

M. Davenport,
Horse Power.

2 Sheets. Sheet 1.

N^o 2,239.

Patented Sep. 4, 1841.

Fig: 3.

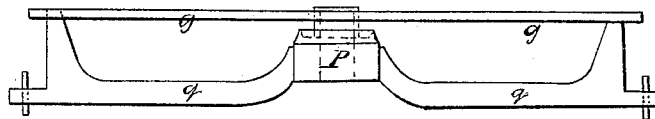


Fig: 2

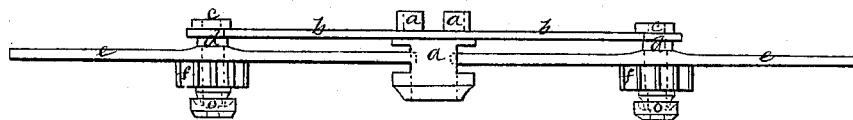
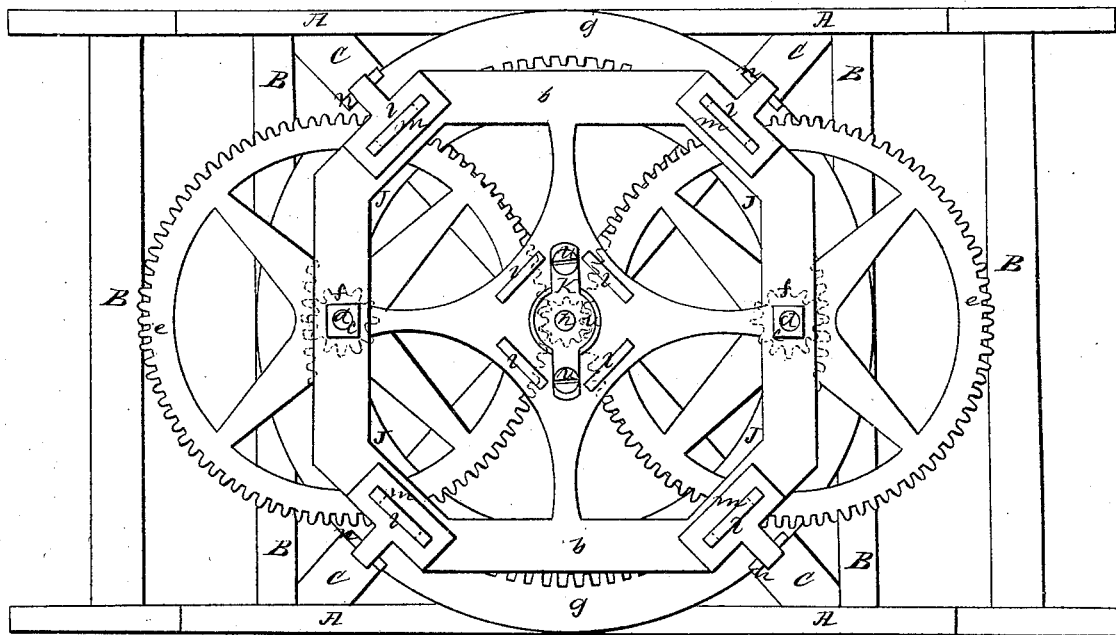


Fig: I



M. Davenport, 2 Sheets. Sheet 2.

Horse Power.

N^o 2,239.

Patented Sept. 4, 1841.

Fig: 4.

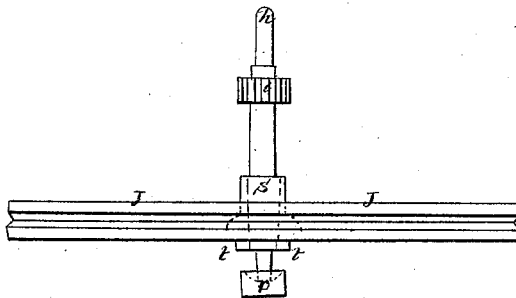
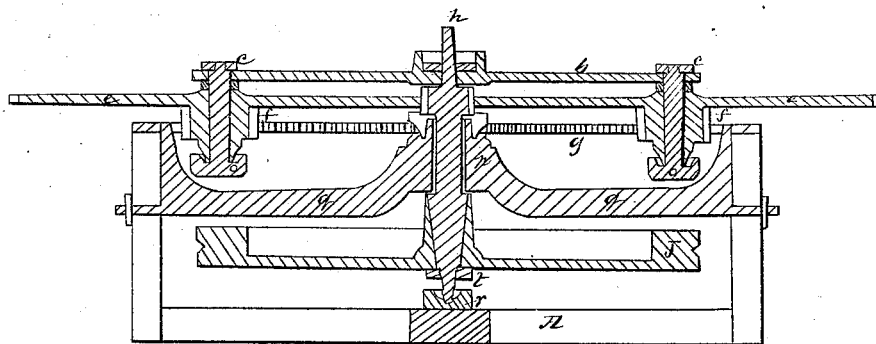


Fig: 5.



UNITED STATES PATENT OFFICE.

MOSES DAVENPORT, OF PITTSBURGH, PENNSYLVANIA.

HORSE-POWER FOR DRIVING MACHINERY.

