

Fraser & Thomas,

Horse Power.

No. 98,947.

Patented Jan. 18. 1870.

Fig. 1

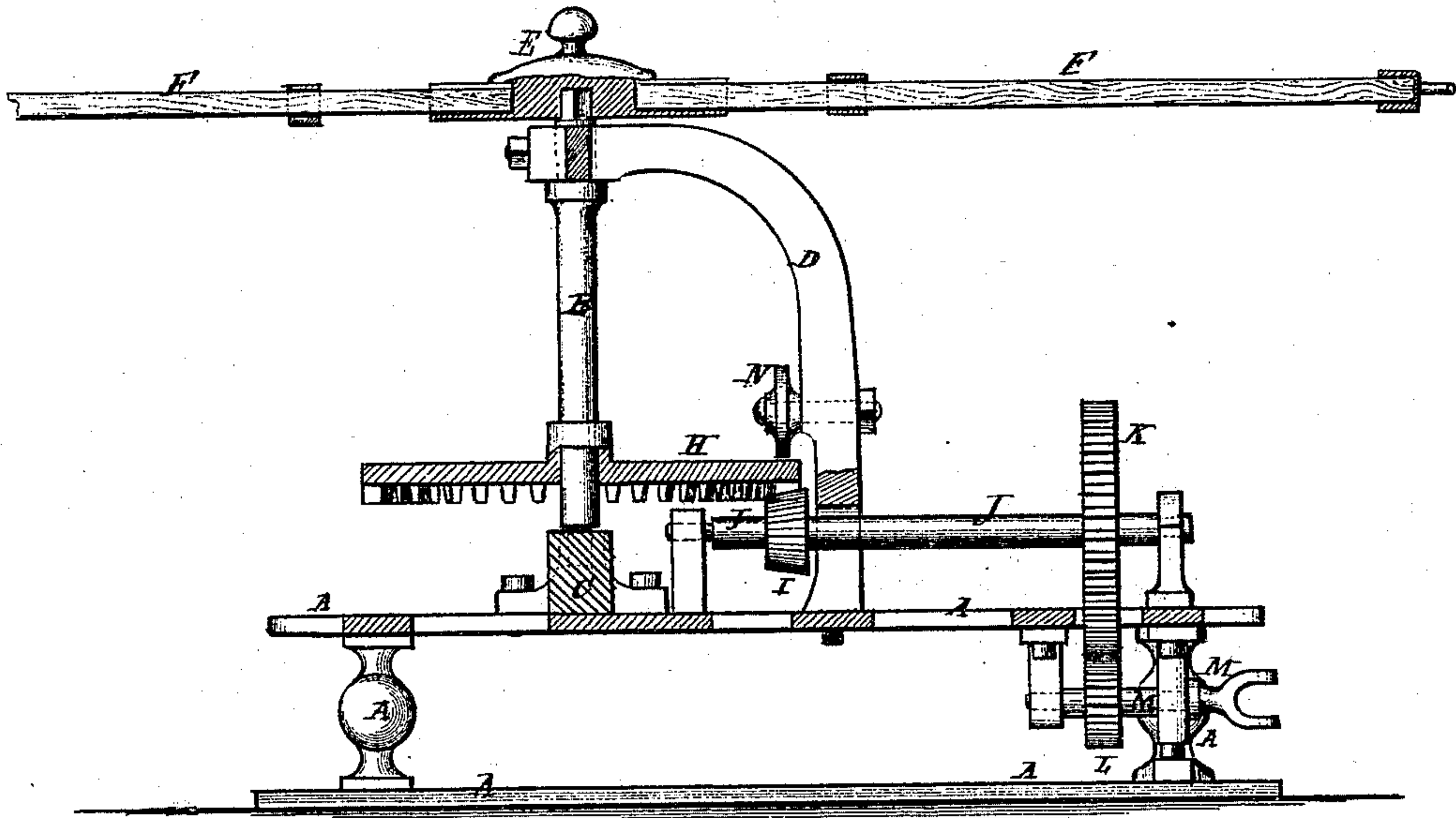
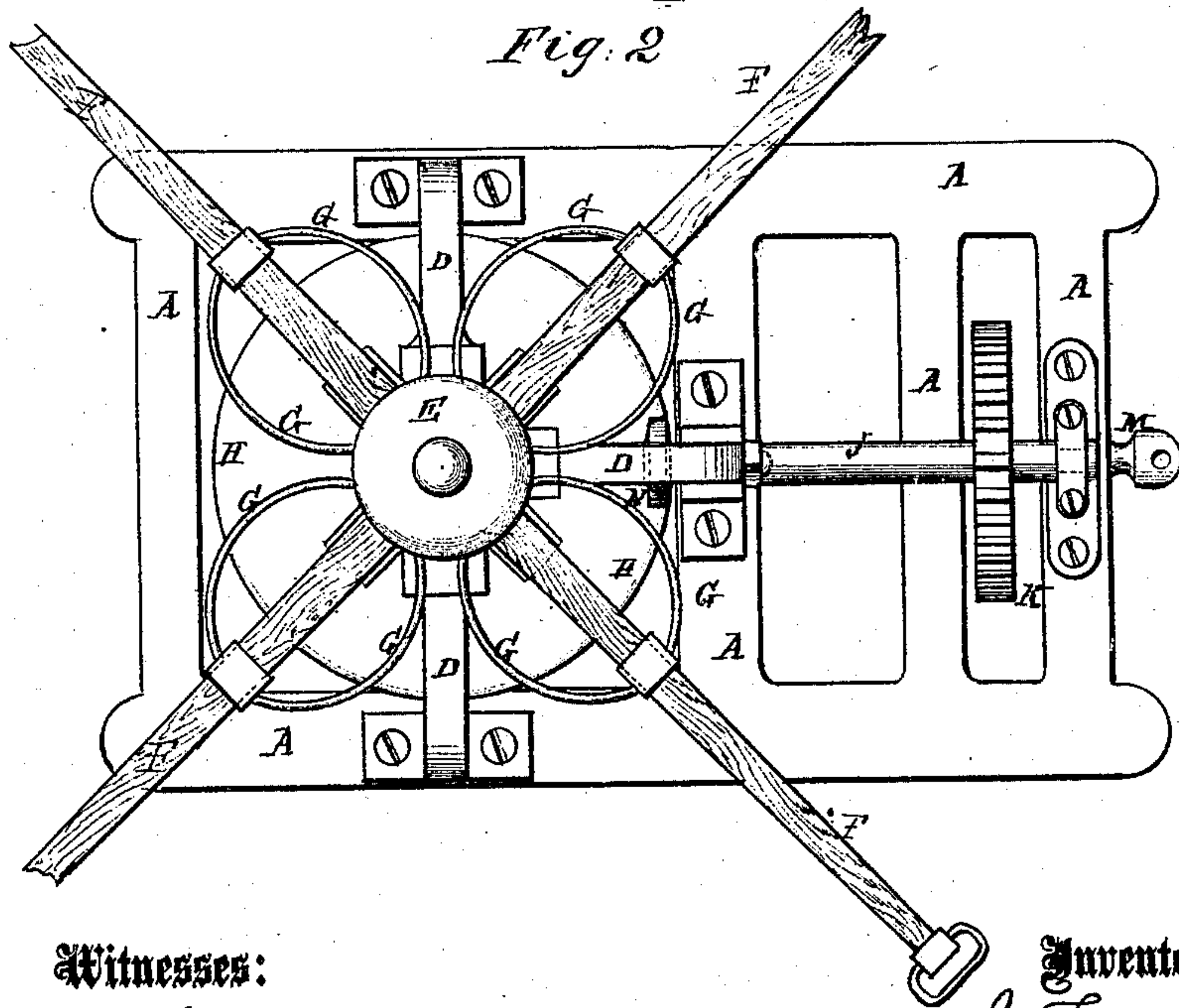


