

(No Model.)

J. H. PURDY.

FOOT POWER.

No. 373,483.

Patented Nov. 22, 1887.

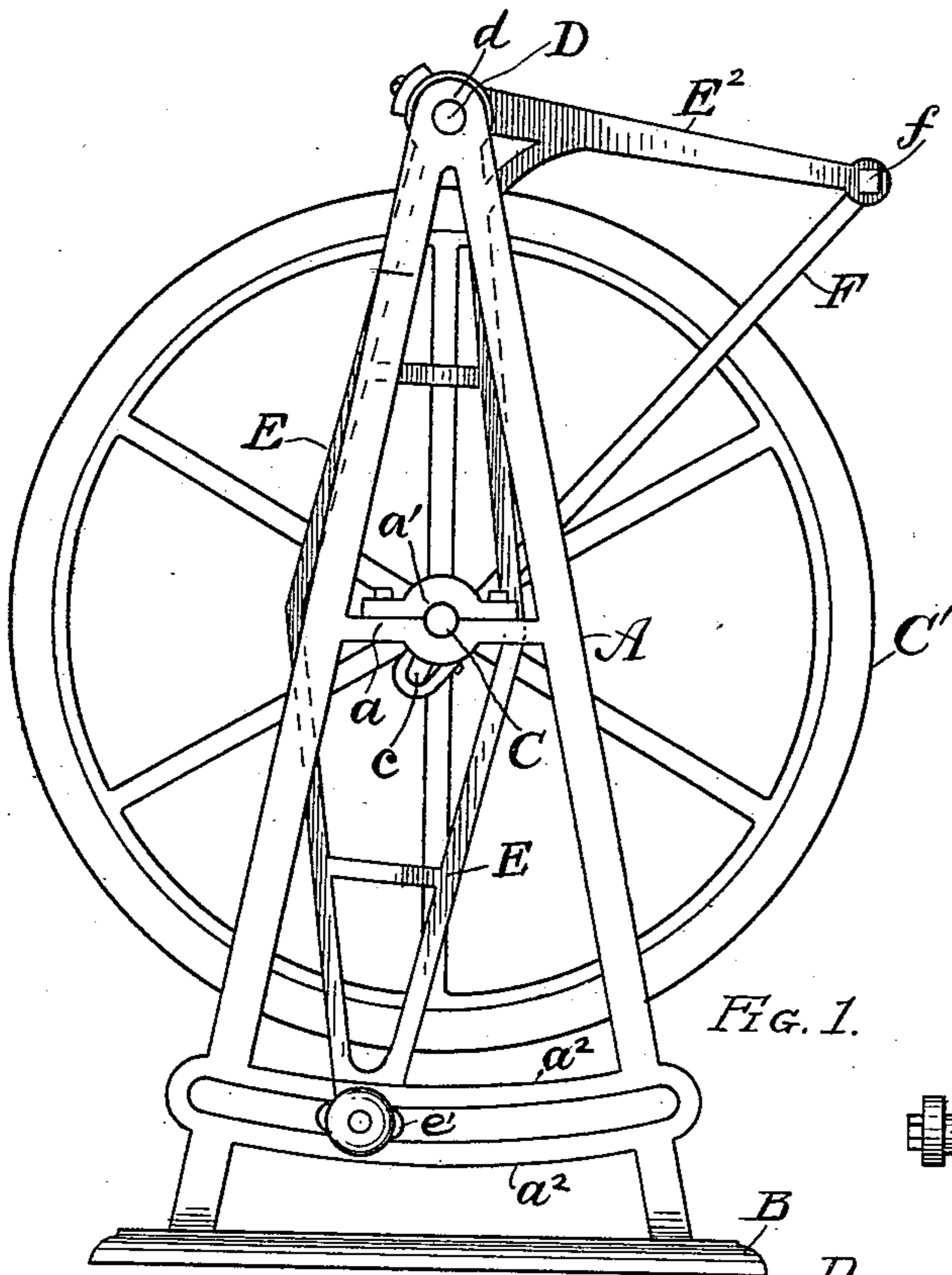


FIG. 1.

