2 Sheets—Sheet 1.

A. D. MANLEY.

HORSE-POWER.

No. 170,386. Patented Nov. 23, 1875.

Fig 1

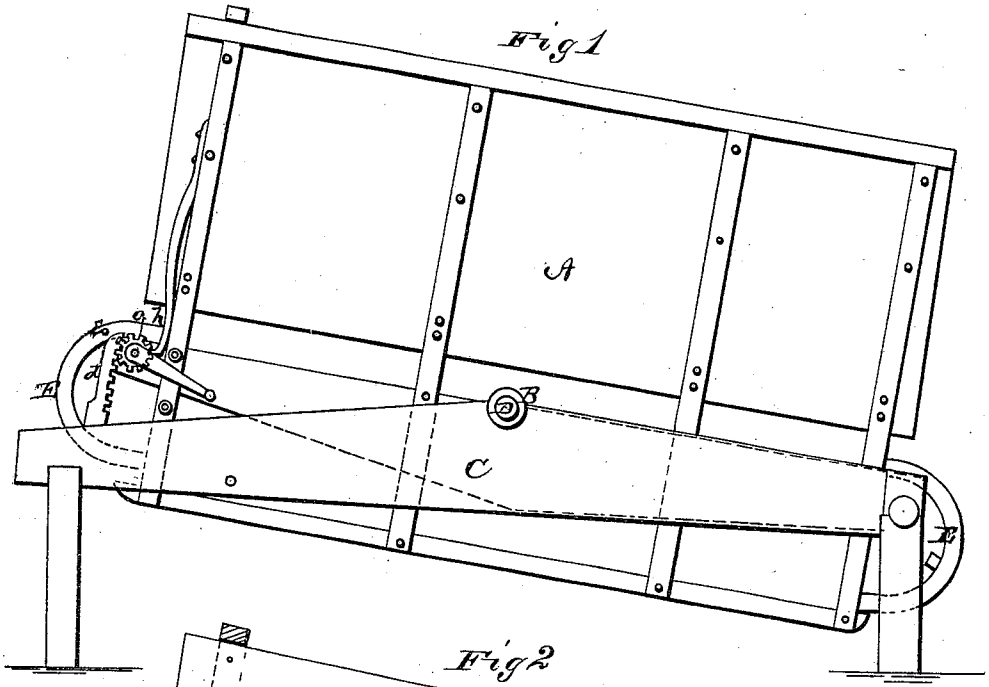
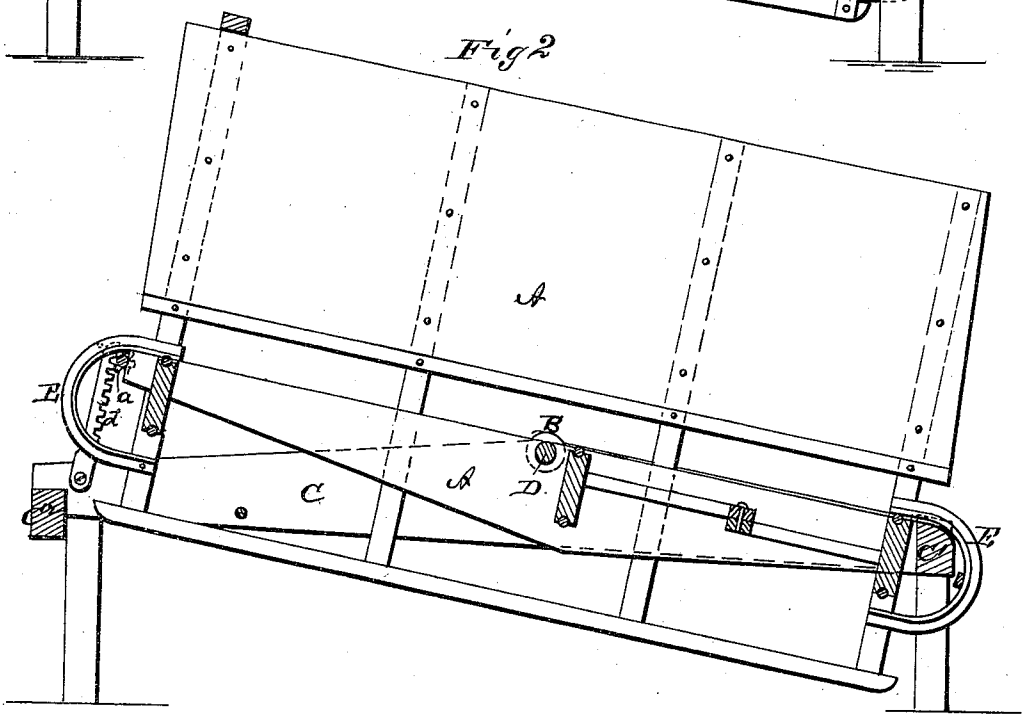


Fig 2



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2 Sheets—Sheet 2.

