J. T. MOORE.
Horse-Power

No. 206,399. Patented July 30, 1878.

Fig. 1.

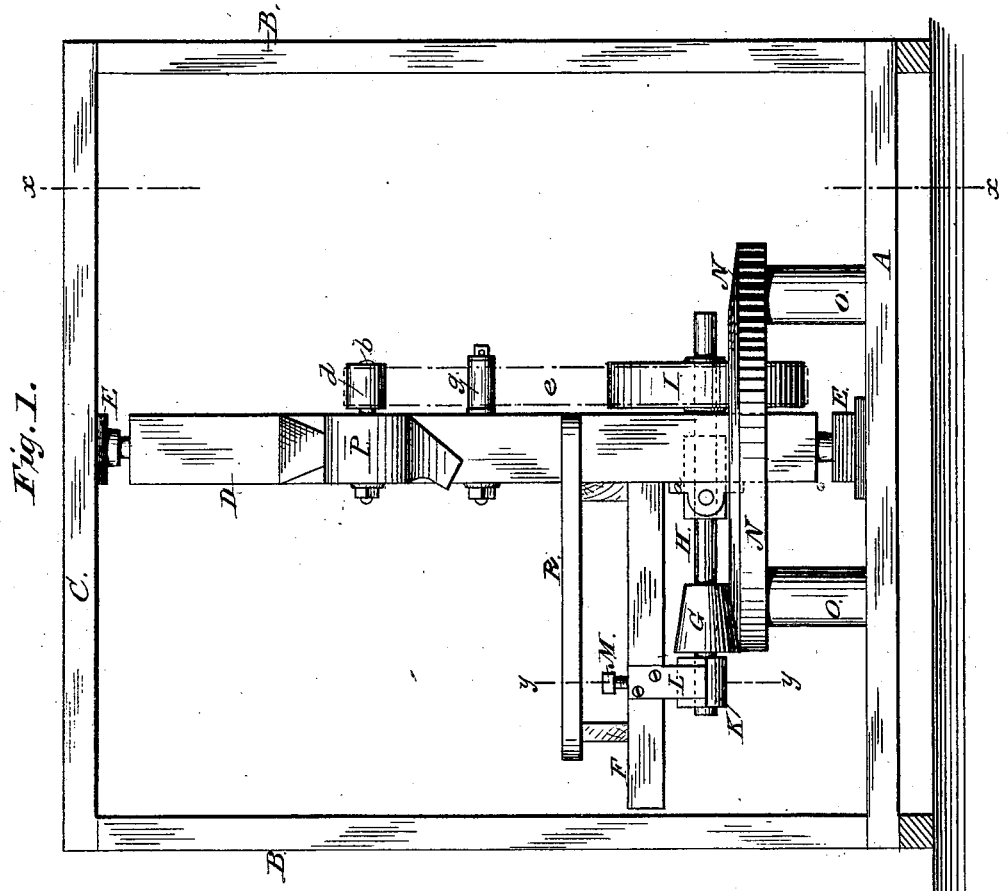


Fig. 2.

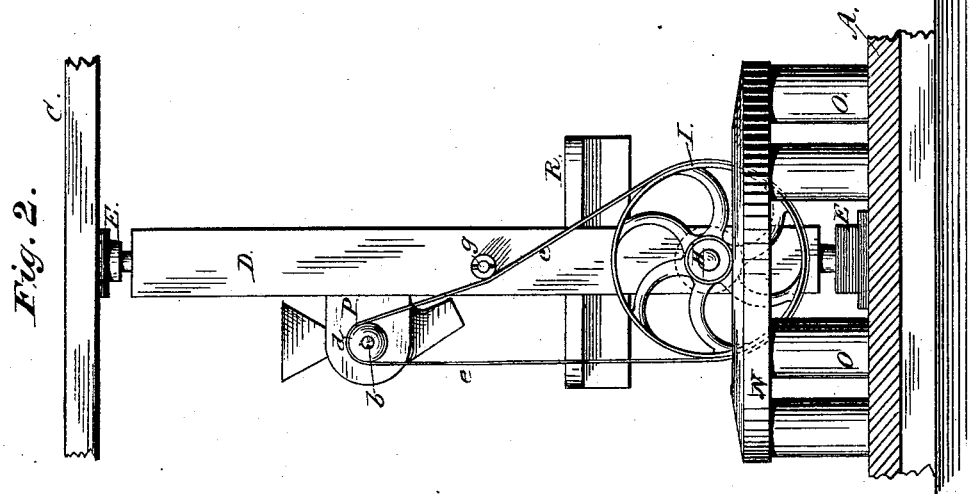
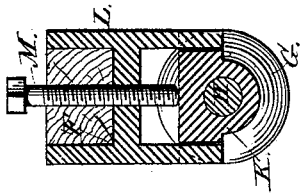


Fig. 3.



Witnesses:
Jos. P. Gibson
L. O. Brown

Inventor:
John T. Moore

UNITED STATES PATENT OFFICE.

JOHN T. MOORE, OF ROBERTSONVILLE, MISSISSIPPI.

IMPROVEMENT IN HORSE-POWERS.

