

(No Model.)

J. AMBROSE & J. W. HADDOCK.  
HORSE POWER.

No. 457,627.

Patented Aug. 11, 1891.

Fig. 1.

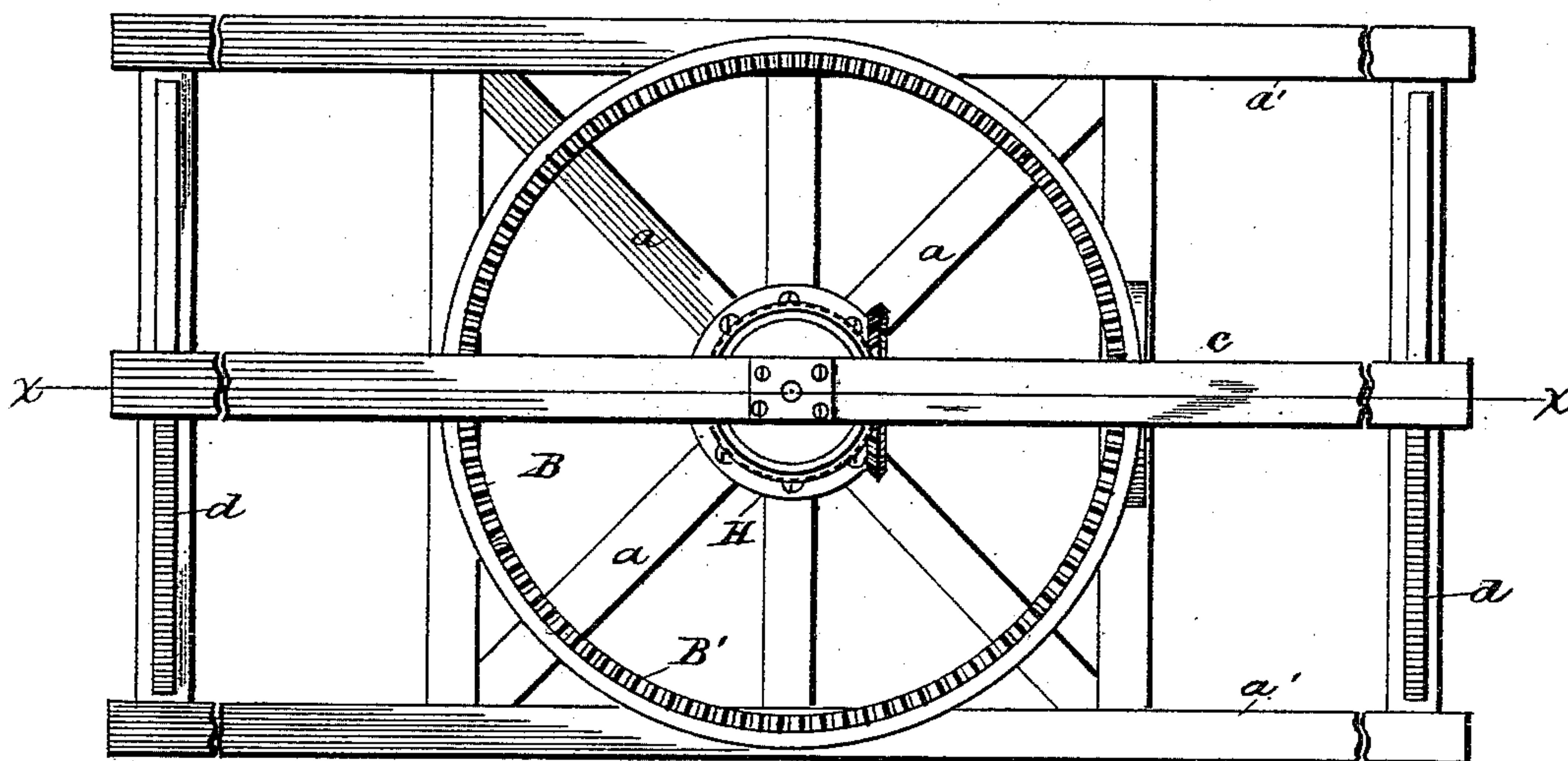


Fig. 3.

