

(No Model.)

2 Sheets—Sheet 1.

J. R. TERRELL & W. E. FRASIER.
HORSE POWER.

No. 493,370.

Patented Mar. 14, 1893.

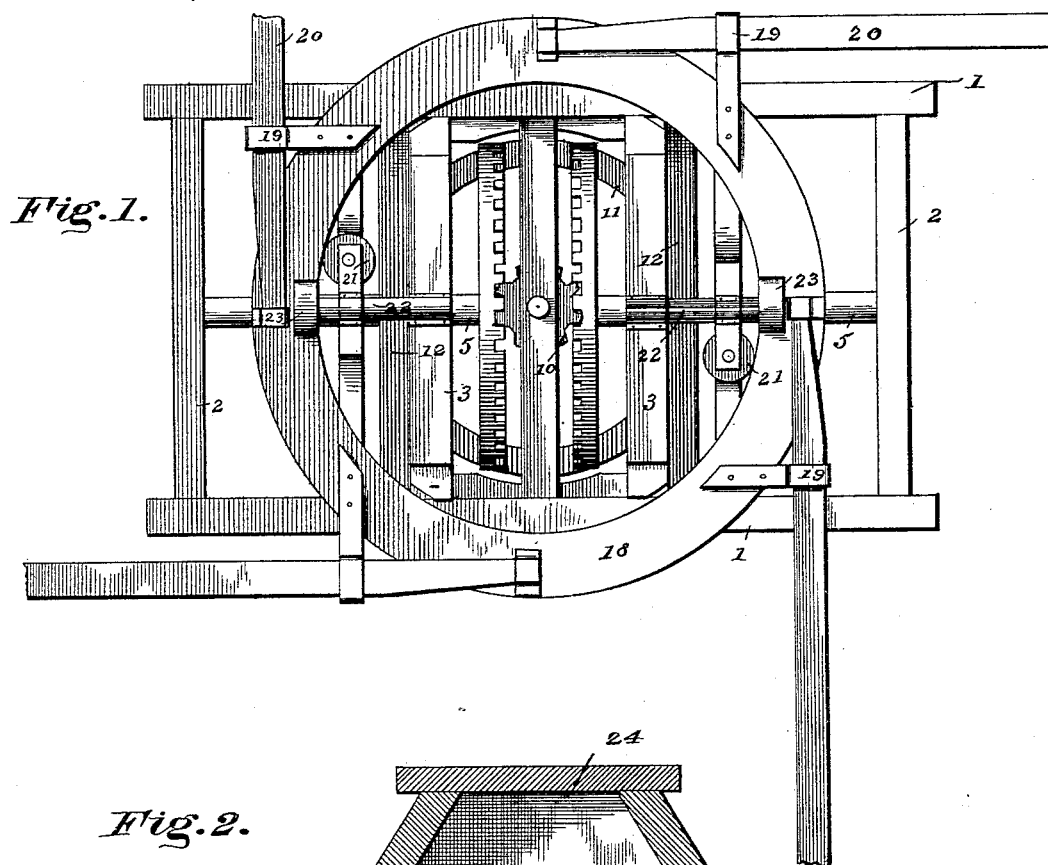
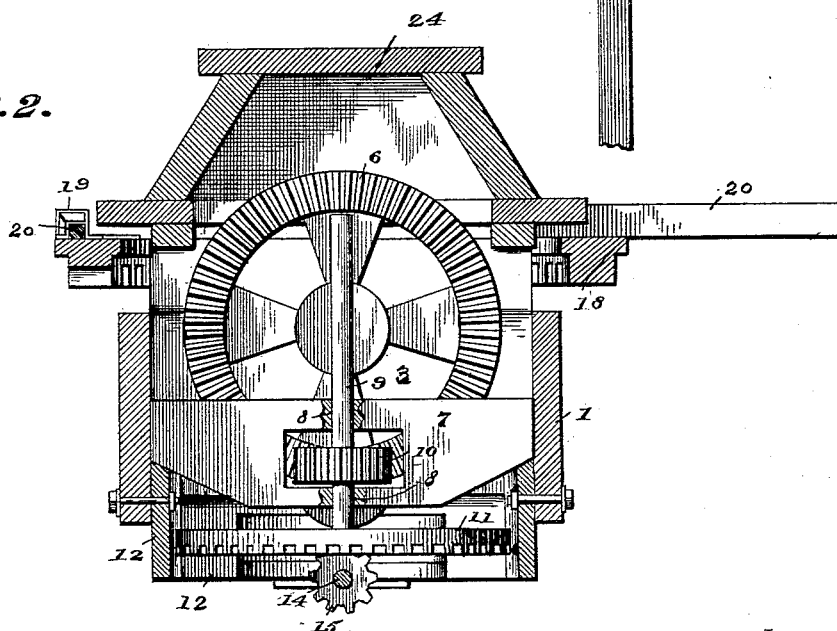


Fig. 2.



