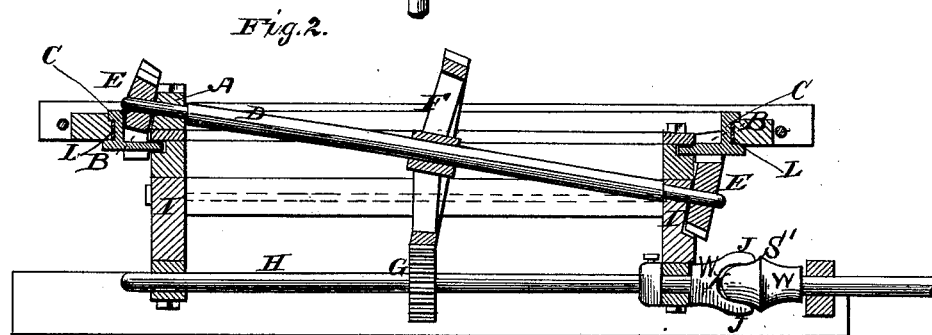
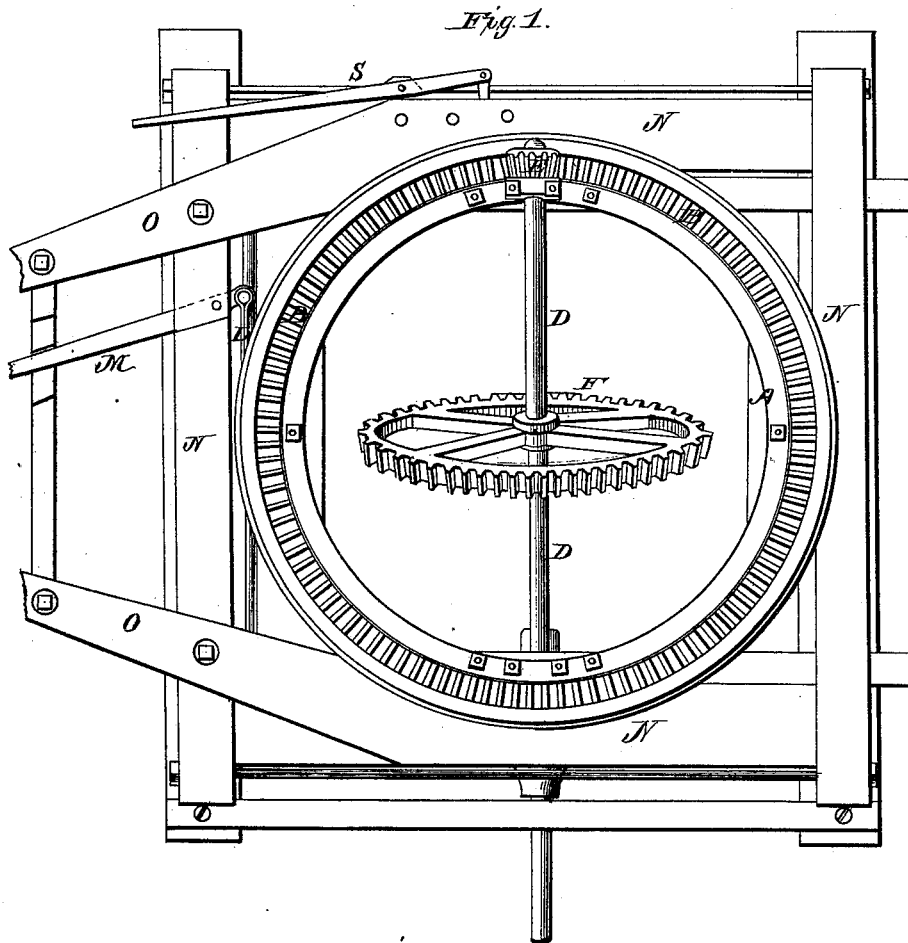


P. K. DEDERICK.  
Horse-Power.

No. 213,742.

Patented April 1, 1879.



Witnesses:  
Frank L. Outland  
Frank McKenny.

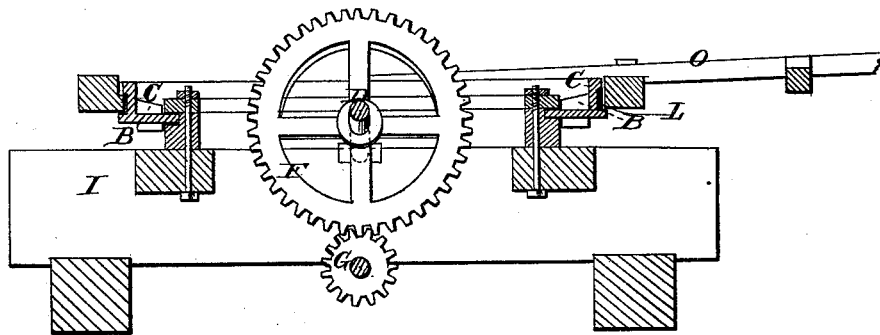
Inventor:  
Peter K. Dederick  
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His atty.

