

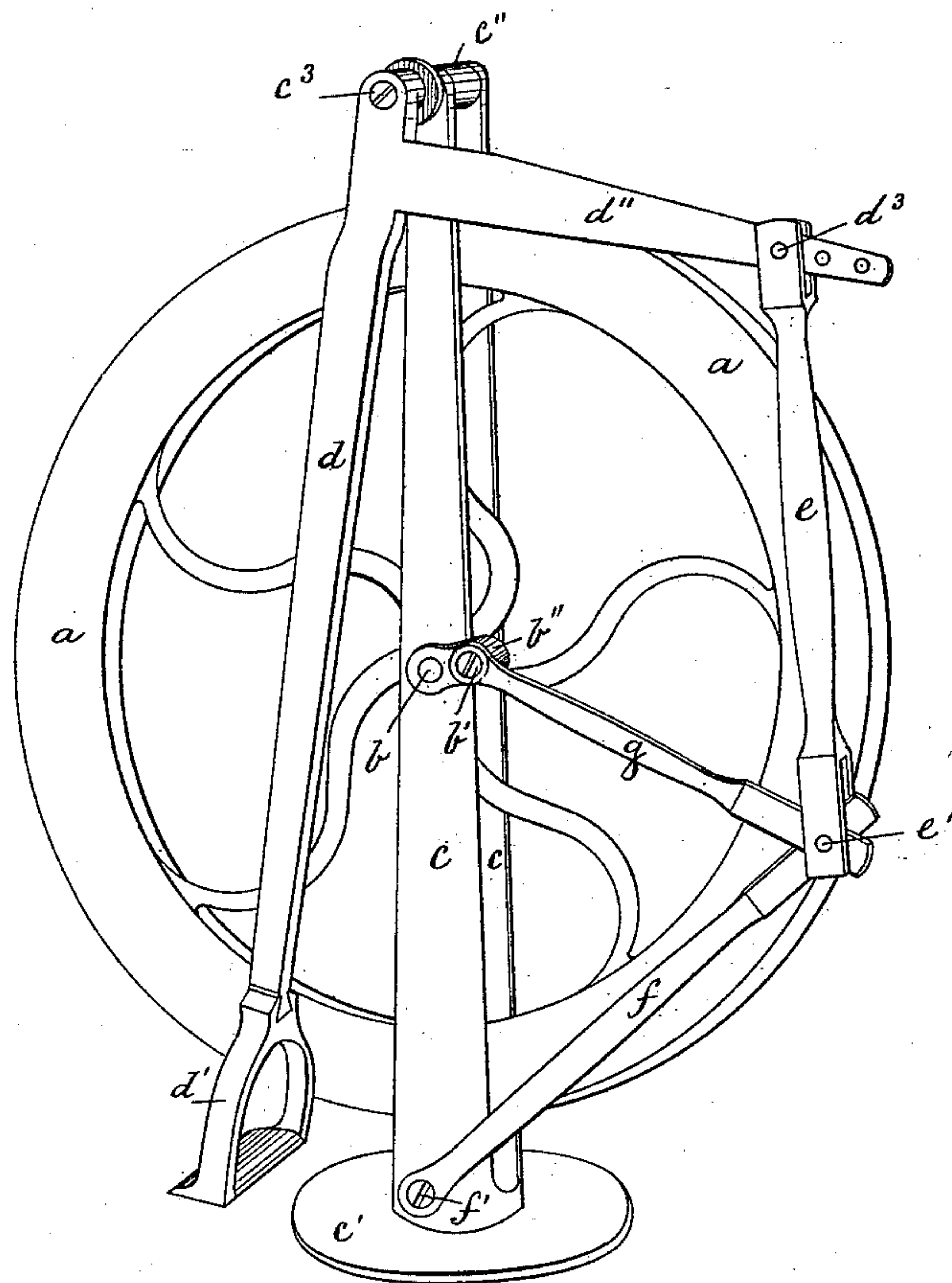
(No Model.)

D. P. FOSTER.

TREADLE MOTION.

No. 299,921.

Patented June 3, 1884.



Witnesses.

Sarah M Goodrich

Henry Chadbourne.

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# UNITED STATES PATENT OFFICE.

