

No. 859,447.

PATENTED JULY 9, 1907.

J. GARCIA.
MECHANICAL MOVEMENT.
APPLICATION FILED JULY 25, 1906.

Fig 1.

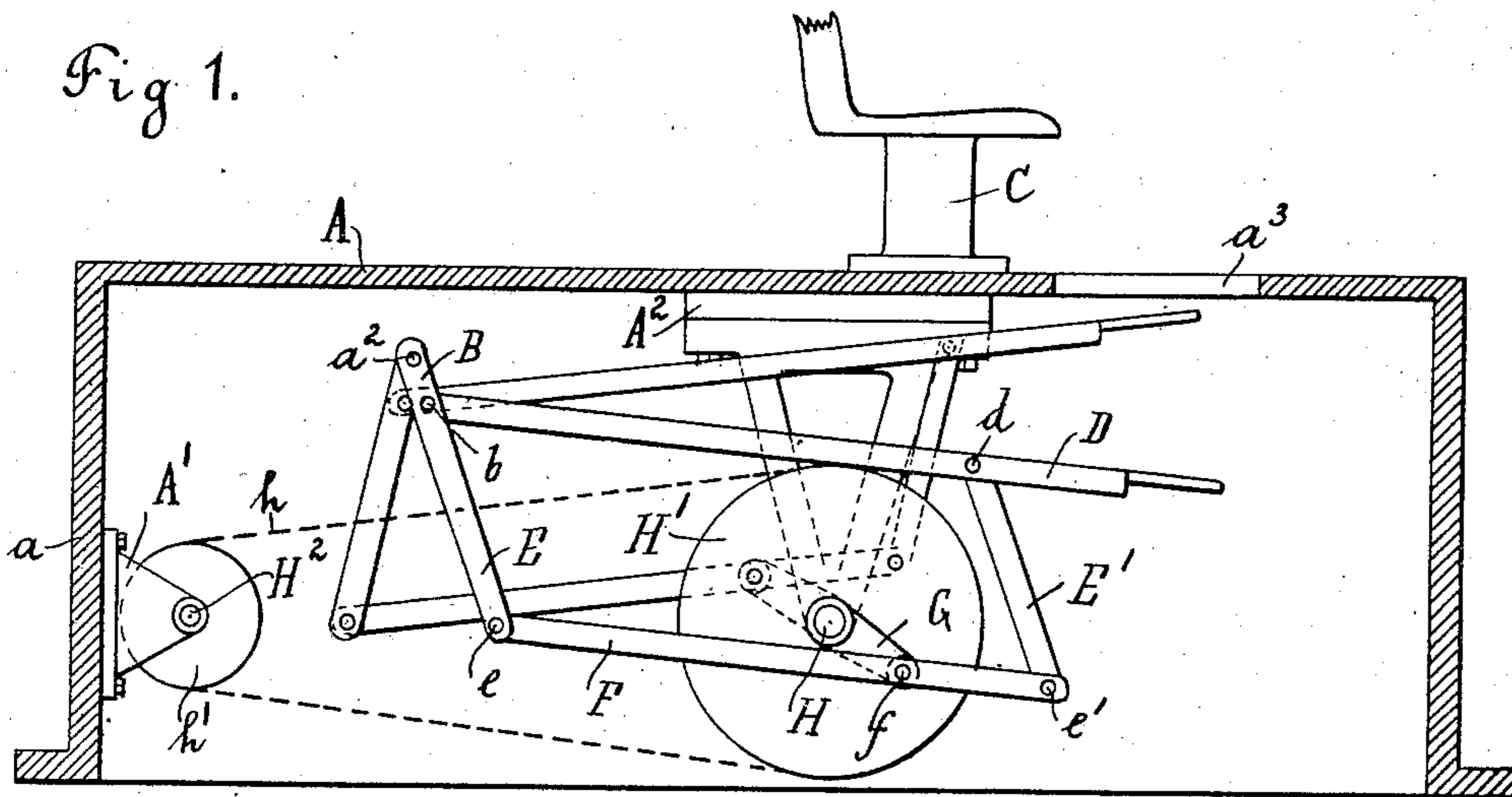


Fig. 2.