Specification of Letters Patent No. 2,239, dated September 4, 1841.

To all whom it may concern:

Be it known that I, MOSES DAVENPORT, of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Machines for Propelling Machinery, called "Davenport Improved Horse-Power," which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a top or bird's-eye view of the machine. Fig. 2 is a side elevation of a part of the running gear or driving wheels. Fig. 3 side elevation of the stationary wheel or circular rim with inverted cogs and its cross bar or brace in the center of which is formed a circular channel or oil cup. Fig. 4 side elevation of the band pulley, pinion and shaft the lower end of the latter turning in an oil box. Fig. 5 is a vertical section.

Similar letters refer to corresponding parts in the several figures of the drawing.

The frame or foundation of this machine is composed of two large parallel side timbers A A resting upon the ground and connected together by parallel cross timbers B B B B and two diagonal braces C C. At the intersection of the diagonal braces is secured the oil box R which is placed at the center of the machine. On the top of the frame is fastened the stationary circular plate *g* with inverted cogs, in a horizontal position, with its center directly over the center of the oil box R. This wheel or plate *g* is a circular rim with cogs on its inner circumference pointing toward the center. Across the opening of this circular plate *g* at the diameter thereof is an arm or brace *q* secured to it at its ends, which are turned up at right angles, tenoned and passed through said rim and secured by riveting or in any convenient manner. At the angles of this arm or cross brace are flanges which are passed through mortises in the sides of the large parallel timbers of the frame and secured therein by pins or otherwise. In the center of this arm *q* is a limb or support P through a circular opening in which the vertical shaft H passes and in which it turns and around which, in the solid part of said limb, is formed a circular channel to hold oil and in which channel the lower end of a hollow cylinder *d*, secured to the under side of the revolving plate or sweep frame hereafter described, turns and which supports the weight of this frame and

the sweeps and driving gear attached thereto. The band wheel, center pinion and main shaft are connected and revolve together in the same direction. The sweep frame revolves in the same direction on the main shaft, but is not connected with it. The pinions and driving wheels are connected to and revolve with the sweep frame, but in contrary directions to the direction of the main shaft.

The vertical or main shaft H on which the pinion *i* and band wheel J are fixed, revolves in the oil box R before mentioned. The band wheel is secured to the shaft H: it passes through a hub in the center of the wheel and has a nut T screwed on the shaft below the said hub which forces it upwards against the underside of the hub P of the arm or cross brace *q* of the stationary wheel *g*. This shaft H is secured to the sweep plate *b* by a pin or key passed horizontally through the shafts H above the plate K placed over the pinion the said key or pin resting upon the plate K of the plate *b* which plate K is fastened to the sweep plate *b* by screws *u* by which it can be raised or lowered at pleasure in order to raise or lower the band wheel. By this arrangement the band wheel J and sweep plate *b* with the driving gear are secured together and prevented from becoming deranged or getting out of gear by raising or falling: and in such manner that they may be regulated vertically at pleasure by means of the aforesaid screws *u*.

The revolving open frame or sweep plate *b* has four arms V inside gradually enlarging as they approach the center where it is made solid except a circular aperture for the vertical shaft H to pass through and turn in. On the upper side of this plate or sweep frame B are fastened staples or loops *l* to receive the sweeps or levers secured therein, &c., by which the horses propel the machine. Four boxes are secured to the sides of the revolving sweep frame in which turn friction rollers N upon the upper side of the stationary cogged plate *g* which serve to steady the revolving sweep frame *b* and keep it in a horizontal position. In one side of this revolving sweep frame *b* is fixed a hanging stud or pin on which a pinion F and driving cog wheel *e* connected together, turn—being kept on said pin by a circular nut or head *o* formed into an oil cup on the upper side, and screwed on the lower end of

said stud; and in which oil cup the lower end of the hub of the pinion F turns being shaped circular for that purpose as the sweep plate is moved round the pinion F meshes into the teeth of the stationary rim *g* which causes the driving wheel *e* to turn, and this wheel *e* meshing into the pinion *i* on the shaft H causes said shaft to turn with increased velocity and with it the band wheel J from which the band leads to the machinery to be propelled—the cylinder *a* surrounding the pinion *i* on the shaft H being left open on the side next the driving wheel *e* to admit the edge of said driving wheel and permit its teeth to reach the pinion *i* turning in said open cylinder and mesh into the same. On the opposite side of said revolving plate or frame *g* is placed another pinion F and driving cog wheel E which work in the same manner as those just described—designed for steadying the motion of the other wheels and thereby reducing the

friction caused by the contact of the teeth of the wheels and pinions. All the wheels, pinions and pulleys revolve simultaneously 25 in the manner of sun and planet wheels.

What I claim as my invention and which I desire to secure by Letters Patent is—

1. The employment of the hollow cylinder *a* attached to the sweep plate *b* having openings through which the driving wheels E E communicate motion to the pinion *i* working within it, for the purpose and in the manner specified.

2. And I also claim the support P (having a channel for the reception of oil into which works the lower part of the hollow cylinder) in combination with the hollow cylinder *a* for the purpose and in the manner specified.

MOSES DAVENPORT.

Witnesses:

B. K. MORCELE,
CHARLES BELL.