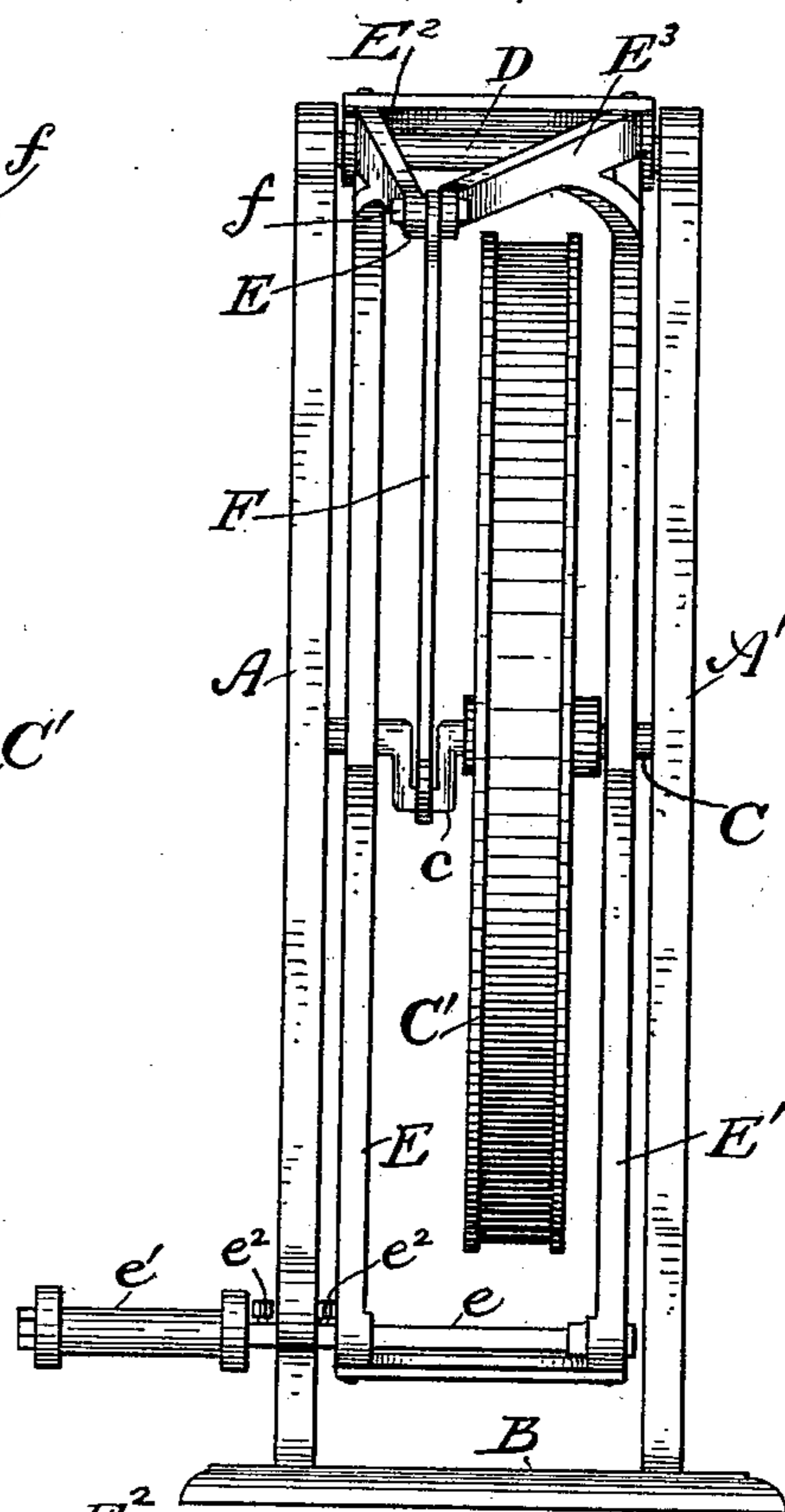


FIG. 2.