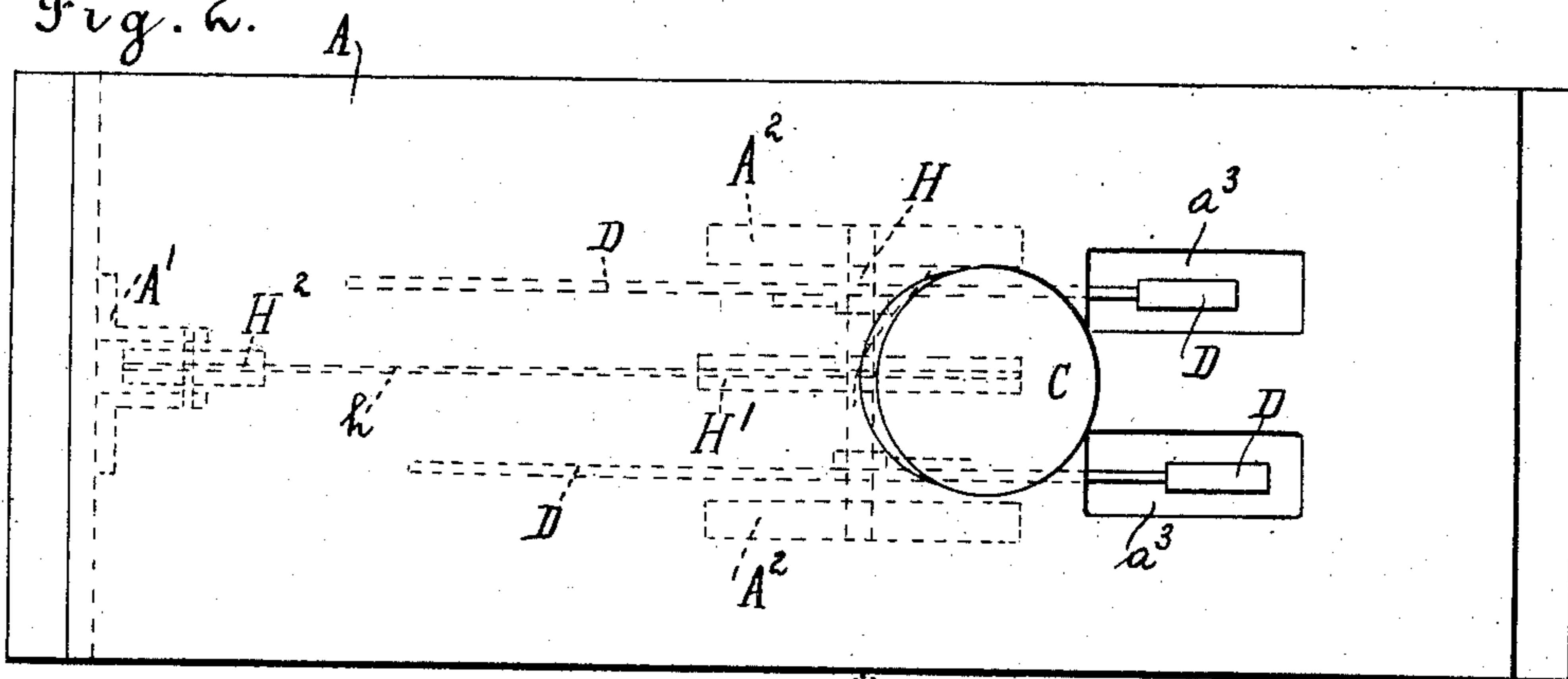
