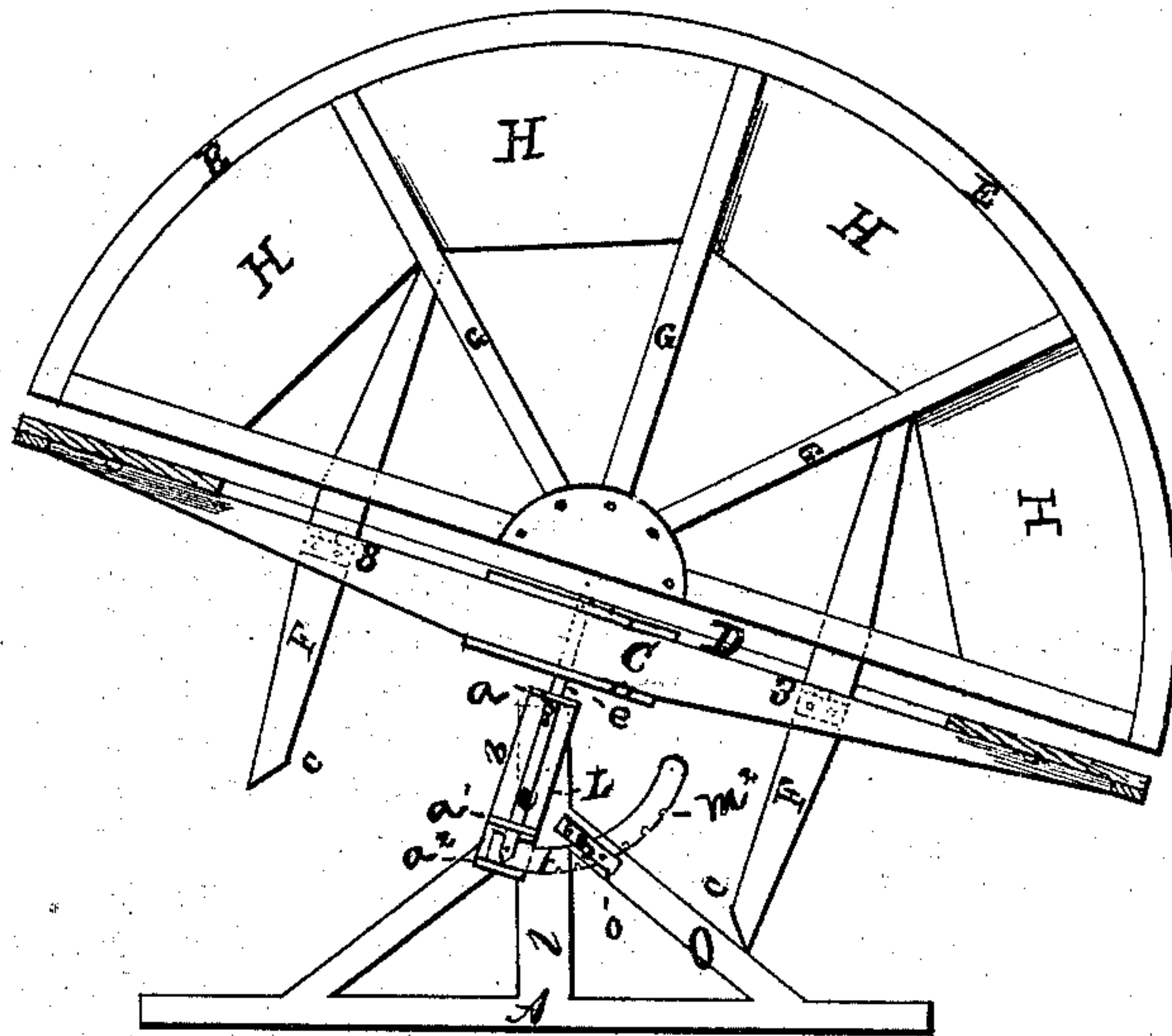


D. E. PANGBURN.  
Dog-Powers.

