

(No Model.)

2 Sheets—Sheet 1.

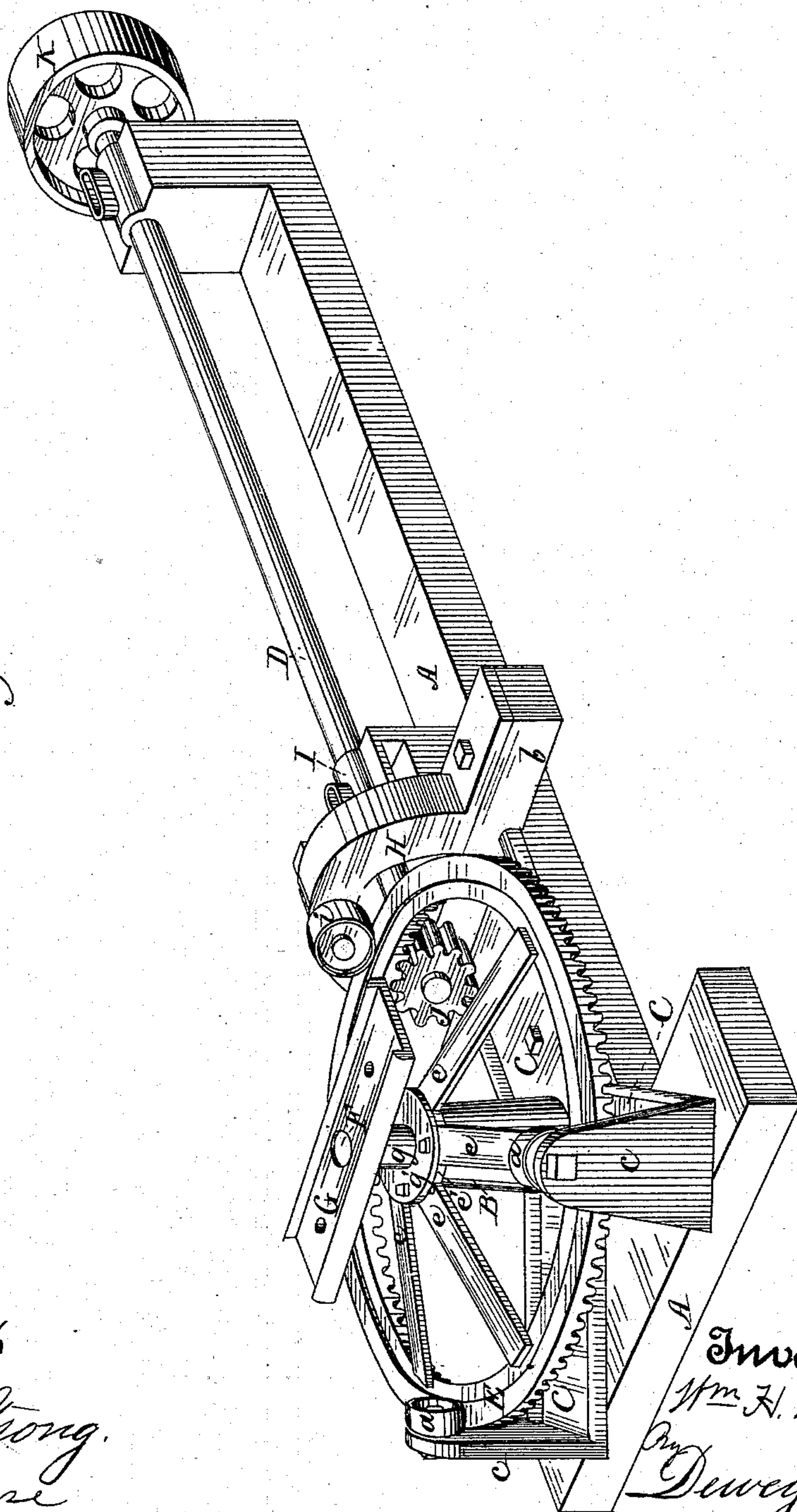
W. H. WORTH.

HORSE POWER.

No. 276,320.

Patented Apr. 24, 1883.

Fig. 1.



Witnesses,

Geo. H. Strong.  
J. H. House

Inventor

Wm. H. Worth

Dewey & Co.  
attorneys

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2 Sheets—Sheet 2.

