O. W. Stanford,

Horse Power,

No 28,018, Patented Apr. 24, 1860.

Fig. 1.

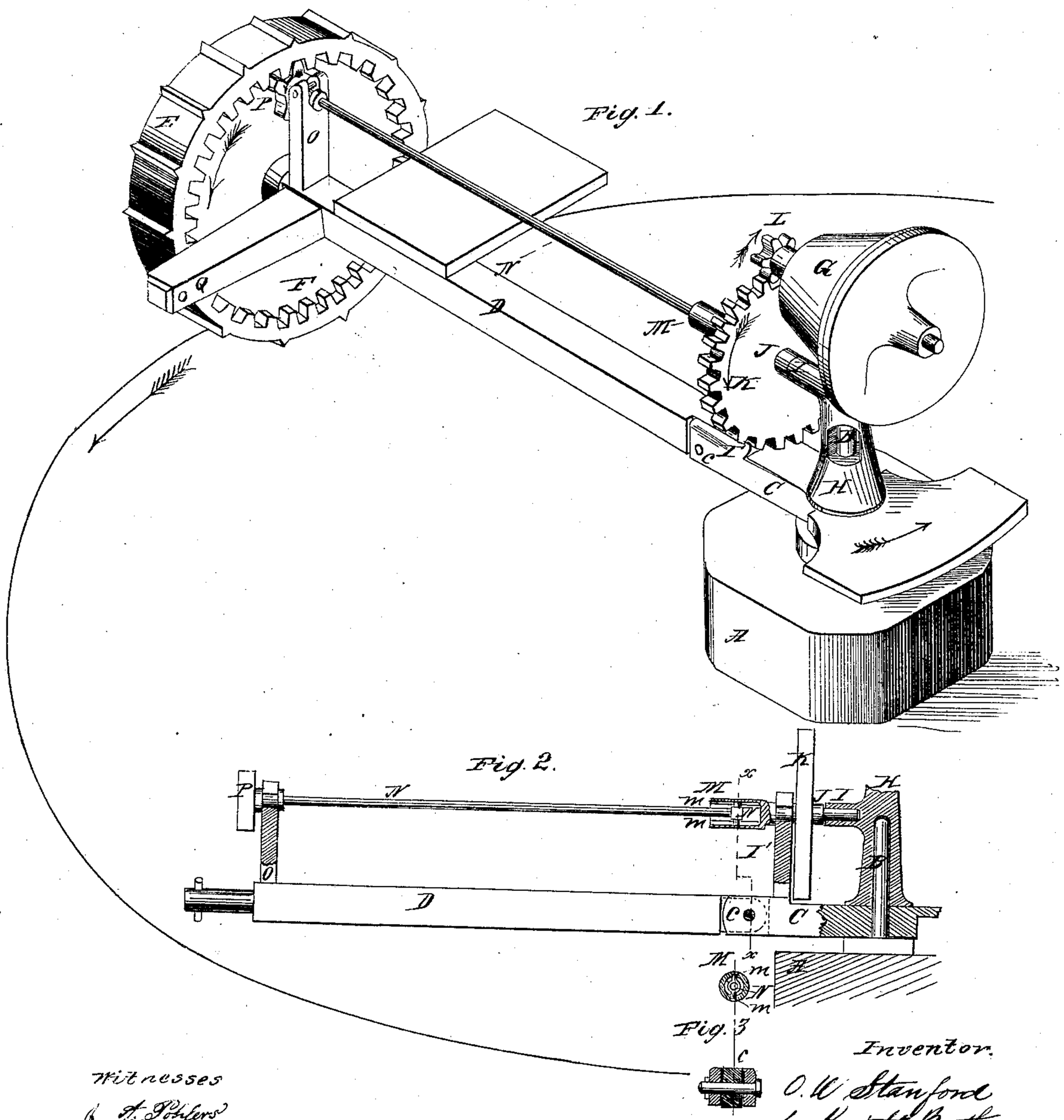

Fig. 2.

Fig. 3

Witnesses

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per Knight Brothers

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UNITED STATES PATENT OFFICE.

OTIS W. STANFORD, OF CINCINNATI, OHIO.

HORSE-POWER.

Specification of Letters Patent No. 28,018, dated April 24, 1860.

To all whom it may concern:

Be it known that I, OTIS W. STANFORD, of Cincinnati, Ohio, have invented a certain new and useful Improvement in Horse-Powers; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification.

The subject of my said invention is an arrangement of mechanism for enabling a horse power employing a cogged driving wheel, axle beam and a separate tumbling or pinion shaft, receiving motion from the periphery of the said driving wheel to operate with ease and effect upon uneven ground.

In the accompanying drawings Figure 1, is a perspective view illustrating my invention in its application to a portable grinding mill. Fig. 2 is an axial section thereof, omitting the mill. Fig. 3 is a vertical section at *x x* Fig. 2.

A represents a post or other fixed object surmounted by a fixed stud shaft B.

C is a frame or platform perforated to rotate around the shaft B and having hinged vertically to it at *c* the inner end of a beam D forming the axle of a ground wheel E.

G represents the shell of a grinding mill from which depends rigidly a hub H fitting the upper portion of the stud shaft B.

Projecting horizontally from the hub H is a socket I which in conjunction with a pedestal I′ from the platform C affords a journal bearing for a shaft J whose spur wheel K actuates a pinion L upon the shaft of the mill. The outer extremity of the shaft J has a peculiar coupling box M open at its outer end and grooved (*m*) lengthwise to receive the cross head *n* of a shaft N, whose outer end is supported in a pedestal O rising from the beam D.

P is a pinion rigidly mounted in the shaft N and meshing with cogs F projecting inwardly from the periphery of the ground wheel E. The hinged attachment of the axle at *c* and the capability of longitudinal play of the shaft N in the coupling box M allow of the ground wheel E adapting itself to any unevenness in the surface of the ground without exerting any strain or producing undue friction on the working parts of the mill gearing, &c.

Operation: The power is hitched to a tongue Q projecting from the beam D and as the ground wheel E is made to traverse the circular track, rotating around the fixed center B, a rapid rotary motion is communicated from said ground wheel through the pinion P shafts N, J, spur wheel K, and pinion L to the grinding mill; the operator riding on the platform C.

I claim as new and of my invention herein and desire to secure by Letters Patent—

The combination of the rotary platform C, axle beam D, cogged driving wheel E F, pinion shaft N P, hinged and slotted socket M *m* constructed arranged and operated in the manner and for the purposes explained.

In testimony of which invention I hereunto set my hand.

OTIS W. STANFORD.

Witnesses:

GEO. H. KNIGHT,

JONATHAN CREAGER.