M. C. Mix,

Horse Power.

No. 802. Patented June 23, 1838.

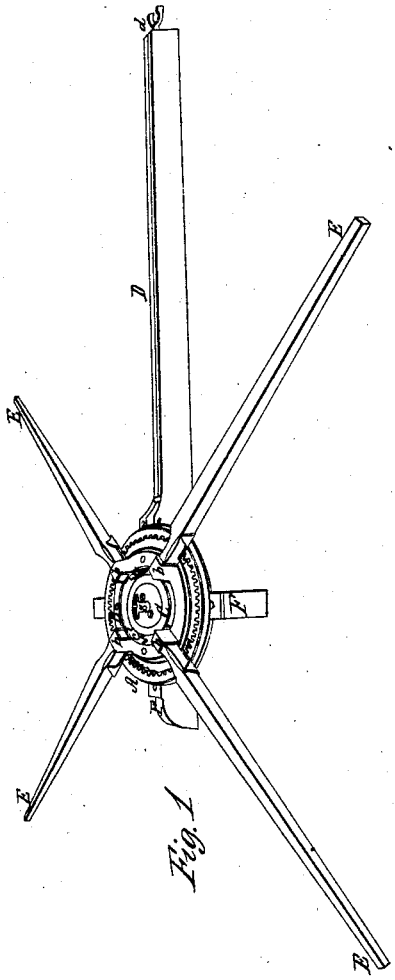

Fig. 1

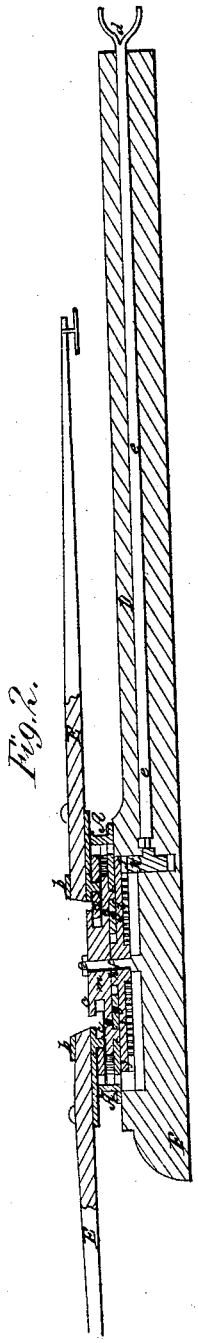

Fig. 2.

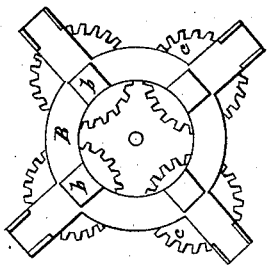

Fig. 6

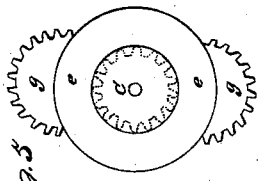

Fig. 5

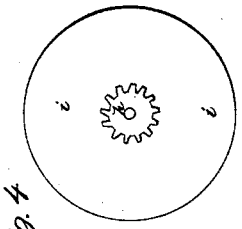

Fig. 4

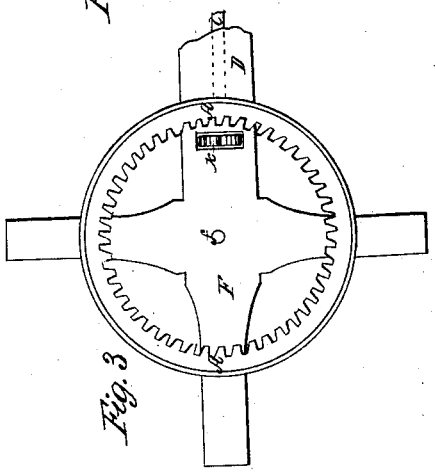

Fig. 3

Witnesses;
Alfred Mills
Benj. G. Ferris

Inventor;
Miles C. Mix

UNITED STATES PATENT OFFICE.

MILES C. MIX, OF DANBY, NEW YORK.

THE HORSE-POWER FOR DRIVING MACHINERY.

Specification of Letters Patent No. 802, dated June 23, 1838.

To all whom it may concern:

Be it known that I, MILES C. MIX, of Danby, in the county of Tompkins and State of New York, have invented an Improvement in the Manner of Arranging and Combining the Wheel and Pinion Gearing of Horse-Powers, by which the stability of the instrument is increased and the requisite speed of the line or horizontal shaft is conveniently attained.

This machine is to be operated upon by horses attached to levers, the inner ends of which pass into loops, or saddles, on the upper side of a revolving ring; this ring has on its lower side, three or four pinions which revolve on gudgeons, or pivots attached to it, surrounding these pinions there is a stationary ring or wheel, made fast to the permanent bed of the machine, and having teeth on the inside of its rim. The pinions on the revolving ring gear into the teeth of this wheel, and also into a center pinion, made fast to a plate of metal below the revolving ring, which plate of metal also revolves freely upon a round pin, or gudgeon, rising vertically from the frame work of the machine. Upon the under side of the last mentioned plate there are two pinions revolving on center pins attached to it and gearing, like those on the revolving ring, into the teeth of the stationary wheel, which is made deep enough for that purpose. These two last pinions gear also into a pinion made fast to another metallic plate below them, and which revolves freely on the pin or gudgeon upon which the superior plate revolves. The periphery of this lower plate constitutes, or carries a bevel, or crown wheel, which takes into a pinion on the line shaft, to which it communicates a rapid motion.

Figure 1, in the accompanying drawing is a perspective view of the machine, Fig. 2 a section across the center thereof, and Figs. 3, 4, 5 and 6 are the parts shown separately.

Where corresponding parts are shown the same letters of reference are used.

A, is a stationary wheel, with the teeth on the inside of its rim.

B, is the revolving rings having the saddles, or staples, *b*, *b*, on its upper side, to receive the levers E, E; and on its lower side the pinions, *c*, *c*, which gear into the wheel A, and into a center pinion, *m*, immediately under the plate C, and attached to the upper revolving plate *e*, *e*, Figs. 2 and 5.

f, is the pin, or gudgeon, rising from the bed, or frame F, of the machine.

g, *g*, are the two pinions upon the under side of the plate *e*, *e*, gearing into the wheel A, and into a pinion *h*, on the lower plate *i*, *i*. The periphery of this plate *j*, *j*, constitutes a bevel, or crown wheel, which drives the pinion *k*, on the line shaft *l*, *l*, passing through the casing D, and terminating at *d*, in a universal joint, or other convenient appendage.

I am aware that gearing to a certain extent like that above described has been employed in horse power, and other machines; but I have extended this gearing by the addition of the pinions on the lower side of the upper plate, and the consequent addition of the lower plate, with the pinion thereon, into which the two or more, pinions on the lower side of the upper plate gears.

It is to this combination of the lower plate with its gearing as described, acting in conjunction with the gearing above the upper plate, that I lay claim; but I do not claim the gearing above the upper plate, taken alone, as of my invention.

MILES C. MIX.

Witnesses:

W. P. BURDICK,

MARTIN RICH.