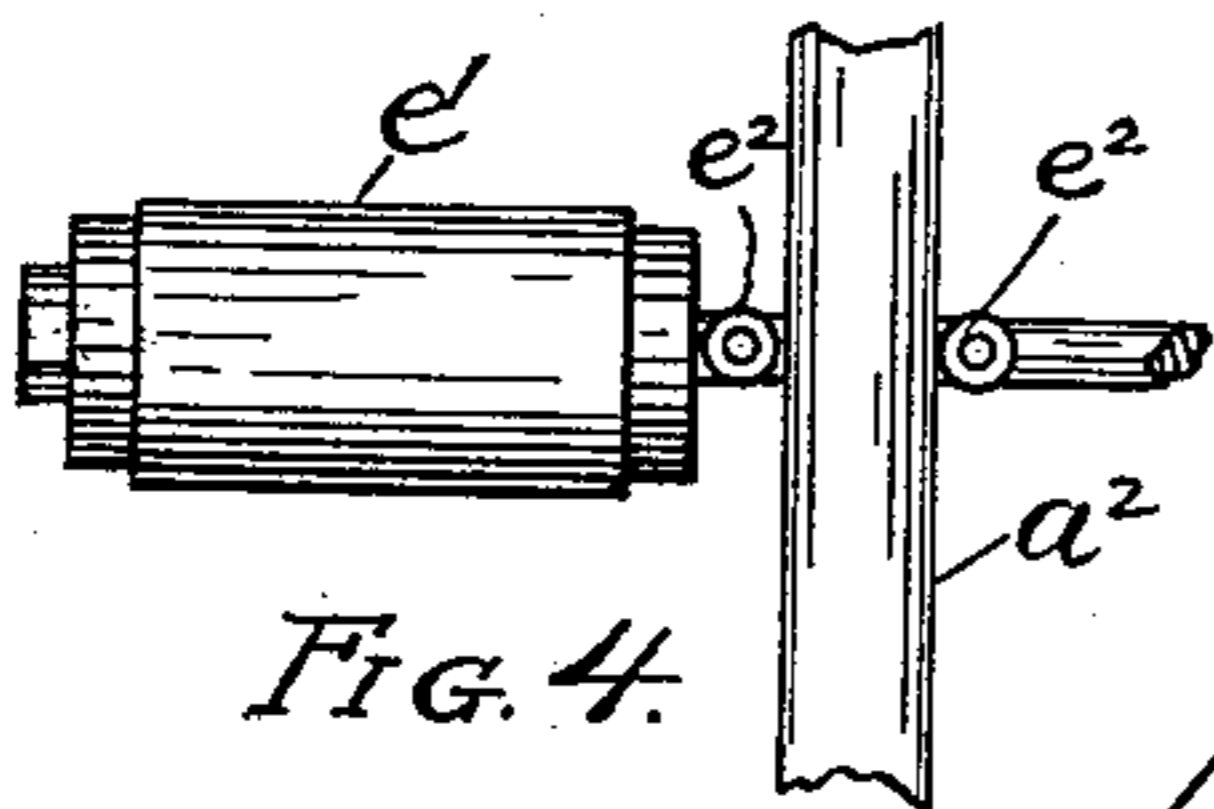


FIG. 4.