Witnesses

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Inventors

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Wm E. Frasier,
By their Attorneys,
C. A. Snow & Co.

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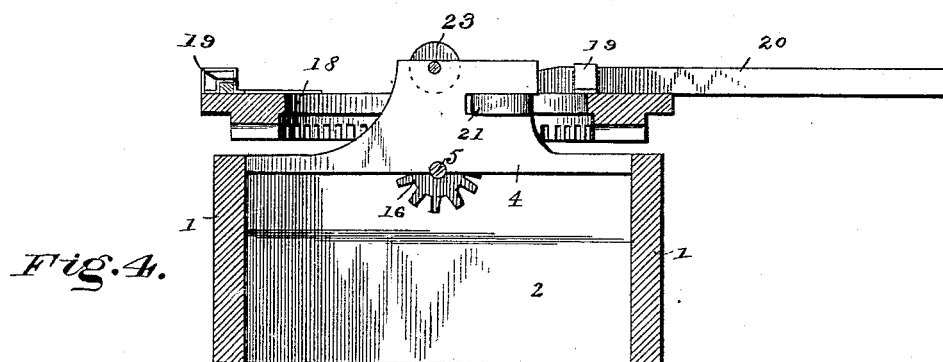
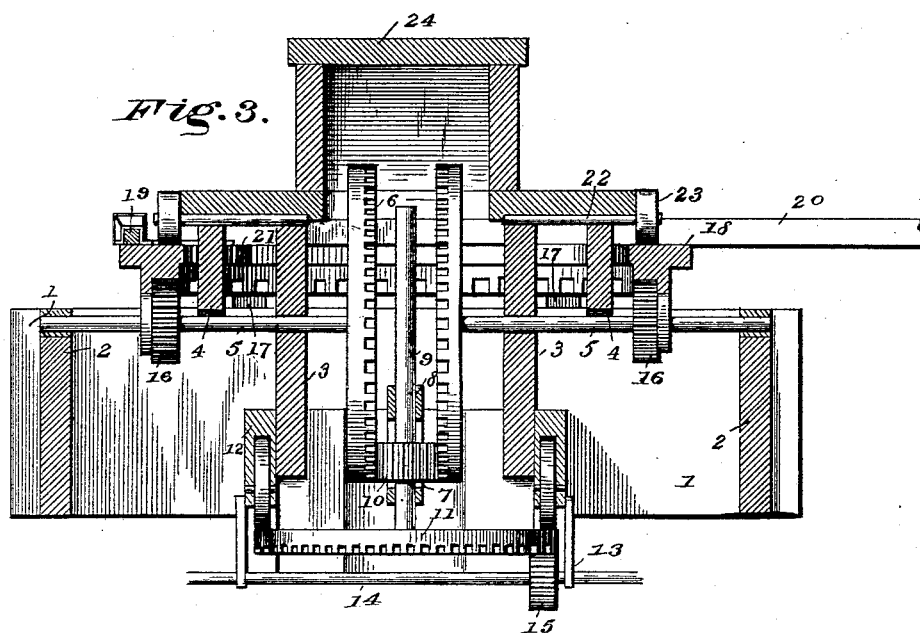
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UNITED STATES PATENT OFFICE.

JOHN R. TERRELL AND WILLIAM E. FRASIER, OF OSCEOLA, TEXAS.

HORSE-POWER.

SPECIFICATION forming part of Letters Patent No. 493,370, dated March 14, 1893.

Application filed November 19, 1892. Serial No. 452,534. (No model.)

To all whom it may concern:

Be it known that we, JOHN R. TERRELL and WILLIAM E. FRASIER, citizens of the United States, residing at Osceola, in the county of Hill and State of Texas, have invented a new and useful Horse-Power, of which the following is a specification.

Our invention relates to improvements in horse-powers; the objects in view being to provide a cheaply and simply constructed yet powerful machine for transmitting and augmenting power to corn-thrashers, corn-hullers, cotton-gins, and other machines that are to be operated.

With these general objects in view, the invention consists in certain features of construction hereinafter specified and particularly pointed out in the appended claim.

Referring to the drawings:—Figure 1 is a plan view of a horse-power constructed in accordance with our invention. Fig. 2 is a transverse sectional view. Fig. 3 is a longitudinal sectional view, the same being taken through the center. Fig. 4 is a transverse sectional view, the same being taken through one end of the machine.