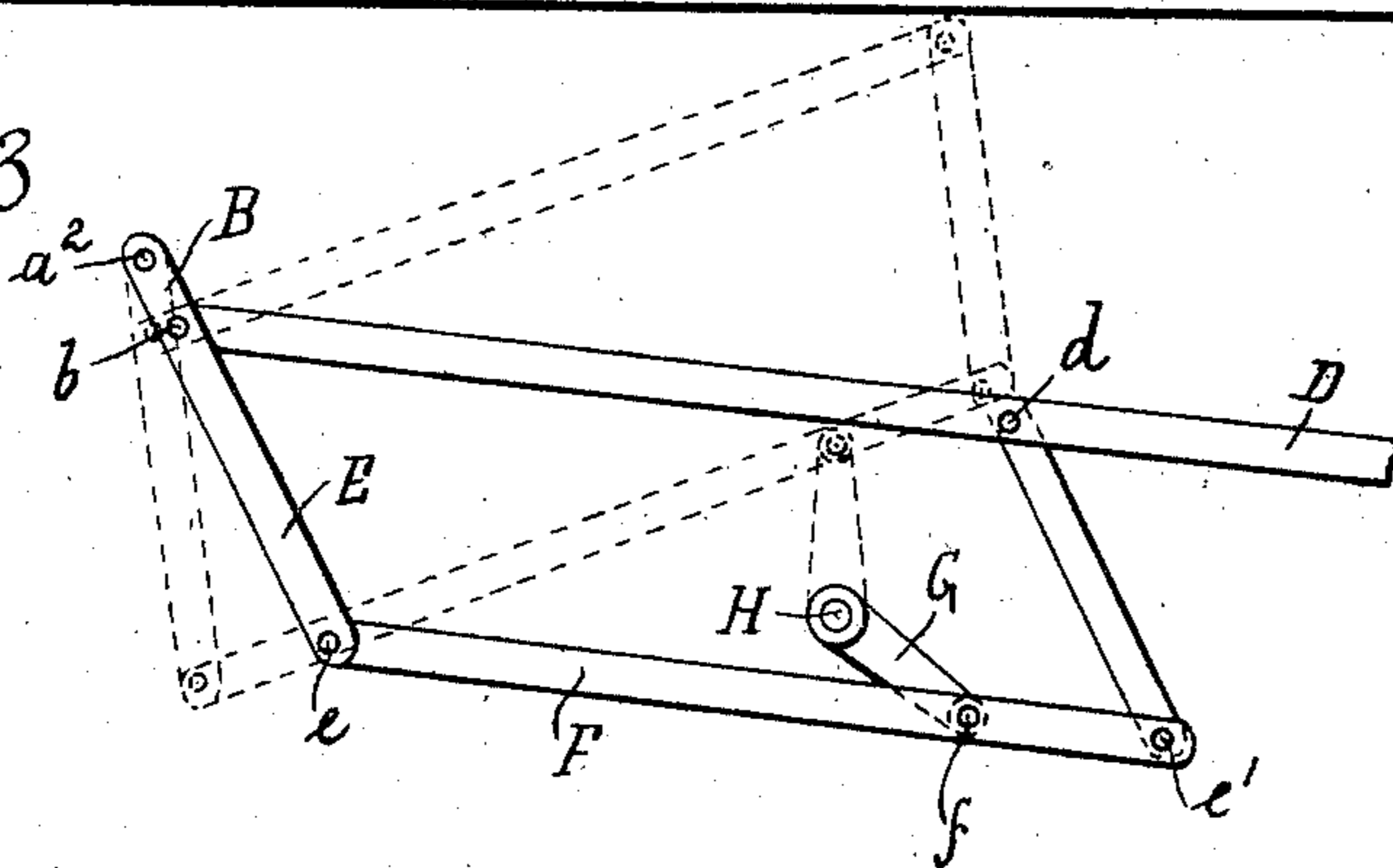


