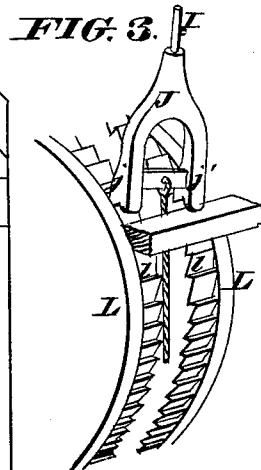
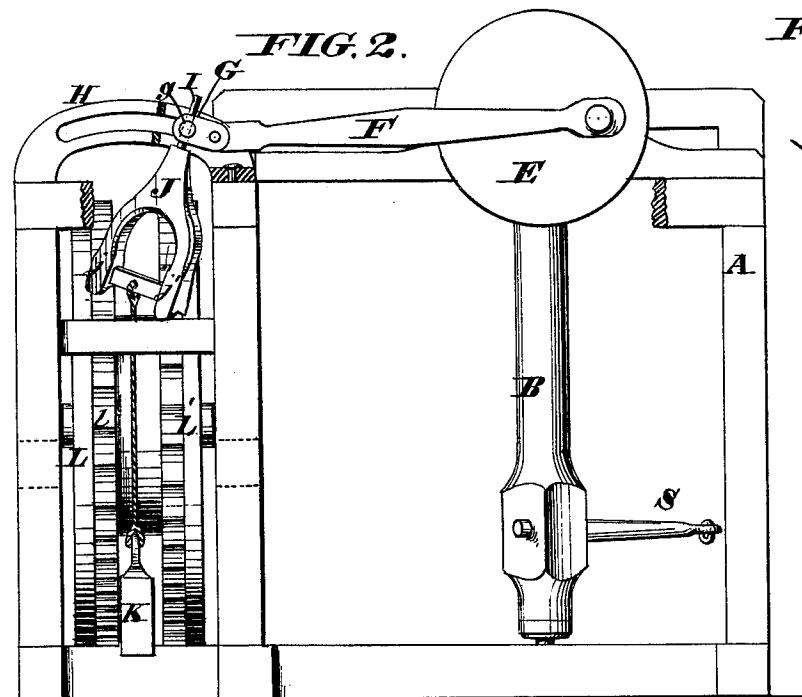
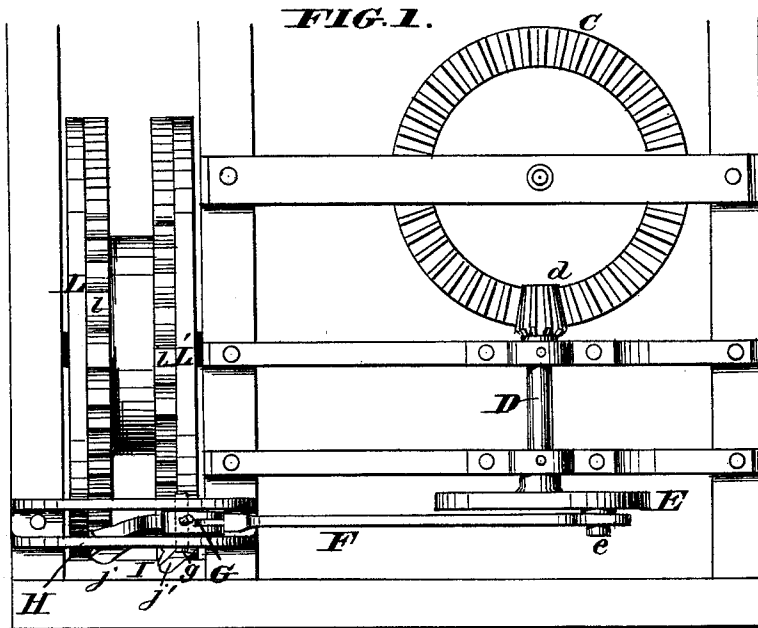


H. K. ANDREWS.

HORSE-POWER.

No. 176,259.

Patented April 18, 1876.



WITNESSES

Chas. G. Goch
L. B. Blond. Burdett

INVENTOR

H. K. Andrews
By Knight & Sons Attorneys

UNITED STATES PATENT OFFICE.

HENRY K. ANDREWS, OF DECATUR, TEXAS.

IMPROVEMENT IN HORSE-POWERS.

Specification forming part of Letters Patent No. **176,259**, dated April 18, 1876; application filed January 27, 1876.

To all whom it may concern:

Be it known that I, HENRY KALEB ANDREWS, of Decatur, in the county of Wise and State of Texas, have invented certain new and useful Improvements in Horse-Powers, of which the following is a specification:

My invention consists in constructing a horse-power with a master-wheel, communicating, through a pinion, crank, and pitman, with an oscillating weighted tappet, adapted to communicate a rotation to a duplex ratchet-wheel, as hereinafter described.

In the accompanying drawing, Figure 1 is a plan or top view of my improved horse-power. Fig. 2 is a front elevation of the same. Fig. 3 is a perspective view of the oscillating tappet, and a portion of the duplex ratchet-wheel on which it operates.

A represents a stationary frame, supporting a vertical shaft, B, which is provided with a sweep, S, for the attachment of the team, and carries at its upper end a master-wheel, C, beveled in customary manner, and driving a beveled pinion, *d*, which is keyed to a shaft, D, carrying at the outer end a crank-wheel, E, to the wrist *e* of which is applied a pitman, F, which is pivoted at its other end to a box, G, sliding in segment-guides H. The box G is formed with horizontal lugs or gudgeons *g*, to work in the guides H, with an aperture to receive a pin, I, projecting upward from the top of a tappet, J, to which is attached a weight, K. L L' are a pair of ratchet-wheels, with their teeth *l l'* alternately arranged—that is to say, with the teeth of one wheel opposite

the intervals between the teeth of the other wheel. The tappet J is formed with teeth *j j'*, adapted to engage with the teeth *l l'* of the wheels L and L'.

Operation: From the above description it will be understood that when the master-wheel C is rotated by the team, the motion will be communicated, through the pinion-shaft D, crank-wheel E, and pitman F, to the upper end of the tappet J, so as to impart an oscillating motion thereto. Its alternate sides are drawn up over the teeth *l l'* of the wheels L L', and the tooth *j*, as it reaches the uppermost position, engages with a tooth on the wheel L, while the other tooth, *j'*, rises with the reverse motion of the tappet, so as to climb on the teeth *l'*, and vice versa. The effect of this motion is to cause the weight K to act constantly on the double ratchet-wheel L L', and impart a continuous rotation thereto, the motion being communicated by a band, pulley, or crank, in any customary manner, to any machinery which it is desired to drive.

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

A horse-power constructed, substantially as herein set forth, with a tappet oscillated by the power of the team, and weighted, so as to communicate rotation to a driving-wheel, as explained.

H. K. ANDREWS.

Witnesses:

THOS. R. ALLEN,
W. H. BULLOCK.