rod extends from the end of this lever to a crank-pin upon the wheel, and this produces an oscillatory motion of the lever-arms, which has a pitman connecting its inner end with the pump-rod.

Referring to the accompanying drawings for a more complete explanation of our invention, Figure 1 is a perspective view of our device. Fig. 2 is a side view of the crank-wheel.

A is a base or track, around which the horses travel, and upon its outer edge is a rim, B, for the wheels to travel upon. If found necessary or preferable, this rim may be provided with teeth, and the driving-wheel C would, in this case, be toothed also; but for ordinary work the friction of a heavy wheel will prove sufficient. The wheel C is mounted upon an axle at the end of the arm or timber D, which is fitted to move around a central post, E. In the present case this post stands directly over the well-opening. An arm, F, is mortised into the arm D, and ex-

tends at right angles to the arm D, having also a supporting-wheel, G, at its outer end, which also travels in nearly or quite the same circle in which the wheel C travels. By this arrangement a frame is formed having three points of support, and consequently very steady. The two arms may have a brace, H, between them, if necessary. Upon the arm D a post, I, is mounted midway of its length, and a lever-arm or beam, J, is suspended at the top of this post. A rod, K, is attached to the outer end of this arm by a rolling-joint to give it some play, and this rod connects with a crank-pin, L, upon the wheel C. The opposite end of the lever J is connected by a pitman, M, with the pump-rod.

It will be seen that when horses are attached to the arm D and driven around, the wheel C will be caused to turn, and through its connecting-rod K and lever J the pump will be operated.

If it be inconvenient to have the well in the center of the circle, another lever could be attached to the first one, J, and carried over a fulcrum to some point outside the circle where the well might be situated.

We are aware of the patent of Thos. D. Burke, No. 14,750, April 22, 1856, and do not claim the features shown therein.

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

The combination of the central post E, the circular track A, the traveling frame D F H, the traveling wheel C, with pitman K, lever J, and pitman M, the traveling frame carrying the levers and pitmen being adapted to revolve about the central post, as and for the purpose described.

In witness whereof we have hereunto set our hands and seals.

JOHN D. HARNER. [L. S.]  
CORYDON A. FARGO. [L. S.]

Witnesses:

C. W. M. SMITH,  
JOHN OWENS.