

(No Model.)

D. D. CAMP.

FOOT POWER.

No. 356,921.

Patented Feb. 1, 1887.

Fig. 1

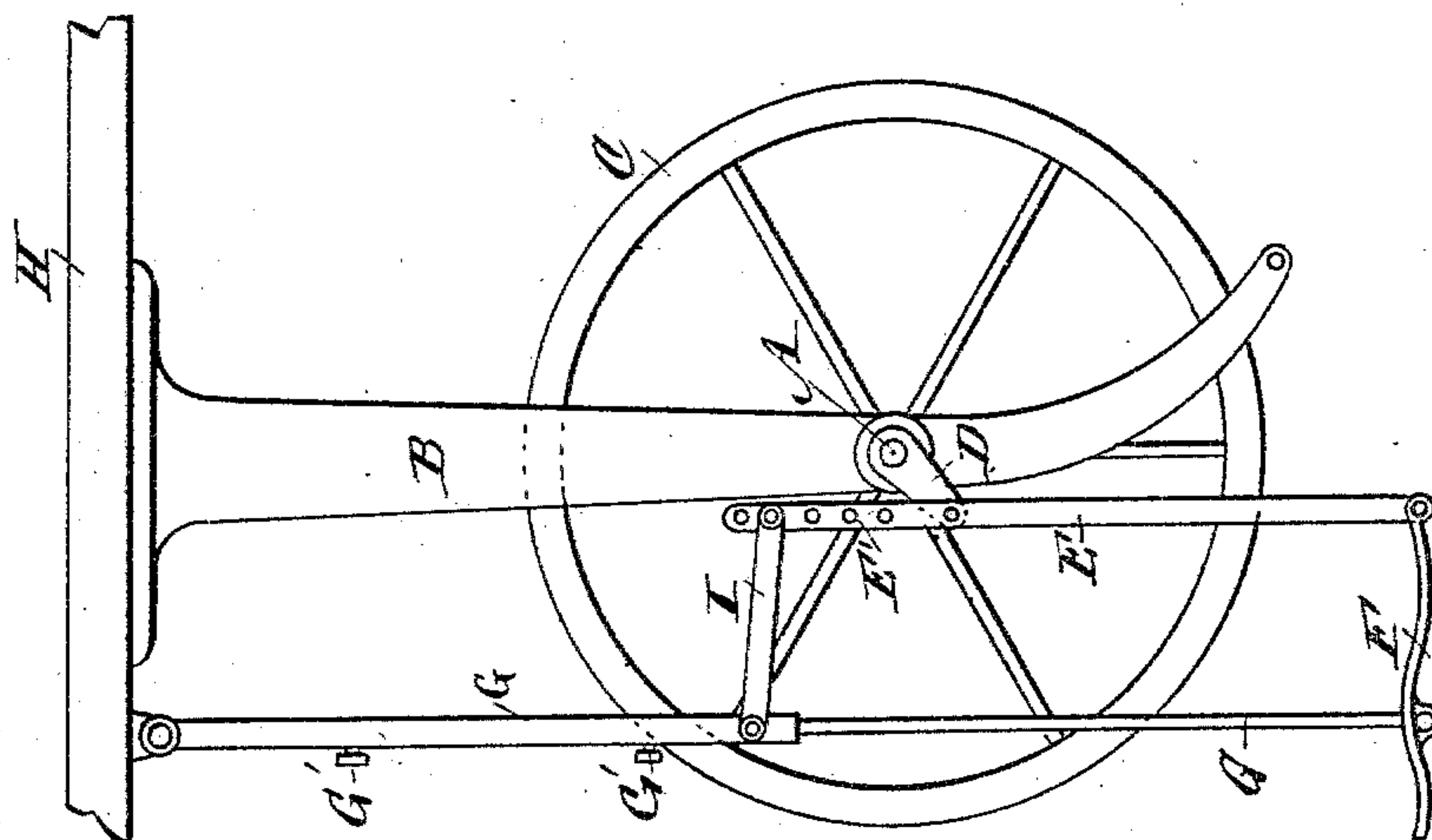
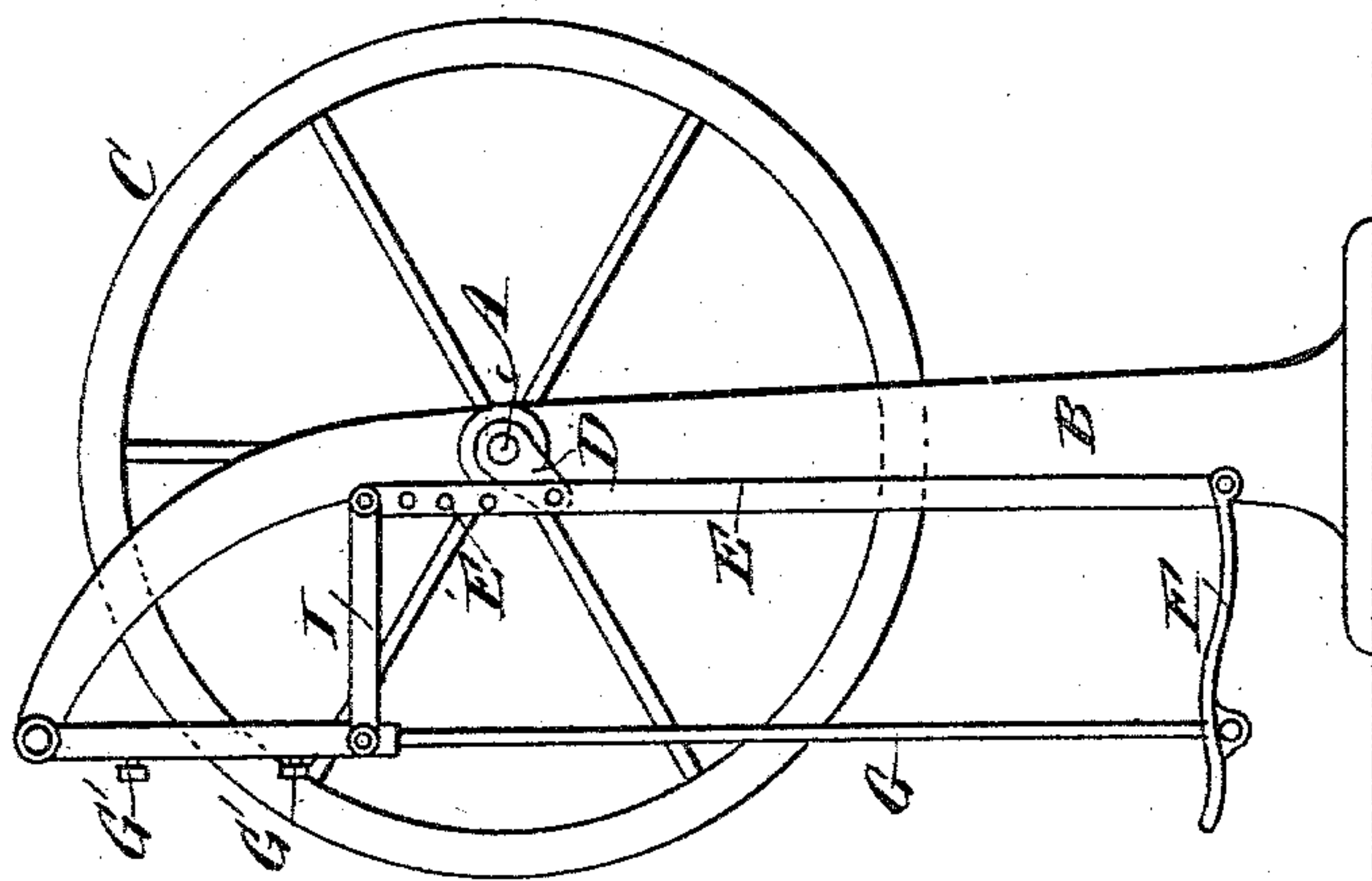