Fig. 2



Witnesses:

A. W. Almqvist
Alex. F. Roberts

Inventor:

J. Fraser
W. Thomas
Mmm
Attorneys.

PER

United States Patent Office.

JAMES FRASER AND WILLIAM THOMAS, OF NEW YORK, N. Y.

Letters Patent No. 98,947, dated January 18, 1870.

IMPROVEMENT IN HORSE-POWER.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, JAMES FRASER and WILLIAM THOMAS, of the city, county, and State of New York, have invented a new and useful Improvement in Horse-Power; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section of our improved horse-power.

Figure 2 is a top view of the same.

Similar letters of reference indicate corresponding parts.

Our invention has for its object to furnish a simple, strong, durable and convenient horse-power; and

It consists in the construction and combination of the various parts of the machine, as hereinafter more fully described.

A is the foundation-frame of the machine, consisting of two parallel horizontal frames, connected to each other, and held at proper distances apart by short studs or posts, as shown in fig. 1.

B is a vertical shaft, the lower end of which revolves in a step, C, attached to the middle part of the frame A.

The upper part of the shaft B revolves in bearings in the upper ends of the three arms D, which meet in a common centre, and the lower ends of which are attached to the foundation-frame A, so that the upper end of the vertical shaft B may be held firmly and steadily in place.

Upon the upper end of the vertical shaft B is formed a square tenon, which enters the socket or centre-piece E, so that the said centre-piece E may carry the said shaft with it in its revolution.

Around the outer edge of the said socket-piece E are formed four, more or less, notches or sockets, to receive the inner ends of the arms or sweeps F, to the outer ends of which the draught is applied.

G G are braces, the inner ends of which are attached to the centre-piece E, and the outer ends of each pair of which are attached to a band, through which one of the arms or sweeps F passes.

The arms or sweeps F may be connected to each other, and further braced and strengthened by braces connecting the outer parts of said arms or sweeps.

To the lower part of the vertical shaft B is attached a gear-wheel, H, the teeth of which mesh into the teeth of the small gear-wheel I, attached to the inner part of the horizontal shaft J, the journals of which revolve in bearings attached to the frame-work A.

To the outer part of the shaft J is attached a gear-wheel, K, the teeth of which mesh into the teeth of the small gear-wheel L, attached to the short horizontal shaft M, placed between the parallel parts of the frame A, and which revolves in bearings attached to said frame.

With the outer end of the shaft M is connected one end of the rod by which motion is communicated to the machinery to be driven.

N is a small friction-wheel, revolving upon a spindle attached to one of the arms D, in such a position that the wheel N may bear upon the upper surface of the gear-wheel H, directly over the gear-wheel I, to hold the said gear-wheel H down upon the said gear-wheel I, and keep them always in gear with each other.

By this construction, a simple, compact, strong, durable, and effective horse-power is produced, and one not liable to get out of order.

Having thus described our invention,

We claim as new, and desire to secure by Letters Patent—

An improved horse-power, formed by the combination of the foundation-frame A, vertical shaft B, arms D, socket or centre-piece E, sweeps F, braces G, friction-wheel N, gear-wheels H and I, horizontal shaft J, gear-wheels K and L, and short horizontal shaft M, with each other, said parts being constructed, arranged, and operating substantially as herein shown and described, and for the purpose set forth.

JAS. FRASER.

WILLIAM THOMAS.

Witnesses:

GEO. W. MABEE,

JAMES T. GRAHAM.