Fig. 3



Witnesses
J. Herzog
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By his Attorney J. C. Fowler

UNITED STATES PATENT OFFICE.

JOSEPH GARCIA, OF BROOKLYN, NEW YORK.

MECHANICAL MOVEMENT.

No. 859,447.

Specification of Letters Patent.

Patented July 9, 1907.

Application filed July 25, 1906. Serial No. 327,762.

To all whom it may concern:

Be it known that I, JOSEPH GARCIA, a citizen of the United States of America, and a resident of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Mechanical Movement, of which the following is a specification, the same being a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a mechanical movement to be used preferably as a foot power and which may be utilized for a variety of purposes where a reciprocatory movement is desired to be converted into a rotary one, as where one wants to rotate a shaft or crank arm by a simple up and down movement of the foot; and my invention embodies certain novel features of construction and combination and arrangement of parts forming in operation a simple and efficient organization.

To attain the desired end, this, my invention, consists in the construction, arrangement and operation of novel devices and combination of devices as hereinafter set forth.

In order to enable the invention to be fully understood, I will proceed to explain the same by reference to the drawings, illustrative of one embodiment of the invention, which accompany and form a part of this specification, and in which

Figure 1 represents an elevation of a mechanical movement constructed according to this invention; Fig. 2 is a plan view of the same, and Fig. 3 is a view in detail of the operating parts of my structure.

Like letters of reference indicate like parts in all the views.

Referring particularly by reference characters to the drawings in the present embodiment, A denotes any suitable frame or supporting means for the mechanical movement, which frame is preferably provided with legs *a*. The seat C may be used in connection with the said frame, and means, as the orifices *a*³ are ordinarily provided in order to allow the feet of the operator to work the treadles of the mechanical movement which is preferably constructed as follows: A movable and preferably swinging lever B is ordinarily hung from the frame A, to which lever B is pivoted the treadle D as at *b*. At the other end of the swinging lever B is pivoted at *e* a lever F, ordinarily parallel with the treadle D, which lever F is connected, intermediate of the ends thereof, with one of the crank arms G of the shaft H. The end of the lever F is preferably connected with the treadle D by the lever E' pivoted to both of the said parts at *d* and *e'*, the same being ordinarily positioned parallel to the swinging lever B. A second treadle and a duplicate set of levers are preferably used in connection with the other crank arm; the two crank arms being ordinarily located in practically the same plane.

It will be observed that each treadle oscillates simultaneously with the crank arm with which it is connected, but that while the crank arm makes a complete revolution, traveling in a circle, the treadle end moves coincident therewith up and down almost vertically and in an oval or elliptical curve on account of the forward and backward movement of the treadle, by reason of the motion of the swinging lever to which it is pivoted.

I wish it to be understood that I do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

What I claim as my invention is:

1. A treadle, a lever positioned approximately parallel with the treadle, a shaft, a crank arm attached to the shaft and to the last named lever intermediate of the ends thereof, and levers to connect the said last named lever with the treadle, one of the last named levers being pivoted to a support and having a bearing formed in it for the treadle.

2. A treadle, a crank arm located approximately below the middle of the same, and connecting means to cause the free treadle end to move up and down almost vertically and in an oval or elliptical curve coincident with the revolution of the crank arm.

3. A crank arm, a treadle pivoted to a swinging lever, a lever positioned approximately parallel with the treadle and also connected with the swinging lever, and also connected with the crank arm intermediate of the ends thereof, and a lever connecting the treadle and the lever positioned approximately parallel therewith.

4. A lever serving as a treadle, a shaft, a rotatory crank arm attached at one end to the shaft and at the other end to a lever intermediate of the ends thereof, said lever being positioned approximately parallel to the treadle, a swinging lever in which bearings are formed for one end of each of the two said levers, and connecting means for the other ends of the two said approximately parallel levers positioned in the same general direction as is the said swinging lever.

5. A shaft, a lever serving as a treadle, a rotatory crank arm attached at one end to the shaft and at the other end to a lever intermediate of the ends thereof, said lever being positioned approximately parallel to the treadle, a swinging lever in which bearings are formed for one end of each of the two said levers, and connecting means for the other ends of the two said approximately parallel levers positioned in the same general direction as is the said swinging lever, in combination with another lever serving as a treadle, another rotatory crank arm attached at one end to the shaft and at the other end to a lever intermediate of the ends thereof, said lever being positioned approximately parallel to the treadle, a swinging lever in which bearings are formed for one end of each of the two said levers, and connecting means for the other ends of the two said approximately parallel levers positioned in the same general direction as the said swinging lever.

In testimony of the foregoing specification I do hereby sign the same in the city of New York, county of New York and State of New York this 16th day of July 1906.

JOSEPH GARCIA.

Witnesses:

ROB. SCHWARZ,
J. O. FOWLER.