Fig. 2



WITNESSES:

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FOOT-POWER.

SPECIFICATION forming part of Letters Patent No. 356,921, dated February 1, 1887.

Application filed April 12, 1886. Serial No. 198,574. (No model.)

To all whom it may concern:

Be it known that I, DAVID D. CAMP, of Stoughton, in the county of Dane and State of Wisconsin, have invented a new and Improved Foot-Power, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved foot-power in which a dead-center is avoided, and which is applicable to a bench or a stationary frame.

The invention consists in various parts and details and combinations of the same, hereinafter more fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of my improvement attached to a bench. Fig. 2 is an end elevation of the same; and Fig. 3 is a side elevation of my improvement attached to a standing frame.

The shaft A is mounted in a suitable bearing on a frame, B, which can be attached to a bench, as shown in Figs. 1 and 2, or be provided with a base, so as to be set on a floor.

The grooved fly and driving wheel C is attached to the shaft A on one side of the frame B, while on the other side of the latter is the crank-arm D, secured to the shaft A. The crank-arm D is pivotally connected with the link E, having a series of apertures, E'. The lower end of the link E is pivoted to the outer end of the treadle F, the treadle having its fulcrum on the swinging arm G, pivoted at its upper end either to the bench H, as shown in Figs. 1 and 2, or to the bent upper end of the frame B, as seen in Fig. 3. The swinging arm G is made in two parts, which telescope each other, and can be fastened together to any desired length by the thumb-screws G'. The upper end of the link E is connected by a short link, I, with the swinging frame G, so as to form a parallelogram composed of part of the swinging arm G, the links I and E, and the foot-treadle F.

The operation is as follows: The driving-wheel C can be set in motion in either direc-

tion by pressing with the foot on either the heel or toe part of the treadle F, so that the link E imparts a swinging motion to the crank-arm D, which causes the parallelogram to oscillate, the upper pivoted end of the swinging arm G being the fulcrum. As the treadle F is a part of the parallelogram, it swings forward and backward, so that the crank-arm D and the treadle F are prevented from assuming a dead-center position in relation to the shaft A. The link E can be lengthened or shortened in relation with the crank-arm D by connecting the crank-pin D' of the latter with the desired aperture E' in the link E, and the swinging arm G is then adjusted to suit this adjustment by sliding the telescoping parts of the frame D correspondingly in or out, and then fastening the two telescoping parts together by the thumb-screws G'.

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

1. The combination, with a frame, B, and a shaft, A, journaled therein, having a crank-arm, D, of a rod pivoted at its upper end to swing and extending at its lower end below the crank, the link E, pivoted between its ends on the pin of the crank, the link I, connecting the swinging rod between its ends to the upper end of the link E, and the treadle F, pivoted to the lower ends of the swinging rod and link E, respectively, substantially as set forth.

2. In a foot-power, the combination of a crank-arm attached to a shaft carrying the driving-wheel and a link having a series of apertures with a swinging arm made of two parts which can be adjusted to each other by a thumb screw, a treadle pivoted on the said swinging arm and pivotally connected with the crank arm link, and a short link connecting the swinging arm with the upper end of the crank-arm link, substantially as shown and described.

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Witnesses:

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