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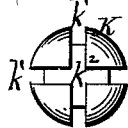
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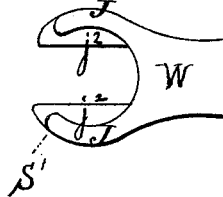
*Fig. 3.*



*Fig. 5.*



*Fig. 4.*



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*Frank L. Curand.*  
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*Inventor:*  
*Peter K. Dederick*  
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*His Atty*

# UNITED-STATES PATENT OFFICE.

PETER K. DEDERICK, OF ALBANY, NEW YORK.

## IMPROVEMENT IN HORSE-POWERS.

Specification forming part of Letters Patent No. **213,742**, dated April 1, 1879; application filed July 27, 1877.

*To all whom it may concern:*

Be it known that I, PETER K. DEDERICK, of Albany, in the county of Albany, State of New York, have invented new and useful Improvements in Horse-Powers, which improvements are fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a plan or top view. Fig. 2 is a sectional elevation in line of the shafting of the power. Fig. 3 is a cross-sectional elevation. Figs. 4 and 5 are detached sections.

This horse-power is particularly adapted and designed to drive my patented hay-press, but could also be readily adapted to thrashing, sawing wood, &c.

In Fig. 1, A is a stationary rim or circle, firmly secured to a frame, I, Figs. 2 and 3, and forming a hollow journal or bearing for the drive-wheel B. The drive-wheel B is provided with teeth or cogs on both faces. D is a shaft passing diagonally through both the drive-wheel B and hollow journal or circle A, and having its bearings on A.

E E are pinions located on the shaft D, and having teeth to correspond with the teeth on the wheel B, one connecting with each face of the wheel. F is another spur-wheel, also located on the shaft D, and connecting with the pinion G on the shaft H. Said shaft H has its bearings on the bottom of the frame I, and is provided with couplings J J and K, to connect it to the tumbling rod or rods connecting with the press or other machine to be operated.

The drive-wheel B is provided with a flange, C, Fig. 2, surrounded with a strap, L, which is secured at one end to the frame N, and the other end attached to the hand-lever M.

There is also a bolt and lever, S, provided for permanently securing the strap and frame to the wheel.

The sweeps or horse-levers O are also attached and secured to the frame N.

S' is the coupling, consisting of the forked blocks W W and ball K, the latter having two circumferential grooves,  $k^1$   $k^1$ , at right angles to each other, and concentric with the neck  $k^2$ . The blocks W W are formed with jaws J J, having inner longitudinal feather-flanges  $j^2$ , whose proximate faces are substantially parallel to each other. The flanges of the jaws enter the grooves of the ball from opposite sides, but are not locked thereto longitudinally. The jaws move around the ball,

and the feather-flanges constitute the means by which the blocks on the driving-rod H rotate the ball, and the latter rotates the outer block.

The object of this construction is to prevent the coupling from binding or twisting by a longitudinal pull on the tumbling-rod, because when this occurs the blocks will pull away from the ball, and the feather-flanges drop out of their grooves. In other words, the coupling will "render" and fall apart before it will bind.

In operation, the power is applied to the horse-levers O, and the friction-strap L (through means of the lever M) is drawn up just enough to slowly start the power, while the horses move steadily along, the strap slipping until the power is in full motion, when the lever M may be secured so as to do the work, or the bolts may be used to lock the strap and frame to the wheel.

The drive-wheel B, revolving with the frame N, communicates motion to the pinions E and shaft D and spur-wheel F, which, in turn, drives the pinion G and shaft H at increased velocity, and the motion is communicated to the work through the couplings J J K.

Having thus fully described my invention, I claim—

1. The combination of the driving friction-strap L with the peripheral flange C of the drive-wheel and the frame of the horse-lever or sweeps, substantially as described, for the purpose specified.

2. The combination of the locking-lever M with the frame of the horse-lever or sweeps, and the peripheral friction-strap L, to adjust the frictional connection between such strap and the wheel-flange C, for the purpose of locking the frame N to the wheel or releasing it therefrom, substantially as set forth.

3. In connection with a horse-power, the coupling S', consisting of the ball K, having grooves  $k^1$  at right angles to each other, and the forked blocks W W, having jaws J J, provided with feather-flanges  $j^2$ , which enter the grooves in the ball, whereby they are held laterally, but allowed to slip longitudinally, substantially as described, for the purpose specified.

P. K. DEDERICK.

Witnesses:

R. J. VAN SCHOONHOVEN,  
C. R. DEDERICK.