Like numerals of reference indicate like parts in all the figures of the drawings.

In practicing our invention we construct a suitable framework, which in this instance comprises a pair of longitudinal side sills 1, and transverse end sills 2, and between these a pair of transverse partitions 3, whose upper ends rise above the sills 1 and 2. The side sills are further connected between the end sills and the transverse partitions by intermediate cross-bars or yokes 4.

In longitudinally opposite bearings with which each of the end sills, partitions, and cross-bars are provided, there is mounted a pair of longitudinally-opposite horizontally-disposed shafts 5, whose inner ends terminate short of each other, and between the partitions are provided with large gear-wheels 6. A transverse yoke 7 connects the side sills between these gear-wheels, and the same is provided with a central bearing 8, in which a vertical shaft 9 is journaled. This vertical shaft 9 carries within the yoke a small gear wheel 10, which is engaged at diametrically opposite sides by the aforesaid gear-wheels 6.

Below the yoke the shaft also carries a large gear-wheel 11, whose teeth are formed upon its under side. The gear-wheel 11 is inclosed by a box or frame 12, which is provided at longitudinally-opposite ends and at its lower edge with bearings 13 that receive and support a longitudinally-disposed power-shaft 14, which between its bearings is provided with a small gear-wheel 15 whose teeth engage or mesh with those formed upon the under side of the large gear-wheel 11, and through the medium of these wheels and shafts motion is conveyed from the gears 6 to the power-shaft 14. This power-shaft of course may extend to any machine for the purpose of conveying power thereto and may be provided with any suitable train of gearing or pulleys for such purpose, but the same forms no part of our invention.

Upon each of the shafts 5 between the transverse yokes 4 and the adjacent end bars, gears 16 are rigidly mounted and designed to rotate with the shaft. These gears in connection with blocks 17 with which the upper edges of the side-sills 1 are provided, serve as a support or aid in supporting a ring 18 which is provided upon its under side with a series of teeth, the same constituting a master-gear. The master-gear is provided at intervals with pairs of tangentially-opposite keepers 19 and the same receive removable draft-poles 20 that are tangentially-disposed. In this instance the master-gear is adapted to receive four draft-poles, but it will be obvious that their number may be decreased or increased as the power requires. The yokes 4 at opposite side edges are recessed and in each is located or journaled a loose roller 21, said rollers bearing against the inner edges or wall of the master-gear 18. Shafts 22 are mounted upon the yokes and partitions 3 and at their outer ends terminate over the master-gear where they are provided with loose rollers 23 that rest upon and ride over the upperside or face of said master-gear.

From the foregoing description in connection with the accompanying drawings, it will be seen that the master-gear is supported by means of the gears 16 and the guides 17, and that it is retained in position through the medium of the rollers 21 and 23. As the master-

gear revolves motion is transmitted from it to the gears 16, which are thus rotated in reverse direction, as are also their shafts 5 and the gears 6. These gears 6 transmit their motion to the small gear of the vertical shaft, and through said shaft to the large gear at the lower end of the same, and from thence to the small gear of the power-shaft, and to the power-shaft itself.

From the foregoing description it will be seen that the power is of cheap and simple construction, strong and durable, and not liable to become impaired by use.

If desired the ring-gear may support a hood or covering 24, which covers and protects from the weather the working mechanism inclosed by said gear.

Having described our invention, what we claim is—

In a horse-power, the combination with the rectangular frame comprising the side and end sills, the pair of transverse yokes, and the inner pair of transverse partitions, short longitudinal shafts journaled in the end walls, yokes, and partitions and projecting beyond the latter, large gears mounted on the inner ends of the shafts between the partitions, small gears mounted upon the shafts between

the yokes and end sills, a vertical shaft between the inner gears, a lower horizontal power-shaft, a gear-wheel carried by the vertical shaft and engaged at opposite sides by the two inner gears, means for transmitting motion from the vertical shaft to the horizontal shaft, of a master-ring gear having teeth on its under side, said gear encircling the inner gears, partitions and yokes and resting upon the outer gears said yokes being provided with recesses, short longitudinal shafts surmounting the yokes and partitions and terminating over the ring-gear, loose rollers mounted on the outer ends of said short shafts and riding over the ring-gear, rollers loosely mounted in the recesses of the yokes and riding against the inner wall of the ring-gear, and draft-poles extending from said ring-gear, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JOHN R. TERRELL.
WILLIAM E. FRASIER.

Witnesses:

E. S. BURGESS,
G. H. ABERNATHY.