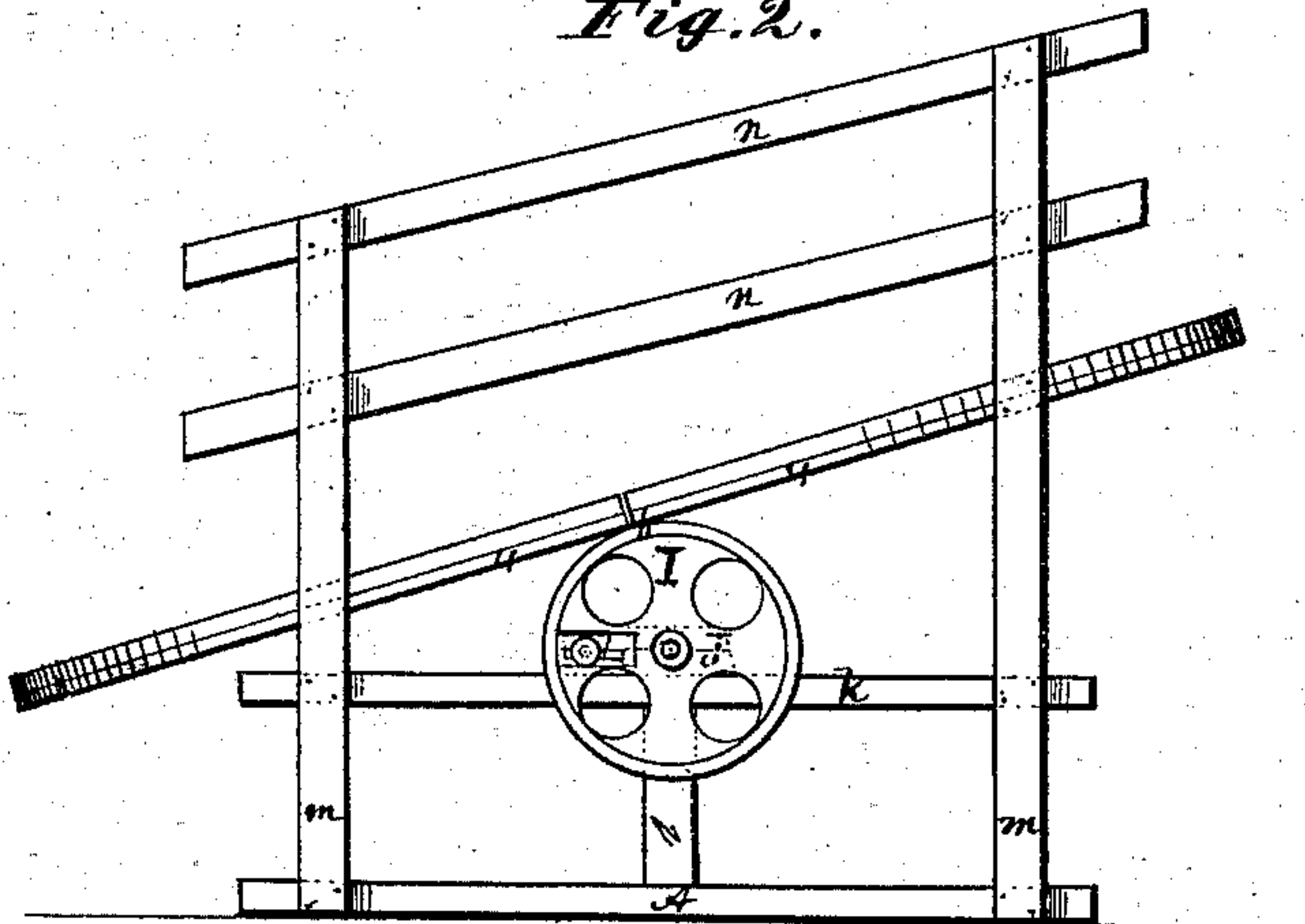
No. 154,075.

Patented Aug. 11, 1874.