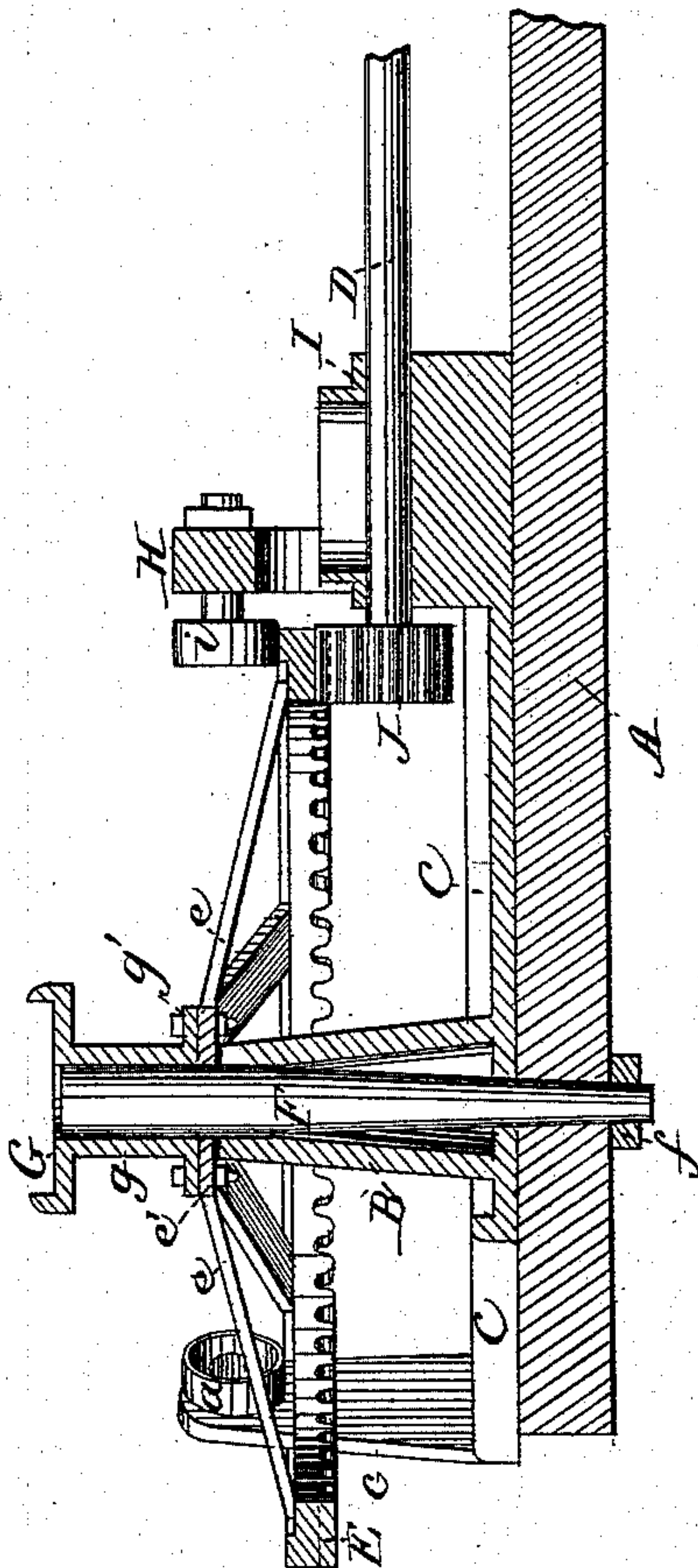
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Fig. 2.



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# UNITED STATES PATENT OFFICE.

WILLIAM H. WORTH, OF PETALUMA, CALIFORNIA.

## HORSE-POWER.

SPECIFICATION forming part of Letters Patent No. 276,320, dated April 24, 1883.

Application filed March 3, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. WORTH, of Petaluma, county of Sonoma, State of California, have invented an Improved Horse-Power; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a new and useful horse-power; and it consists in the construction and arrangement of parts I shall now particularly describe, reference being made to the accompanying drawings, in which—

Figure 1, Sheet 1, is a perspective view. Fig. 2 is a vertical longitudinal section.

The object of my invention is to provide a simple, economical, and efficient horse-power.

A is the foundation, which is intended to be let into the ground.

B is a hub having three radiating arms, C, the ends *c* of two of which are turned up at right angles, and have equalizing-rollers *a* journaled in their tops. The third arm has an enlarged end, and acts as a bearing for the driving-shaft D. The hub B, with its arms, is a single casting bolted down to the foundation.

E is a crown-gear having arms *e* and a central disk-hub, *e'*.

F is the king-pin, fitted down through hubs *e'* and B. It is tapered downwardly, and the hub B is tapered oppositely, so that by screwing up the nut *f* underneath the pin may be tightened up.

The hub *e'* of the gear E fits upon the bolt and bears on the top of hub B. G is a channel-shaped casting having a hub, *g*, with a flange, *g'*, whereby it is bolted securely to the hub *e'* of wheel E. This casting fits the king-pin loosely enough to turn readily upon it as a journal. The channel portion or top of the casting is to receive and secure the draft-bar or tongue, and is set at an inclination in order to throw the end of the tongue high enough for the horse.

The rollers *a* bear upon the upper edge or rim of the crown-gear at two points; and in order to provide for a third and properly equal-

ize the gear, I cast an arch, H, and bolt it to a cross-bar, *b*, of the foundation. In its top is a roller, *i*.

I is the upper cap of the shaft-bearing, and J is the pinion on the end of the shaft, which meshes with the crown-gear. K is a pulley on the other end of the shaft. These parts are all cast, and may be readily put together. The three rollers perfectly equalize the crown-gear and counterbalance the tongue all the way around, so that the gear will always engage with the pinion—a result which is not attained where but a single equalizer is used.

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

1. The hub B, having arms C, with upturned ends, carrying rollers *a*, the king-pin F, secured in said hub, and the driving-shaft D, journaled in the end of an arm C, and having pinion J, in combination with the crown-gear E, mounted on said pin and hub B, and the channel-shaped casting G for the tongue, fitting on said pin and bolted to the crown-gear, all arranged and operating substantially as herein described.

2. The stationary hub B and pin F, and the driving-shaft D, having pinion J, in combination with the crown-gear E and tongue-support G, bolted thereto, said support having an inclination to raise the draft end of the tongue, substantially as herein described.

3. A horse-power consisting of the hub B, having arms C, with equalizing-rollers *a*, the arch H, having equalizing-roller *i*, the king-pin F, the driving-shaft D, having pinion J, the crown-gear E, upon which said rollers *a i* bear, and the inclined tongue-support G, all arranged and operating substantially as herein described.

In witness whereof I hereunto set my hand.

WILLIAM H. WORTH.

Witnesses:

S. H. NOURSE,

G. W. EMERSON.