J. S. SCHOFIELD.

Horse-Power.

No. 163,534. Patented May 18, 1875.

Fig. 1.

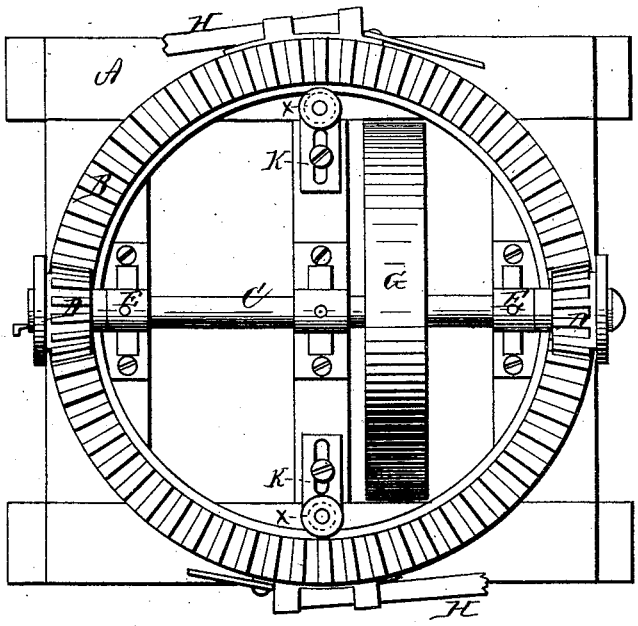
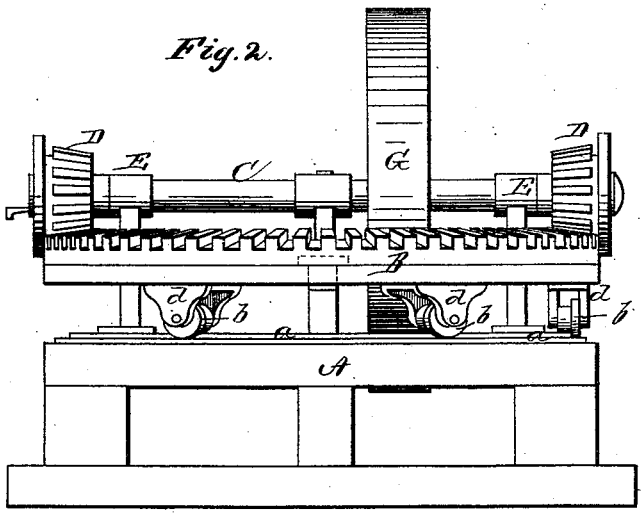


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN S. SCHOFIELD, OF MACON, GEORGIA.

IMPROVEMENT IN HORSE-POWERS.

Specification forming part of Letters Patent No. **163,534**, dated May 18, 1875; application filed February 15, 1875.

To all whom it may concern:

Be it known that I, JOHN S. SCHOFIELD, of Macon, in the county of Bibb and in the State of Georgia, have invented certain new and useful Improvements in Horse-Powers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

On the 15th day of September, 1874, Letters Patent No. 155,111 were granted to me for certain improvements in horse-powers, which Letters Patent have been reissued. In the invention there patented a large armless master-wheel is used, which has a groove on its under side, into which are placed rollers that are attached to castings rigidly secured to the bed-frame. In such invention the rollers simply revolve in their castings, and are not carried around with the master-wheel. The present application is intended as an improvement upon such patented device in the particular hereinafter described and claimed. My invention, therefore, relates to that class of horse-powers in which an armless wheel is made to revolve and transmit power to a band or other wheel within the same; and the nature of my invention consists in a circular railway-track made stationary on the base, and a series of strands containing small flanged car-wheels bolted securely to the under side of the master-wheel, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view of a horse-power embodying my invention. Fig. 2 is a side elevation of the same.

A represents the base of my horse-power, and B is the armless master-wheel. On the base A is secured a circular railway-track, *a*, upon which run a series of small flanged car-wheels, *b b*, each of said wheels being suitably journaled in a stand, *d*, secured to the under side of the master-wheel B. C is a central shaft held above the master-wheel B in suitable standards E E secured to the base. On the ends of the shaft C are the flanged pinions D D gearing with the master-wheel, one of said pinions being loose on the shaft and the other fast thereon. On the shaft C, within the master-wheel B, is further secured the band or gear wheel G, from which motion is communicated to the machine to be driven. H H are the levers attached to the master-wheel, and to which the horses are to be hitched.

K K are slotted castings secured to the frame and carrying-rollers *x x*, which latter bear against the inner periphery of the master-wheel. These rollers, together with the flanged rollers *b b*, which rest on the track *a*, act as guides to keep the master-wheel in proper position on the frame and allow it to freely revolve.

I am aware that railroad turn-tables have been provided with under-projecting rollers, which run upon a track; hence I do not broadly claim such as my invention.

My main object has been to reduce the draft in horse-powers, and especially in the invention as previously patented to us.

It will be understood that in the device as previously patented the master-wheel B is provided with a circumferential groove in its bottom; and the friction-rollers are attached to castings rigidly secured to the bed-frame. In such case it was found difficult to have the groove perfectly circular and perfectly smooth, and oftentimes the friction-rollers by wear would twist and catch in this groove, and have a tendency to retard the free movement of the master-wheel.

In my present invention I dispense with the groove in the master-wheel, and provide a track on the bed-frame. This not only lessens the draft of the machine, but obviates the difficulties experienced in the other invention.

I am also enabled, with the construction of the present machine, to dispense with the flanges on the pinions which gear into the upper surface of the master-wheel, inasmuch as the friction-rollers have flanges and rotate with the master-wheel.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is—

The combination, in a horse-power, of a frame, A, having circular track *a*, and the master-wheel B, having castings *d d*, carrying the flange-rollers *b b*, all substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 31st day of December, 1874.

JOHN S. SCHOFIELD.

Witnesses:

W. T. CLARKE,

A. C. CLIETT.