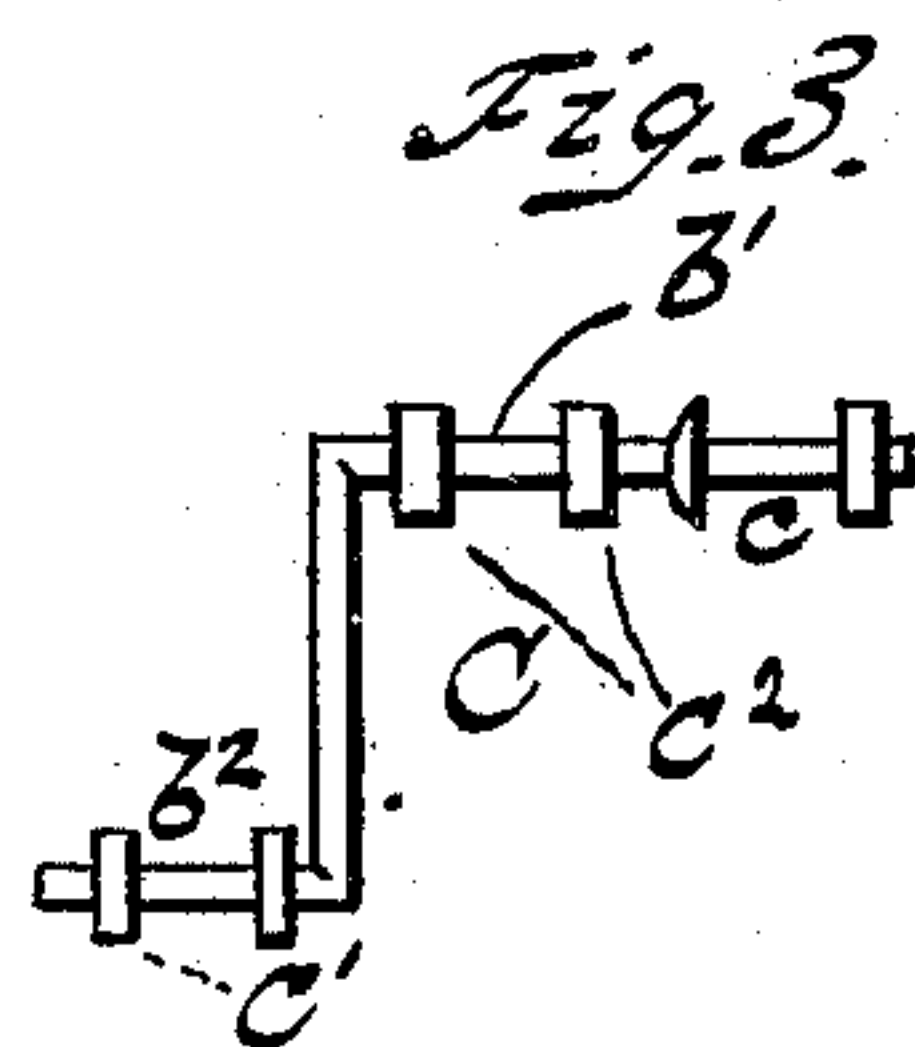
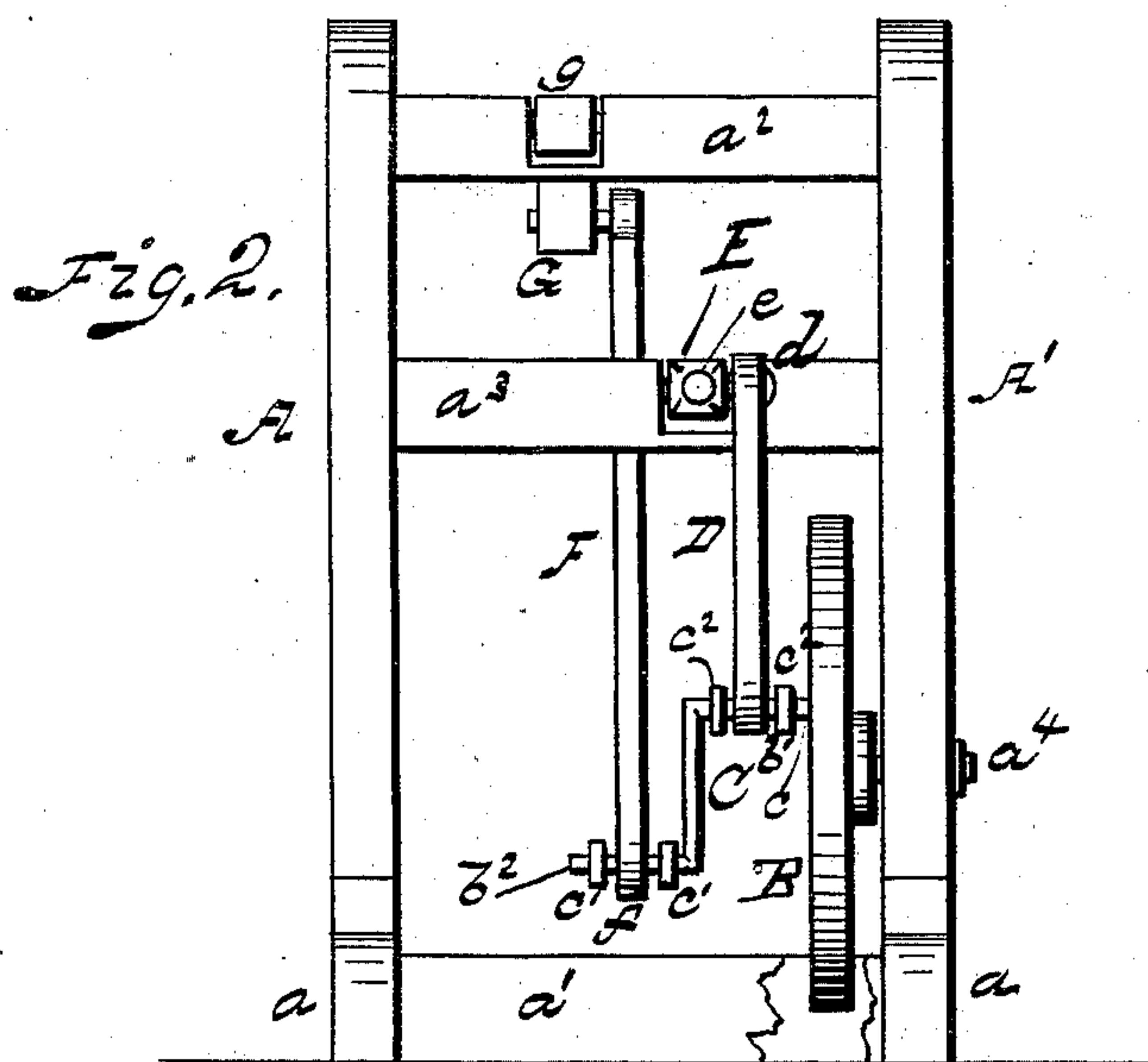
