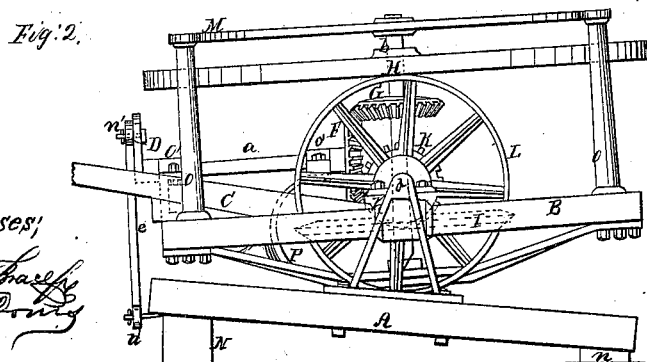
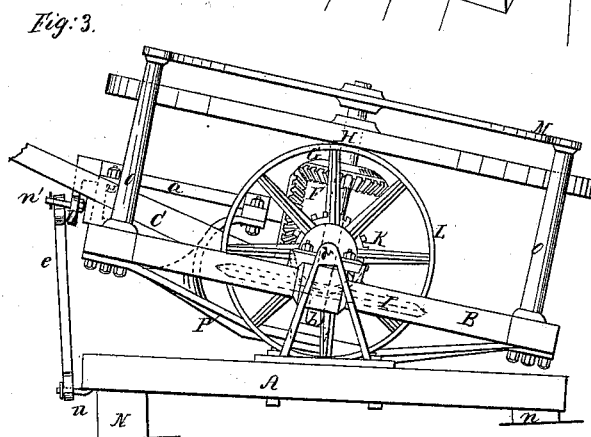
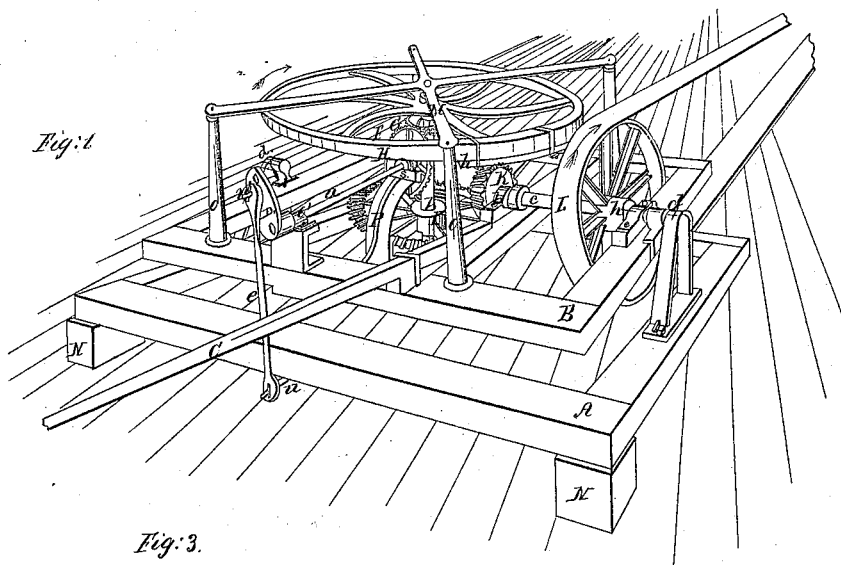


J. H. Haven,

Horse Power.

N^o 52,287.

Patented Jan. 30, 1866.



Witnesses;

*Albert Thayer
P. V. Dwyer*

Inventor;

J. H. Haven

UNITED STATES PATENT OFFICE.

JONATHAN H. HAVEN, OF LEWISTON, NEW YORK.

IMPROVEMENT IN MOTIVE POWERS.

Specification forming part of Letters Patent No. 52,287, dated January 30, 1866.

To all whom it may concern:

Be it known that I, JONATHAN H. HAVEN, of the town of Lewiston, county of Niagara, and State of New York, have invented a new and Improved Motive Power; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my improved motive power. Fig. 2 is a side elevation, showing the crank up and the frame at the lowest point of oscillation. Fig. 3 is also a side elevation of the same, showing the crank down and the frame at its highest point of elevation.