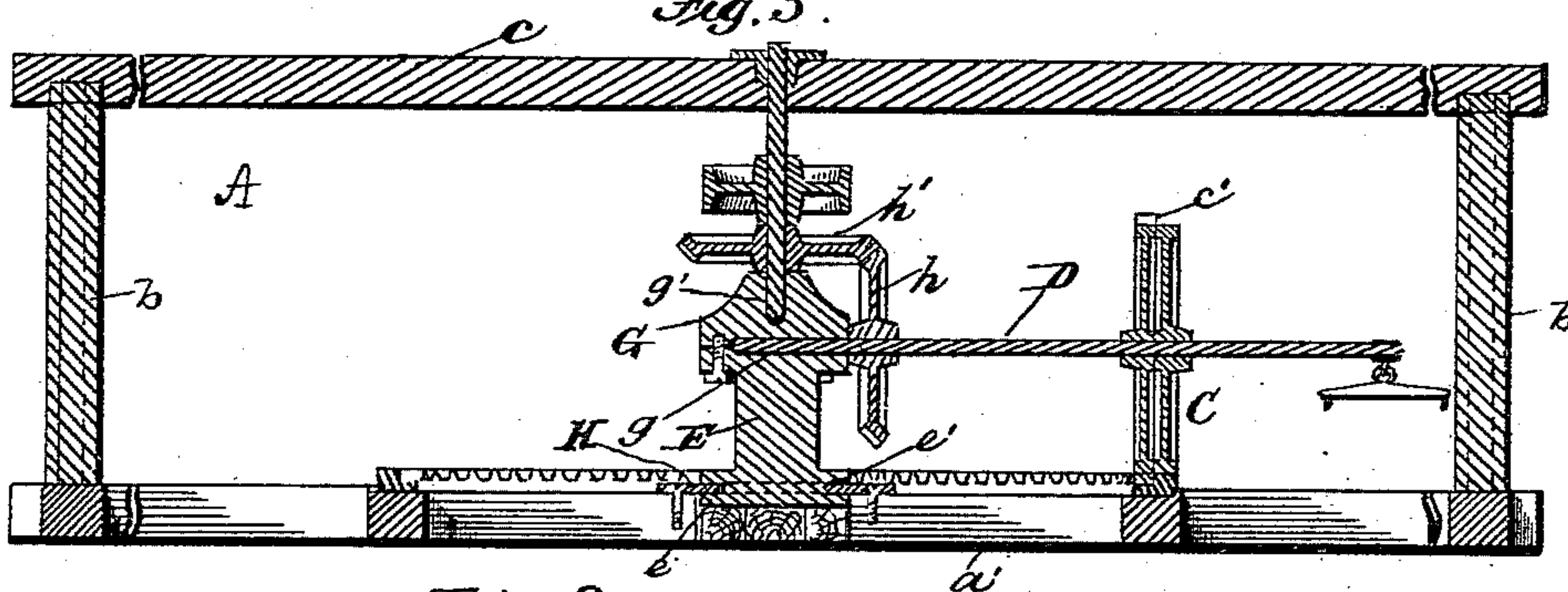
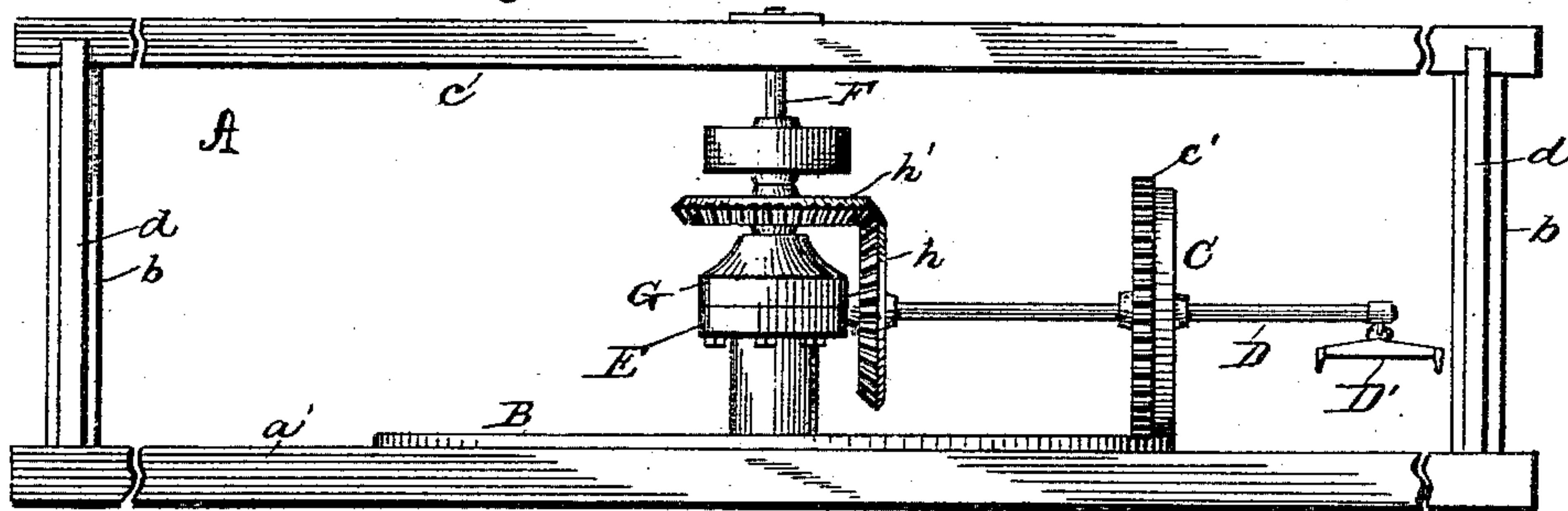


Fig. 2.