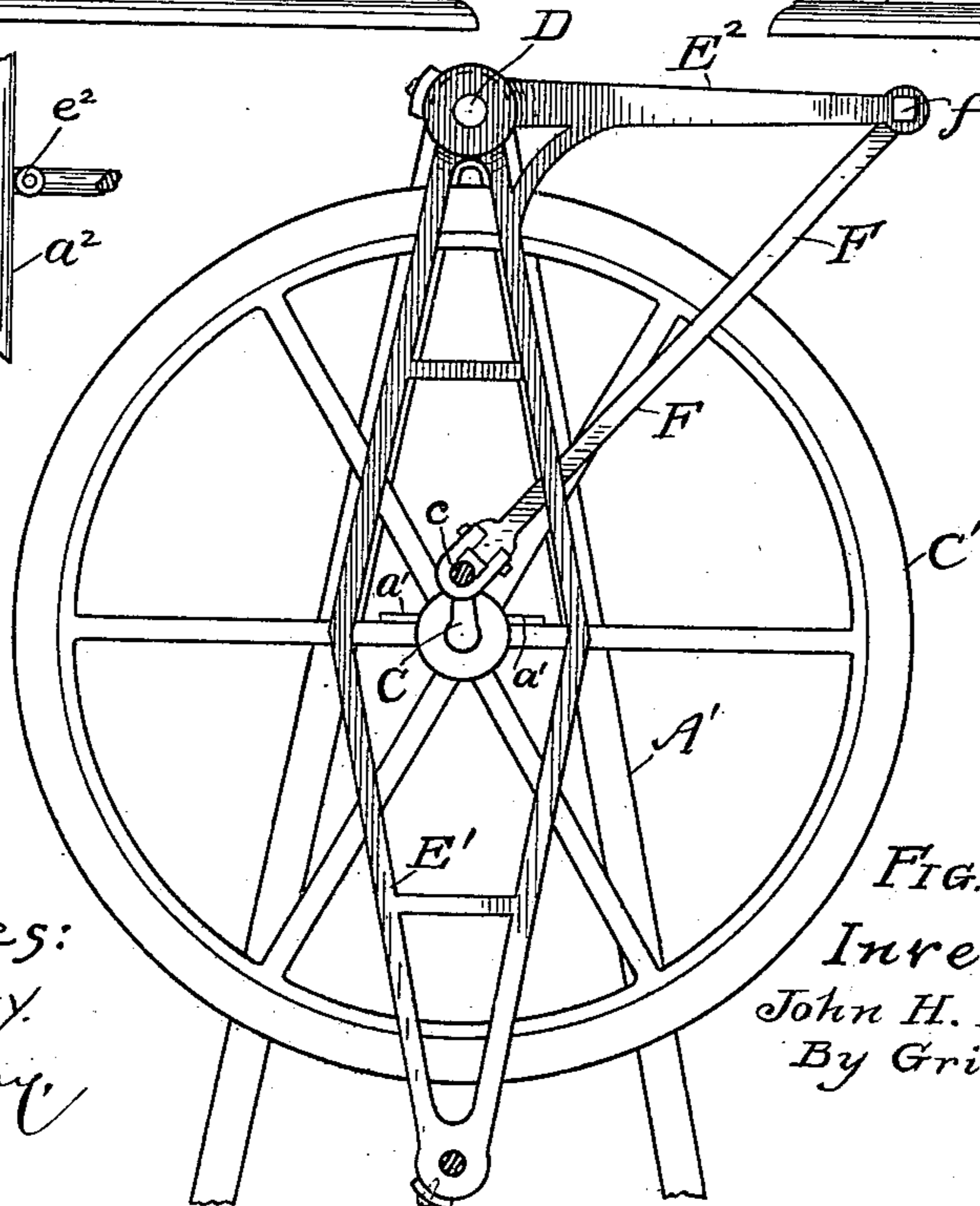


FIG. 3.

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FOOT-POWER.

SPECIFICATION forming part of Letters Patent No. 373,483, dated November 22, 1887.

Application filed August 9, 1886. Renewed August 11, 1887. Serial No. 246,683. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. PURDY, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful

5 Improvements in Foot-Powers, of which the following is a description, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of said wheel. Fig. 2 is a rear elevation of the same. Fig. 3 is a detail view, partly in section, in which the outer frame is removed; and Fig. 4 is a detail view in plan of the treadle and a portion of the connecting parts.

15 Like letters of reference indicate like parts in the different figures.

The object of my invention is to provide a foot-power wheel which shall be simple, cheap, compact, and durable, having its working parts arranged within the frame, so as not to be brought into contact with the clothing of the operator, and which may be actuated by a swinging movement of the foot and lower limb, as distinguished from the usual rocking treadle movement.

25 To this end my invention consists in the peculiar arrangement and construction of the parts, as hereinafter more particularly described and claimed.