Specification forming part of Letters Patent No. **206,399**, dated July 30, 1878; application filed March 18, 1878.

To all whom it may concern:

Be it known that I, JOHN T. MOORE, of Robertsonville, Coahoma county, State of Mississippi, have invented a new and useful Improvement in Horse-Powers, of which the following specification is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof, and in which—

Figure 1 is a side view of my apparatus; Fig. 2, an end elevation taken from line *x x*, Fig. 1; and Fig. 3, a sectional view through the line *y y*, Fig. 1, of the adjusting mechanism.

Like letters represent like parts in all the views.

The invention relates to horse-powers, and it is designed more particularly for running horizontal grist-mills; but it may be applied to communicate motion to any machinery to which, by its construction, it is applicable.

The object of my invention is to provide a horse-power which shall be simple in its construction and economical in cost, and adapted especially for driving the many grist-mills now in use throughout the southern States, and which are ordinarily worked by hand.

The invention consists in the employment of a friction-spindle, in combination with a roadway, driving-lever, and main post or spindle, and the spindle of the mill, and in the construction and manner of operation of these several elements, as more fully hereinafter described, and pointed out in the claims.

Referring to the accompanying drawings, A represents the foundation, which may be made of any desired size. B B represent uprights, which are supported in the foundation A, and are held in position by a cross-bar, C.

D is the main post or spindle, which is stepped, at top and bottom in metallic pieces E E, rigidly affixed to the center of the platform A and the under side of the cross-bar C, respectively, so that it readily revolves within its bearings.

F is the driving-lever, which is rigidly affixed to the spindle D in any convenient manner. To the outer end of this lever, and at any desired position relative to the friction-spindle, may be secured hooks for attaching the team.

G is the friction-spindle, of the shape of the frustum of a cone, and which is, by any desired means, made fast in its proper position on the journal H, so that it may turn therewith.

The end of the journal H, which passes entirely through the spindle D on a line directly beneath the driving-lever F, rests in the metallic bearings *a;* and when the friction-spindle G is placed thereon it is in close proximity to the driving-lever F, as shown.

Upon one end of the journal H is secured the driving-pulley I, while the other, or outer, end thereof rests in a vertically-adjustable metallic bearing, K, which is supported from the driving-lever F by means of the metallic hanging-bracket L.

The vertical adjustment of the bearing K is effected by means of the screw M. By this means the friction-spindle G is kept down, with the proper degree of pressure, upon the circular roadway N, whose surface is made sloping outwardly, so as to correspond to the comformation of the surface of the friction-spindle. By this construction, also, the friction-spindle readily revolves upon its bed as it is carried around with the driving-lever in the revolution of the spindle D.

O O represent the posts which support the circular roadway N, upon and around which, as explained, the friction-spindle G turns and is carried.

P is the mill, which is made stationary to the spindle D; *b*, the spindle of the mill, and *d* a pulley secured to the end thereof to receive the band *e* from the larger pulley I upon the end of the journal H.

The device *g* is secured to the spindle D beneath the mill, and under this the band *e* is passed, which is thus guided and held to its work with more certainty.

The pulley I, as well as the roadway N and the several attachments, can be made any size desired, to suit the power required. A roadway three feet in diameter, with the pulley I of the same size, will give sufficient speed for a small mill. For a larger mill these parts need to be increased in size proportionately.

The drawings may be taken to represent the roadway N as about three feet in diameter and the friction-spindle G one foot and a

half in length. With these parts thus constructed, the driving-lever F should be at least seven feet long, and the platform or track for the team about fifteen feet in diameter. In practice I have found that a platform fifteen feet in diameter and a friction-spindle of four inches diameter give a sufficient speed to a small mill for all ordinary emergencies. The platform may, however, be made as large as desired.

R is a platform, upon which the attendant stands to supply the mill. It is readily removable, and rests, as is seen, upon the driving-lever F, a depression in the opposite end receiving the spindle D, thus guarding against lateral displacement.

The operation of the apparatus is plain from the above description and the drawings. The power being brought into exercise to move the driving-lever, the friction-spindle C is caused to revolve upon its axis while it is being carried around the roadway N, and the power is thus transmitted to pulley I, and in turn is transmitted to pulley *d* upon the end of the spindle of the mill, the last-mentioned pulley being connected with pulley I by means of suitable belting *e*.

It will be observed that, the mill being affixed to the spindle D, it is carried around with the revolution of said spindle.

This invention is simple, compact, and durable in its construction, and it furnishes one of the cheapest apparatus yet devised for the purpose of applying the power of draft-animals to the driving of machinery.

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

1. The combination of the friction-spindle G and roadway N with the driving-lever F, adjustable platform R, and spindle D, substantially as and for the purpose specified.

2. The friction-spindle G and journal H, in combination with the adjusting mechanism M K and spindle D, substantially as and for the purpose specified.

3. The combination of the friction-spindle G, journal H, adjusting mechanism M K, and pulley I with the lever F, spindle D, and roadway N, substantially as and for the purposes described.

JOHN T. MOORE.

Witnesses:
JAS. P. GIBSON,
S. S. BROWNE.