*Fig. 1.*



*Fig. 2.*



Witnesses.

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# UNITED STATES PATENT OFFICE.

DAVID EMORY PANGBURN, OF UTICA, NEW YORK.

## IMPROVEMENT IN DOG-POWERS.

Specification forming part of Letters Patent No. **154,075**, dated August 11, 1874; application filed July 20, 1872.

*To all whom it may concern:*

Be it known that I, DAVID EMORY PANGBURN, of Utica, county of Oneida, State of New York, have invented a new and valuable Improvement in Dog-Power; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 is a side elevation embodying my improvement. Fig. 2 is a side elevation of the same.

This invention has relation to dog-powers; and the novelty consists in the tread-wheel, made in two parts, and hinged together to form a perfect wheel.

In the annexed drawings, A represents a frame, which is firmly connected together by means of cross-bars and brace-rods. M N represent the posts and guard-rails attached to one side of this frame to prevent the animal that drives the wheel from stepping off while operating the machine. K represents the horizontal bar, upon which the journal-boxes J are attached in the usual way, to support and hold the shaft B in its relative position. To this shaft B the crank-wheel I is keyed, at its outer end, as shown in Fig. 2. This crank-wheel, with its shaft, is arranged on a parallel line with the tread-wheel, as will be hereinafter described. C D represent the horizontal dividing-arms, the length of the wheel, less the width of the dividing-band. G G are the frame-arms, extending from the periphery to the center of the wheel, and secured to their respective half-wheels by means of screws, or bolts, and metal plates. On the upper surface of these arms G G is laid the animal-track or foot-boards H H. F F represent arms, rigidly secured to the upper side of one of the sectional wheels, and to that section that is designed to be folded, and connected to the arms C C by means of hinges 3 3, so that by putting the sections of the wheel together and arranging them in the same plane a complete circle is formed for use. The lower ends *c* of the arms F F are intended to come up to a level with their opposite ends, and are prevented from passing beyond, and too

far, by metal stop-plates secured to the arms G. To the under side of the foot-boards, and to the outer ends of the frame-arms G, is secured a circumferential band, E, which is designed to come in contact with, and to rest upon, the crank-pulley I. This band is to be of a corresponding width to the pulley. L represents the spindle-bracket, pivoted near its upper end to the upper end of the inner support of the frame A. This spindle-bracket consists of three journal-bearings, *a a<sup>1</sup> a<sup>2</sup>*, with a notched ratchet-lever attached thereto. The vertical shaft *e* of the tread-wheel passes down through the journal-bearing *a* and *a<sup>1</sup>*, and is stepped into the lower bearing *a<sup>2</sup>*. The adjustable notched ratchet-bar *m<sup>2</sup>* is pivoted to the lower end of the bracket L, between the bearings *a<sup>1</sup>* and *a<sup>2</sup>*, and works in conjunction with the stop *o*, attached to diagonal brace O of the frame A, as fully shown in Fig. 1. By this means the desired angle is given to the tread-wheel.

The manner of operating my machine is as follows: After the wheel is properly set and in position, the spindle-bracket is set to the desired angle to secure such motion and power as may be required; the wheel is driven by the movement and weight of the animal, and if the wheel runs too slow or too fast a change can readily be effected by moving the ratchet-bar *m<sup>2</sup>* either up or down, as may be required, without stopping the machine. To the crank-wheel a pitman can be attached in the ordinary manner for the purpose required.

It will be seen from the above description that I am able to adjust the tread-wheel without stopping the animal by adjusting the notched lever working in conjunction with the stop on the diagonal bar. Also, I am able, by constructing the wheel in two sections, to fold it in a compact small form for storing away and transportation.

I claim as my invention—

The sectional hinged tread-wheel, consisting of the horizontal dividing-arms C D, frame-arms G, track H, arms F, and band E, substantially as described.

DAVID EMORY PANGBURN.

Witnesses:

HORATIO OLIN WILLIAMS,  
W. H. HACKETT.