In the drawings, A A' represent the frame, which consists, mainly, of two inclined or bracing supports, preferably cast in one piece, as shown in Fig. 1, one of said supports being preferably placed upon each side of the wheel, and both being rigidly attached to a suitable base. Said frame is provided with cross-bars a a', one of which is shown in Fig. 1, provided with suitable journal-boxes, a' a', into which is journaled a crank-shaft, C, having keyed thereto a fly-wheel, C'. Loosely journaled at the top of the frame, at d, is a shaft, D, to which is rigidly attached near the respective ends thereof a depending frame, consisting of the parts E E', which are placed at the respective sides of the wheel C', and are preferably constructed, as shown in the drawings, so as to straddle the shaft C and be free to swing like a pendulum from the axis D. The parts of said depending frame are connected at the bottom by means of a bar, e, which is extended laterally through a slot formed by the curved cross-bars a' a', which describes an arc of a

circle the center of which is the shaft D. Upon the outer end of said bar is attached an ordinary loose treadle, e', secured thereto in any well-known way.

To prevent a lateral movement of the depending frame E E', I prefer to attach one or two friction-rollers, e' e', Figs. 2 and 4, to suitable wrist-pins upon the bar e upon each side of the cross-bars a'; but I do not regard these as essential, provided said swinging frame is made sufficiently stout or is properly braced.

The parts E E' of the frame are provided, respectively, with horizontally-projecting rigid arms E² E³, which are laterally bent, as shown in Fig. 2, so that the ends converge at a point upon one side of the wheel C' in a vertical plane with the crank c of the shaft C. A bolt, f, connects the ends of said arms, to which is loosely attached a pitman, F, which is in turn connected with the crank c, in the usual way.

The arms E² E³ extend in the rear of the machine away from the operator, and the swinging frame is wholly within the stationary or supporting frame, the only movable part outside of said frame being the treadle e'. This construction prevents the clothes of the operator from being brought into contact with the moving parts, while at the same time it is durable and strong and enables the machine to be lightly constructed. It likewise admits of an easy, natural, and graceful movement in its operation, while the power is applied to the crank between the end bearings of the shaft C, which causes a uniform and even movement of the wheel.

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

1. A foot-power consisting of the combination of a stationary frame having a wheel, crank-shaft, and swinging frame mounted therein, said swinging frame depending upon opposite sides of said wheel, there being arms attached rigidly to said swinging frame and extending in the rear thereof, a pitman for connecting the same with said crank, and a treadle extending from said swinging frame to the outside of the main frame, substantially as and for the purposes set forth.

2. In a foot-power, the combination of a stationary frame having a wheel, a crank-

shaft, and swinging frame mounted therein and straddling said shaft, there being arms attached rigidly to said swinging frame and extending in the rear thereof, a pitman for
5 connecting the same with said crank, and a treadle extending from said swinging frame to the outside of the main frame, substantially as specified.

3. A foot-power consisting of the combination of a stationary frame having a wheel, crank-shaft, and swinging frame mounted therein, said swinging frame depending upon opposite sides of said wheel and straddling said crank-shaft, there being arms attached
15 rigidly to said swinging frame and extending in the rear thereof, a pitman for connecting the same with said crank, and a treadle extending from said swinging frame to the outside of the main frame, substantially as and
20 for the purposes set forth.

4. The combination, with a stationary frame having a wheel and crank-shaft mounted in suitable bearings therein, of a swinging frame

arranged within and depending from the top of said stationary frame, a treadle, e' , said
25 swinging frame having arms E^2 E^3 , and a pitman for connecting the same with said crank, substantially as and for the purposes set forth.

5. In a foot-power, the combination, with the supporting-shaft, of the open swinging
30 frame-work pivoted thereon and arranged to straddle the crank-shaft and swing in the arc of a circle, substantially as and for the purposes set forth.

6. The combination, in a foot-power, of a
35 stationary and swinging frame, said stationary frame being provided with curved cross-bars α^2 , a bar, e , extending without the stationary frame for the attachment of a treadle, said bar
40 e being provided with friction-rollers e^2 , substantially as and for the purposes set forth.

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Witnesses:

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