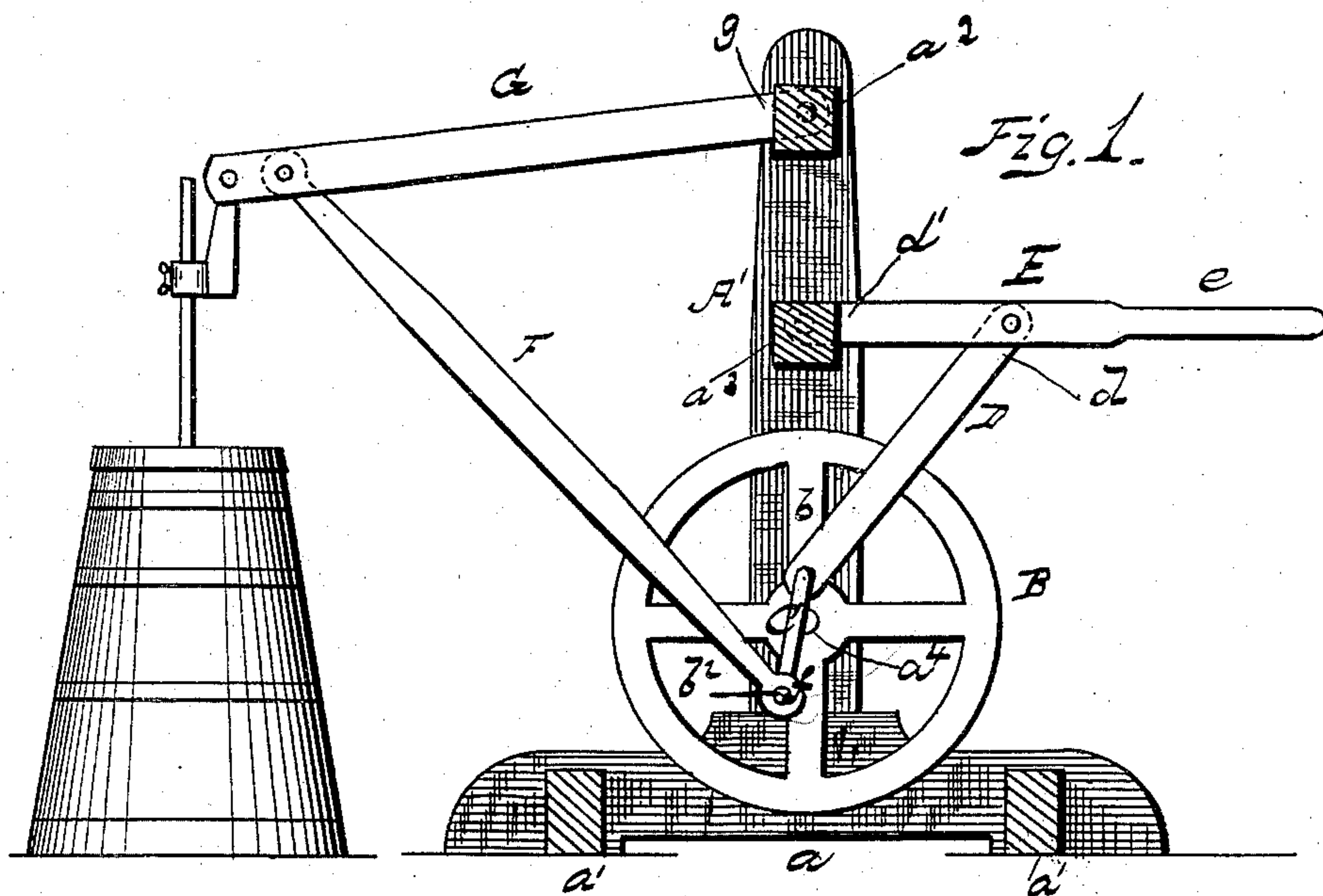


