R. M. BEEBEE.

Horse-Power.

No. 223,875. Patented Jan. 27, 1880.

FIG. 1.

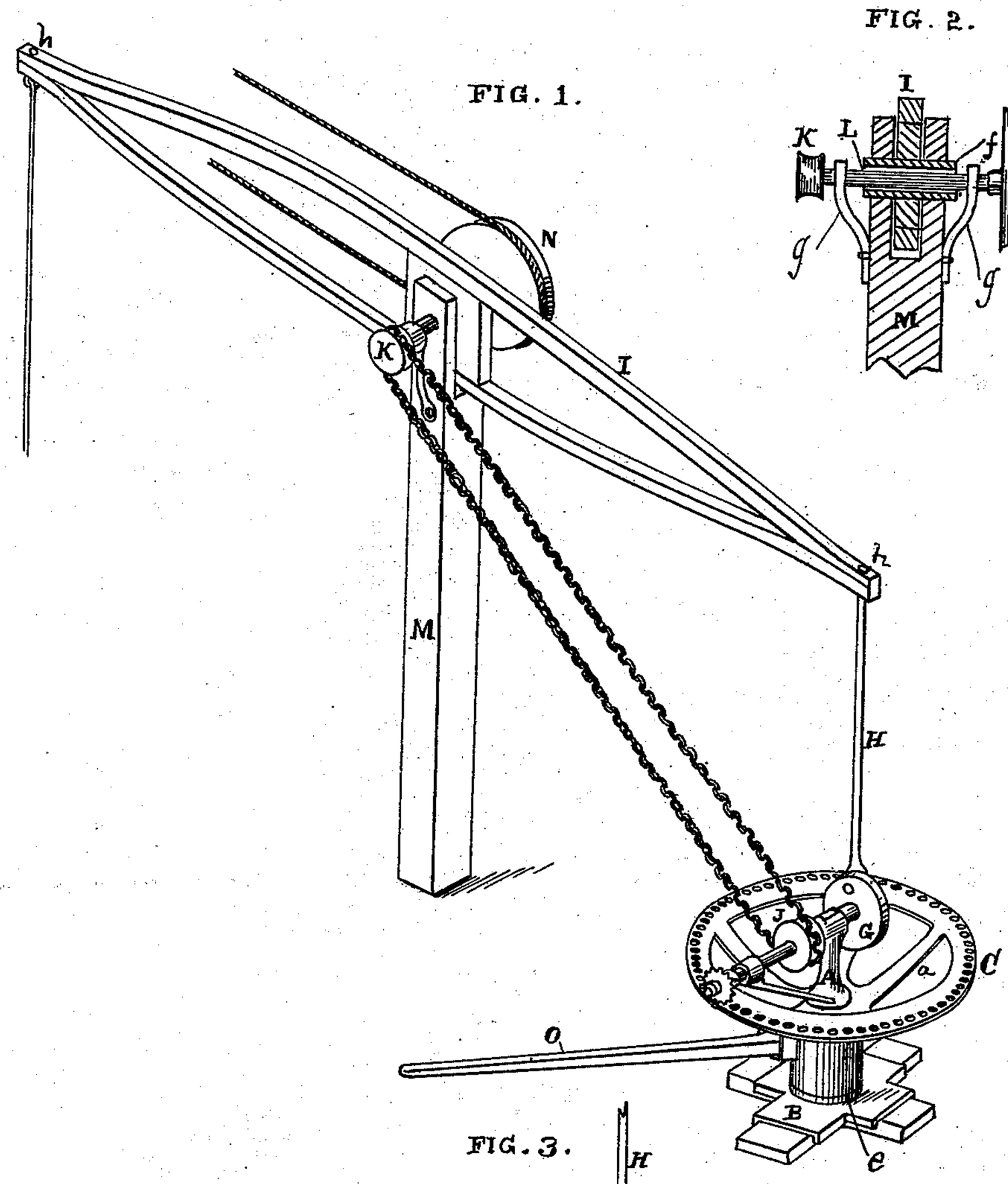
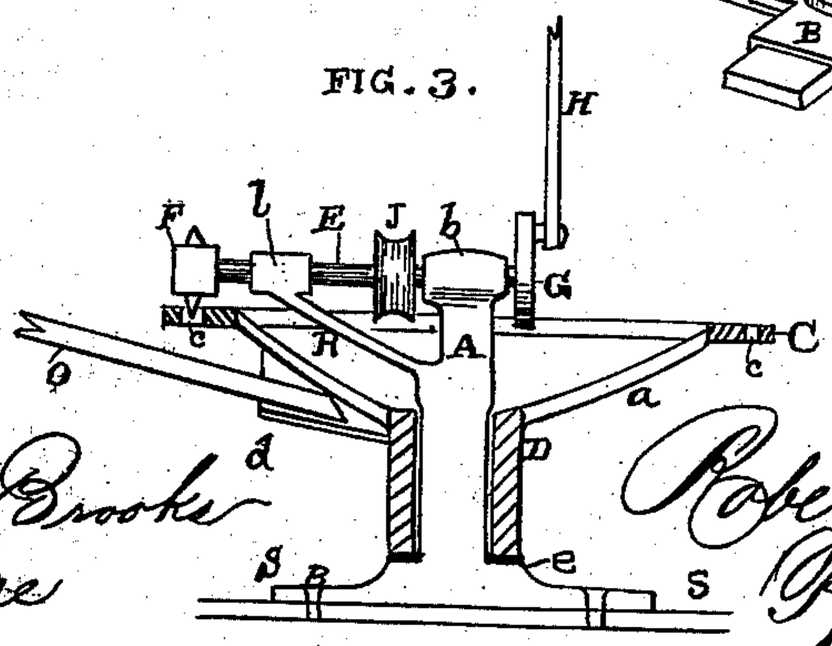


FIG. 2.