Witnesses

W. H. N. Knight  
H. J. Berubach

Inventors:-  
J. Ambrose & J. W. Haddock  
By their Attorney  
H. W. Money



# UNITED STATES PATENT OFFICE.

JOHN AMBROSE AND JOHN W. HADDOCK, OF GRENADA, MISSISSIPPI.

## HORSE-POWER.

SPECIFICATION forming part of Letters Patent No. 457,627, dated August 11, 1891.

Application filed April 21, 1891. Serial No. 389,850. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN AMBROSE and JOHN W. HADDOCK, citizens of the United States, residing at Grenada, in the county of Grenada and State of Mississippi, have invented certain new and useful Improvements in Horse-Powers; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in horse-powers; and it has for its object to provide an improved power of simple and durable construction and one which is efficient and reliable in operation.

With these ends in view the invention consists in the combination and construction of parts that will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a plan view of our improved horse-power. Fig. 2 is a side elevation of the same, and Fig. 3 is a longitudinal section on the line  $x x$  of Fig. 1.

Referring to the drawings, in which like letters of reference denote corresponding parts in all the figures, A designates the frame of the machine, consisting of the base  $a'$ , having the radially-arranged sills  $a$ , the uprights  $b$ , the cross-beam  $c$ , secured to the uprights, and  $d$  the stay beams or braces secured to the cross-beam. On the base and radial sills of the frame A is secured the circular track B, one-half of the upper side or face of which is smooth or plain, while the inner side of said track is provided with cogs or teeth  $B'$ . On this circular track rests a master-gear wheel C, the periphery of which is constructed in a manner similar to the surface of the track—that is to say, one side of the periphery of the wheel is smooth and travels on the plain surface of the track, while the other side of said periphery has cogs or teeth  $c'$ , which mesh with the cogs on the track B.

D is the horizontal operating-shaft, which passes through the hub of the wheel C, and the outer end of this horizontal shaft protrudes beyond the said wheel and the track

and carries the whiffletree  $D'$ , to which the horse is to be hitched. The inner end of this horizontal shaft, or, as it might be termed, the “sweep,” is journaled in a bearing of the vertical post E, which serves to sustain both the sweep-shaft and the vertical power-shaft F. The lower end of this vertical post is provided with an enlargement or rib  $e$ , and in the periphery of this enlargement is formed a groove or depression  $e'$ , which receives the inner edge of a sectional ring or annulus H, that is bolted or otherwise suitably secured to the base-sills  $a'$ , whereby the vertical post or bearing-support is sustained in position and is free to rotate with the horizontal sweep-shaft as the latter is drawn around the track by the animal. The upper end of this post is provided with a cap or plate G, which is suitably bolted or otherwise fixed to the post proper, and this cap and the post are formed with coincident grooves or recesses  $g$ , that constitute the bearing for the inner end of the horizontal sweep-shaft. This cap G is further provided with a central step-bearing  $g'$  in axial alignment with the vertical post, and in this bearing  $g'$  is stepped the lower end of the vertical power-shaft F.

The horizontal sweep-shaft D is provided with a bevel gear-wheel  $h$ , which is keyed to said shaft, and this bevel gear-wheel meshes with a similar bevel gear-wheel  $h'$ , keyed to the vertical power-shaft, whereby as the shaft D is caused to rotate on its axis by the wheel C meshing with the toothed track, and by the pull or force exerted by the animal in causing the shaft and wheel to move around the track the intermeshing bevel-gears  $h h'$  cause the vertical power-shaft to be rotated, thus securing efficiency by a simple and durable construction of parts.

The vertical power-shaft passes upwardly above the beam  $c$ , and it has its upper end confined in place by a strap or equivalent device. On the upper end of this vertical shaft is a pulley for transmitting the motion and power of this shaft to a suitable machine to be operated by our horse-power.

The operation of our machine will be readily understood from the foregoing description, taken in connection with the accompanying drawings.

We are aware that changes in the form and

proportion of parts and details of construction of our improved machine may be made without departing from the spirit or sacrificing the advantages of our invention.

5 Having thus fully described our invention, what we claim as new is—

10 In a horse - power, the combination of a frame, the toothed track, the post - bearing having the removable recessed cap at its upper end and the grooved rib at its base, the fixed annulus fitted in the grooved rib, the vertical shaft stepped in the cap of the post-bearing, the horizontal sweep-shaft, also jour-

naled in the post-bearing and cap and geared with the vertical shaft, and the toothed wheel 15 carried by the sweep-shaft and engaging the toothed track, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN AMBROSE.

JOHN W. <sup>his</sup> × HADDOCK.  
mark

Witnesses:

J. W. DUBARD,  
J. C. PERRY.