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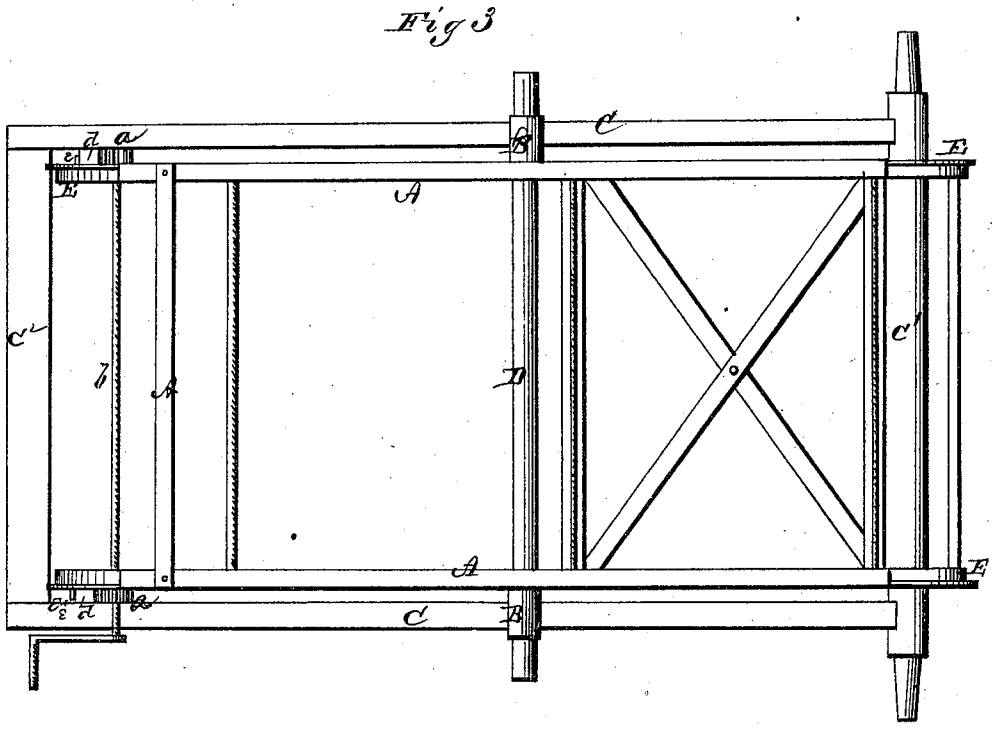
Fig 3



WITNESSES

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UNITED STATES PATENT OFFICE.

ALMON D. MANLEY, OF WASHINGTON, MICHIGAN.

IMPROVEMENT IN HORSE-POWERS.

Specification forming part of Letters Patent No. **170,386**, dated November 23, 1875; application filed May 6, 1875.

To all whom it may concern:

Be it known that I, ALMON D. MANLEY, of Washington, in the county of Macomb and in the State of Michigan, 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.

My invention relates to that class of animal or horse powers known by the name of "tread-mill horse-powers;" and it consists in supporting the main body of the power on center gudgeons within an outside frame or support, in the means of adjusting the power at any angle desired, and in the construction and combination of parts, 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 drawings, in which—

Figure 1 is a side elevation, Fig. 2 a longitudinal vertical section, and Fig. 3 a plan view, of my invention.

A represents the body or main frame of my horse-power, provided on the outer sides of its side pieces with hollow center gudgeons B B, which rest in an outside frame or support C, the body or main frame being entirely within the outside frame. D is the main shaft of the horse-power, which passes through the hangers or gudgeons B B, they serving as boxings or bearings for the shaft, thus avoiding any vibration in the tension of the belt in altering the pitch of the power. The rear cross-bar C^1 of the supporting-frame C forms the hind axle for the trucks of a portable power, and the forward bar C^2 forms the bolster. The track in the main frame A, around which the endless chains move, may be constructed in any of the known and usual ways, with segments E E at the ends, the rear segments clasping, or rather passing around, the rear axle C^1.

The elevation of the power is controlled by the following means: Through the front end of the main frame A passes a shaft, *b*, upon each end of which is secured a pinion, *a*. Each pinion gears with a rack-bar, *d*, pivoted on the outer supporting-frame C, and held against the pinion by a pin, *e*, on the segment E. When the power is set at the desired pitch, it is held by means of a spring-latch, *h*, catching in the pinion *a*, and preventing any movement thereof.

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

1. The combination, in a horse-power, of the body A, having hollow gudgeons B B, frame C, shaft D, cross-bar C^1, segments E E, shaft *b*, pinions *a a*, and rack-bars *b b*, all substantially as set forth.

2. The latches *h*, in combination with the pinions *a* and rack-bars *d*, arranged with a centrally-suspended horse-power body, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of April, 1875.

ALMON D. MANLEY.

Witnesses:

JAS. M. VAUGHAN,

IDA B. VAUGHAN.