DAN P. FOSTER, OF WALTHAM, MASSACHUSETTS.

## TREADLE-MOTION.

SPECIFICATION forming part of Letters Patent No. 299,921, dated June 3, 1884.

Application filed April 24, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, DAN P. FOSTER, a citizen of the United States, residing at Waltham, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Treadle-Motions; and I do hereby declare that the same are fully described in the following specification and illustrated in the accompanying drawing.

10 This invention relates to improvements in treadle-motions for the purpose of imparting a continuous rotary motion to a balance-wheel by a reciprocating horizontal movement of the operator's foot; and it is carried out as follows, reference being had to the accompanying drawing, representing a perspective view of the invention.

20 In the drawing, *a* represents the fly-wheel or balance-wheel to which a rotary motion is to be imparted, such wheel being secured to a spindle, *b*, running loosely in bearings or perforations in the vertically forked or slotted standard *c*, the latter having in its lower end a platen or sole-plate, *c'*, secured by screws or otherwise to the floor or other stationary object in the ordinary manner. In its upper end, above the balance-wheel *a*, the forked standard *c* is cast in one piece, preferably with a brace or hub, *c''*, as shown.

30 To the upper end of standard *c* is hinged by means of a suitable screw, stud, or bolt, *c<sup>3</sup>*, the downwardly-projecting treadle-lever *d*, provided in its lower end with a stirrup-shaped treadle, *d'*, the latter being preferably made as a separate piece from the lever *d*, and attached to the lower end of the latter by a dovetailed projection on the lever *d*, and a corresponding recess in the upper end of stirrup *d'*, so that the said stirrup may be reversed in position on the lever *d* in case it is desired to locate the latter on the opposite side of the standard *c*, to suit the requirements of left-handed operators or for other purposes. I wish to state, however, that I do not wish to confine myself to any particular manner of securing said stirrup *d'* to the lever *d*, as this may be done in any desirable manner or cast in one piece with it without departing from the spirit of my invention.

50 From the upper end of the lever *d* extends rearwardly the arm *d''*, such arm being preferably cast in one piece with the lever *d*,

although it may be made as a separate piece and bolted to the lever *d*, without departing from the essence of my invention.

55 To a pin, *d<sup>3</sup>*, passing through a perforation in the end of arm *d''* is jointed the upper end of the toggle-lever *e*, the lower end of which is jointed by means of pin *e'* to the upper end of the toggle-lever *f*, the latter being hinged 60 by means of bolt or screw *f'* in its lower end to the base of the standard *c*, as shown.

To the pin *e'*, that unites the toggle-levers *e* and *f*, is also jointed the outer end of the connecting-rod *g*, the inner end of which is hinged 65 to the crank-pin *b'* on the crank *b''*, the latter being secured to the spindle *b*, on which the balance-wheel *a* is keyed or otherwise fastened.

The operation of the device is as follows: By placing his foot into the stirrup *d'* the operator 70 causes the lever *d* to rock forward and back on its fulcrum *c<sup>3</sup>* by a swinging motion of his foot, thereby causing the arm *d''* to swing up and down, and by the connecting mechanism of toggle-levers *e f* and connecting-rod *g* to the crank-pin *b'* on the crank *b''* the spindle *b* and its fly-wheel *a* is set in a continuous rotary motion in either direction, as may be desired. 75

By the construction and combination of parts as hereinabove described I obtain a treadle-motion device that is very easy and agreeable in its operation, not liable to stop on a dead-center, and less fatiguing to the operator than other devices for this purpose, and with it the foot-stroke is lessened, while at the same time 85 the leverage is increased, as well as the pressure conveyed to the connecting-rod that drives the crank, making it a very powerful device, combined with ease and facility in its operation. 90

What I wish to secure by Letters Patent, and claim, is—

The treadle-lever *d*, hinged at *c<sup>3</sup>* to the standard *c*, and having stirrup *d'* and arm *d''*, combined with the toggle-levers *e f*, connecting-rod *g*, and crank *b' b''* on the spindle *b*, substantially in a manner and for the purpose as set forth and described. 95

In testimony whereof I have affixed my signature in presence of two witnesses.

DAN P. FOSTER.

Witnesses:

ALBAN ANDRÉN,  
HENRY CHADBURN.