The nature of my invention consists in the employment of a large wheel, to which a weight is attached at a certain point of its periphery and at such a point of the oscillation of the frame that the weight will be at the highest point in its revolution while the frame on the same side is at its highest point of oscillation, so that, if in this position the wheel be started, the weight will descend and continue to descend five-sixths of the whole of the circumference of the wheel, and then, after having passed the half-center opposite the point from which it started, by the oscillating movement of the frame, it is carried forward to the point above mentioned.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Letters of like name and kind refer to like parts in the drawings.

A is a rectangular frame, made of wood or metal, the front side of which is raised according to the length of the crank—say five inches (more or less) from a level—and which rests on blocks N n.

B is a supplementary rectangular frame, which I usually make of wood, and to which is attached the gearing. This frame is made to oscillate on bearings d d, which are secured to the main frame A.

OOO are posts or pillars, upon which rests the cross-frame M, which serves as a bearing or guide for the upper end of the upright shaft b, to which is secured the bevel-gear wheel G, which is driven by the bevel-gear wheel F, which is secured to the horizontal shaft a, to which is secured the crank D. This shaft a runs in suitable bearings o' o'.

e is a pitman or connecting-rod, with a stationary bearing at u, said bearing being rigidly secured to the main frame A, while the upper end of the pitman connects with the crank-pin n.

K is a bevel-gear wheel or pinion, which is driven by the horizontal bevel-wheel I. The pinion K is secured to the horizontal shaft C, which runs in suitable bearings h h, and upon which is the band-wheel L, from which the power is transmitted to the required machinery to be operated.

N n are blocks upon which the frame A stands.

C is a lever to which the power is applied, and by which the machine is worked.

P is a brace of iron rigidly secured to the oscillating frame B, which serves also as a bearing for the upright shaft b.

The operation consists in attaching any of the motive powers to the lever C, or it may be worked by hand in a vertical direction, (where the resistance is not too great,) which causes the supplementary frame B to oscillate, and, by the lower end of the pitman or connecting-rod being stationary, (only working on the bearing u, which is rigidly secured to the main frame A,) this oscillating movement produces a revolving motion to the shaft a by means of the crank D, through which means a rotary motion is given or imparted to the fly-wheel H through the medium of the bevel-gear wheels F and G; and from the gear-wheel I, which is secured to the upright shaft b, upon which is the fly-wheel H, a revolving motion is imparted to the horizontal shaft C, upon which is a band-wheel, L, from which the power of the machine is applied to the machinery.

It will be observed, in operating my improved machine, that when the supplementary frame B is at the point of oscillation that brings the end of said frame to its highest point the crank is at the lower center, which brings or throws the bearing and crank-pin out of line with each other, as seen in Fig. 3. This may be remedied by making a knuckle-joint in the pitman.

It will also be observed that one side of the main frame is raised some five inches, or the same height that the crank is long. The object of this is that when the frame B is at its highest point of oscillation on the side of which the lever C is attached the weight on the fly-wheel is placed at about thirteen degrees from

or past the lever in the direction of the arrows. At this point the weight is ten inches higher than at the opposite side, or at one hundred and eighty degrees. Then, by starting the weight, it descends, and by its momentum and the oscillating of the frame B the weight is carried around to within one-sixteenth of the whole circumference of the fly-wheel, when it remains in nearly the same position as before it started—that is, the weight raised to nearly the standing-point.

By working the lever vertically it oscillates the frame B, and the pitman, being made fast in the bearing *u*, causes the crank to rotate, which communicates motion through all of the gears, as before described.

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

1. The oscillating frame B, with the connecting-rod *e*, and supporting-frame A, and lever C, constructed and operating substantially and for the purposes herein set forth.

2. The weighted fly-wheel H, when used in combination with the above-described oscillating frame, having the gearing and band-wheel L, constructed and arranged to operate as and for the purposes and substantially as described.

J. H. HAVEN.

Witnesses:

ALBERT TROUL,
P. W. DORRIS.