J. W. MILLER.  
Churn-Power.

No. 222,147.

Patented Dec. 2, 1879.



Witnesses:  
E. H. Bates  
J. H. Pearce

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# UNITED STATES PATENT OFFICE.

JAMES W. MILLER, OF NEW CASTLE, PENNSYLVANIA.

## IMPROVEMENT IN CHURN-POWERS.

Specification forming part of Letters Patent No. **222,147**, dated December 2, 1879; application filed November 1, 1879.

*To all whom it may concern:*

Be it known that I, JAMES W. MILLER, of New Castle, in the county of Lawrence and State of Pennsylvania, have invented certain new and useful Improvements in Hand-Powers for Operating Churns; and I do hereby declare the following to be 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention is an improvement on Letters Patent granted to me on the 29th day of July, 1879, and numbered 217,892, for hand-powers for operating churns and light machinery; and it consists in the novel construction and arrangement of the same, whereby an easier movement is given to the different parts of which it is constructed, in operating a churn-dasher or light machinery to which said power may be applied, all of which will be hereinafter more fully explained.

The annexed drawings, to which reference is made, fully illustrates my invention, in which—

Figure 1 represents a vertical sectional view of my improved hand-power applied to an ordinary churn. Fig. 2 represents an end view of the same, and Fig. 3 represents a detail view.

The capital letters A A' designate vertical standards arising from a base, *a*, to which the lower ends of said standards are permanently fixed, and are joined to one another by cross-pieces *a'* *a'* and upper cross-pieces, *a*<sup>2</sup> *a*<sup>3</sup>. Said standard A' is provided with a perforation running crosswise the same, through which is passed a bolt, *a*<sup>4</sup>, on the inner end of which and between the standards A A' is placed a fly-wheel, B, revolving loosely thereon. Said fly-wheel B is provided with a crank, C, the end *c* of which enters a perforation or a slot formed in one of the bars *b* in the fly-wheel B, and is secured thereto. The horizontal portion *b'* of said crank has pivoted thereto and arising therefrom a rod, D, the upper end, *d*, of which connects and is pivoted to a hand-lever, E, at or near its center. The inner end,

*d'*, of said lever is also pivoted to the cross-piece *a*<sup>3</sup>, which connects the standards A A' to one another. The outer end, *e*, of the lever aforesaid is formed into a handle, by which the churn-power is operated.

F represents a pitman or rod the end, *f*, of which is connected to the horizontal portion *b*<sup>2</sup> of the crank C, and is provided with washers *c'* similar to the washers *c*<sup>2</sup> on the opposite portion, *b'*, on which works the rod D. The opposite end of the pitman or rod F connects with the forward end of a second lever, G. The inner end, *g*, of said lever is pivoted to the cross-piece *a*<sup>2</sup>, between the standards aforesaid, as shown in Figs. 1 and 2 of the drawings.

Having explained the different parts of which my improved churn-power is constructed, I will now proceed to describe the mode in which it is operated. The handle *e* of the hand-lever E is given an up-and-down movement. This is allowed by the inner end of the same being pivoted as above described. At the same time the connecting-rod D moves with said hand-lever and causes the fly-wheel B to revolve and carry the crank C therewith. This movement of said crank imparts a vertical movement to the end of the lever G, through the medium of the pitman or rod F. The inner end, *g*, of the lever G being pivoted to the cross-piece *a*<sup>2</sup>, connecting the standards A A', as hereinbefore described, allows of such vertical movement to the outer end of said lever, in order to operate a churn, as shown in Fig. 1 of the annexed drawings.

It will thus be seen by the foregoing description that a churn-power constructed as herein shown and described is simple in its construction, and easily operated by a slight pressure upon the handle *e* by the operator. At the same time the crank before mentioned prevents and overcomes a dead-center in the revolution of the fly-wheel B, and thus prevents the different parts of the power from receiving a shock in starting the fly-wheel.

I may attach a simple device in the shape of a swinging arm, the upper part being pivoted in a slot made in the outer end of the lever G, and in the lower end of said swinging arm I form an eye, through which passes the upper

end of a dasher-rod of a churn, said rod being held in said eye by a pin or thumb-screw running crosswise the same.

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

In a churn-power, the construction and arrangement of the levers E and G, pitman or rod F, rod D, and crank-arm C, the whole be-

ing arranged to operate as herein shown and described, and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 28th day of October, 1879.

JAMES W. MILLER.

Witnesses:

MILTON LOVE,  
WM. E. AGNEW.