FIG. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT M. BEEBEE, OF CHICO, CALIFORNIA.

HORSE-POWER.

SPECIFICATION forming part of Letters Patent No. 223,875, dated January 27, 1880.

Application filed May 20, 1879.

To all whom it may concern:

Be it known that I, ROBERT M. BEEBEE, of Chico, county of Butte, and 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 an improved horse-power; and my improvements consist in mounting the master-wheel in a peculiar manner, so that the mechanism for producing a reciprocating or rotary motion may all be contained within its circumference.

It also relates to certain details of construction by which either a rotary or reciprocating motion may be imparted from the power at the same time, as is more fully described in the accompanying drawings, in which—

Figure 1 is a perspective view. Figs. 2 and 3 are details of construction.

The king-post A is mounted on a firm bed, B, and is made stationary, not being intended to revolve. The master-wheel C has a cylindrical base, D, to which it is connected by means of arms *a*, this base slipping over the king-post A, as shown, and revolving around it as the wheel revolves.

In a journal, *b*, on top of the king-post, is placed the horizontal driving-shaft E, a brace, R, carrying a journal-bearing, *l*, for the outer end of said shaft, so that it will be properly supported and the pinion held down, as shown. On the outer end of this shaft is a pinion or toothed wheel, F, which engages with the teeth-perforations *c* in the edge of the master-wheel.

On the inner end of the shaft is the crank-wheel G, to which is connected the pitman H, operating the beam I, to the outer end of which may be connected a pump or other apparatus requiring power.

On the shaft E, over the brace R, is a chain or belt pulley, J, over which passes a belt or chain, which also passes around the pulley K on the shaft L. This shaft L is journaled on the upper end of the standard M, which supports the beam, and has on its opposite end a driving-pulley, N. A belt or chain may be operated by this pulley so as to give a rotary motion to any machinery, while a reciprocating motion may be imparted to a pump or other device by the same horse-power at the same time by means of the beam.

Mortises *d d* are placed in the arms of the master-wheel, for the insertion of the lever O in the usual way.

Under the cylindrical base D of the master-wheel is a washer or bushing, *e*, the object of which is to raise the master-wheel to accommodate the small pinion.

The beam I is mounted on an iron tube, *f*, which passes through the slotted standard M, and the shaft L, carrying the chain pinion and driving-wheel, passes through this tube. This shaft L is journaled in the babbitted boxes or braces *g*, secured to the sides of the standard, and does not impinge on the sides of the tube *f*, but rotates freely in it. The tube *f* forms the bearing for the working-beam.

The bolts *h* at the ends of the walking-beam, which join its two parts together, have eyes or slots at their ends, through which hooks or pins may pass to make joints for the pitman and pump rod.

The king-post A is bolted to the foundation-timbers by means of its lower flanges, S, as shown, and the master-wheel, with its cylindrical base, is slipped over it. One end of the working-beam comes directly over the pitman-wheel on the power, and is connected by the pitman. The mortises in the master-wheel engage with the teeth of the pinion, causing it to rotate the shaft and operate the beam by means of its crank, and the driving-pulley on the standard by means of the pulleys and chain-belt. Both a reciprocating and rotary motion may be imparted at the same time from this power, or each motion separate, as may be desired, by disconnecting either the chain or pitman. All the wearing and bearing parts of this device are in sight.

The beam is made of two pieces of timber sprung over a center block at the bearing, and the ends brought together by means of a bolt, as shown. This makes a truss-beam which is light, strong, and easily constructed.

It will be seen that the driving-shaft E, with its bearings, crank-pulley, and pinion, are all inside the circumference of the master-wheel, so that the power is very compact. By extending the arms of the master-wheel upward

from the rotating base the face of the wheel is raised up to the proper level to engage with the pinion, and all the working parts are inside. There are, therefore, no tumbling rods or shafts to form obstructions for the horse in walking around his circle, and he passes under the chain and beam. The whole power, with its connected driving apparatus, is in a very compact form, and both light and strong.

The king-post combines in one piece a foundation for the power, a bearing for the master-wheel, and a journal for the driving-shaft.

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

1. The shaft E, with its crank G and pulley J and pinion F, engaging with the master-wheel, in combination with the standard M, carrying the beam I, with its pitman H, and the shaft L, with its pulleys K N and belt, whereby both a rotary and reciprocating motion may be imparted at the same time from the same power, substantially as herein described.

2. The elongated hub D, with its washer *e*, and having the spokes *a* projecting upward at an angle, carrying the rim or wheel C, and shaft E, with its crank and driving mechanism within the wheel, said hub being provided with the mortises or sockets *d d* for the operating-lever O, whereby the lever is supported and works below the driving-shaft and wheel, substantially as and for the purpose herein described.

3. The truss-beam I, with its supporting-sleeve or hollow journal *f*, passing through the standard M, in combination with the shaft L, passing through said sleeve, and provided with independent bearings *g*, so that rotary motion may be given to the shaft L and reciprocating motion to the beam I from the same support, substantially as herein described.

In witness whereof I have hereunto set my hand and seal.

ROBT. M. BEEBEE. [L. S.]

Witnesses:
HENRY WM. RIEHL,
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