

No. 766,914.

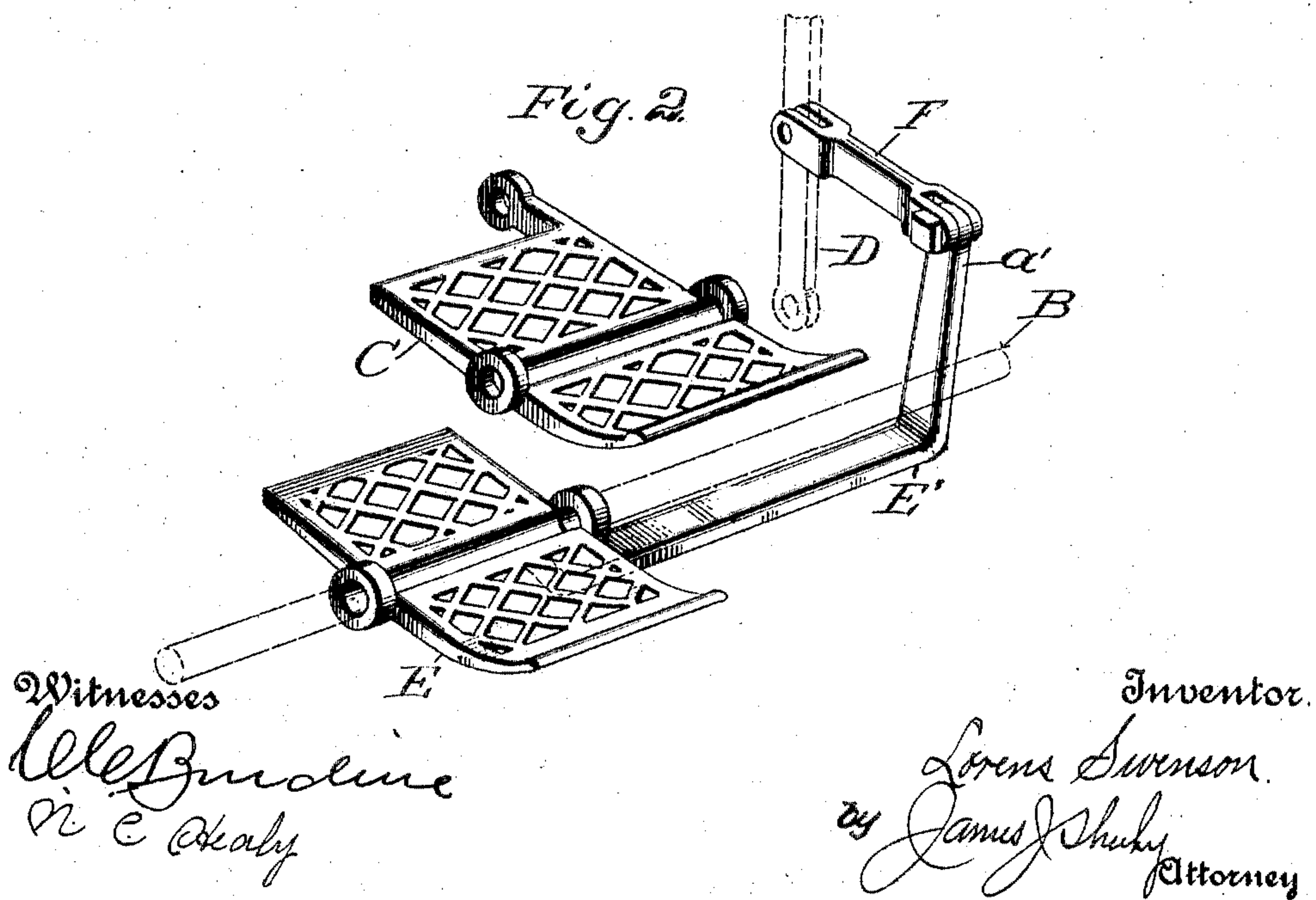
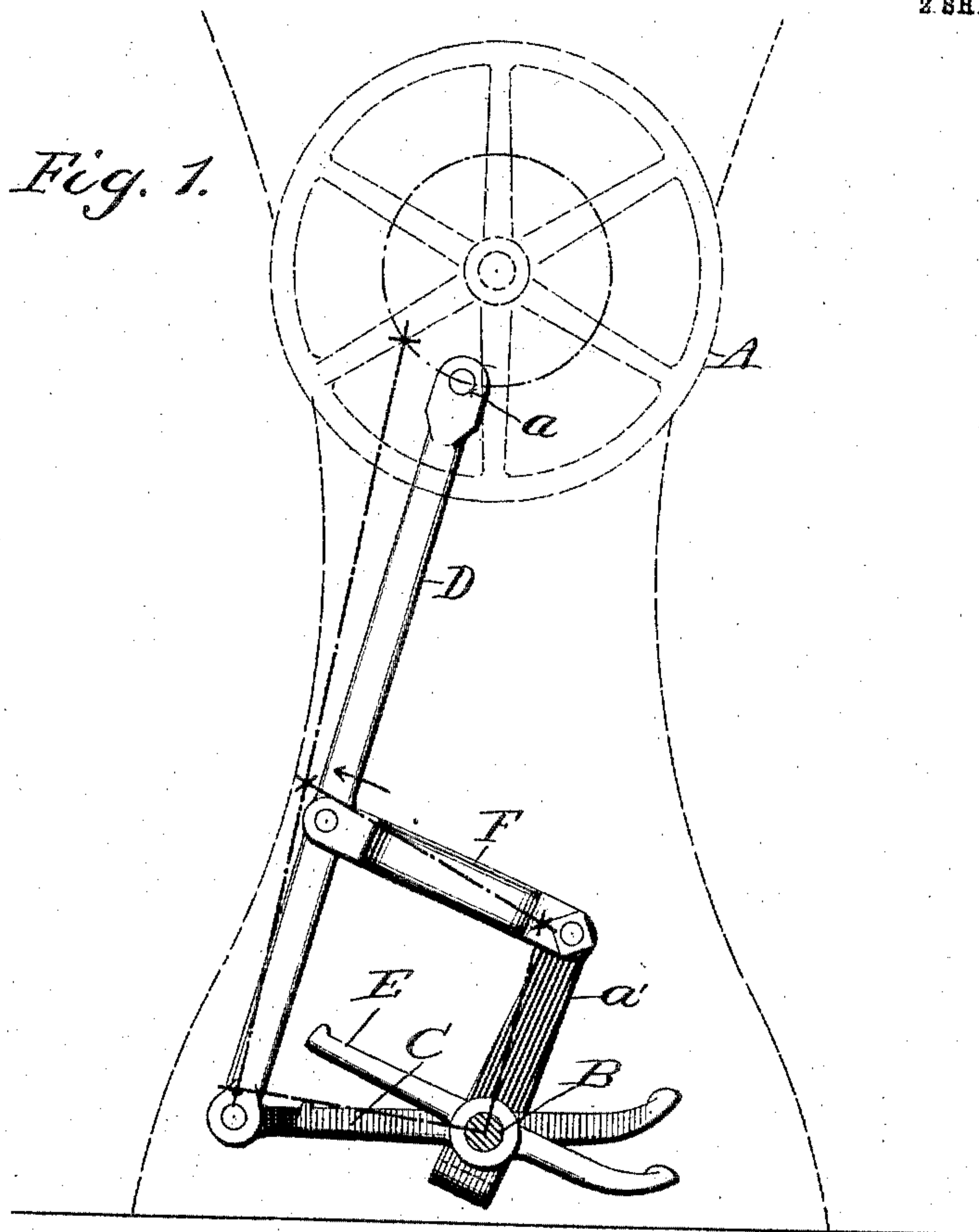
PATENTED AUG. 9, 1904.

L. SWENSON.
DEVICE FOR OVERCOMING DEAD CENTERS.

APPLICATION FILED MAR. 14, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 3.

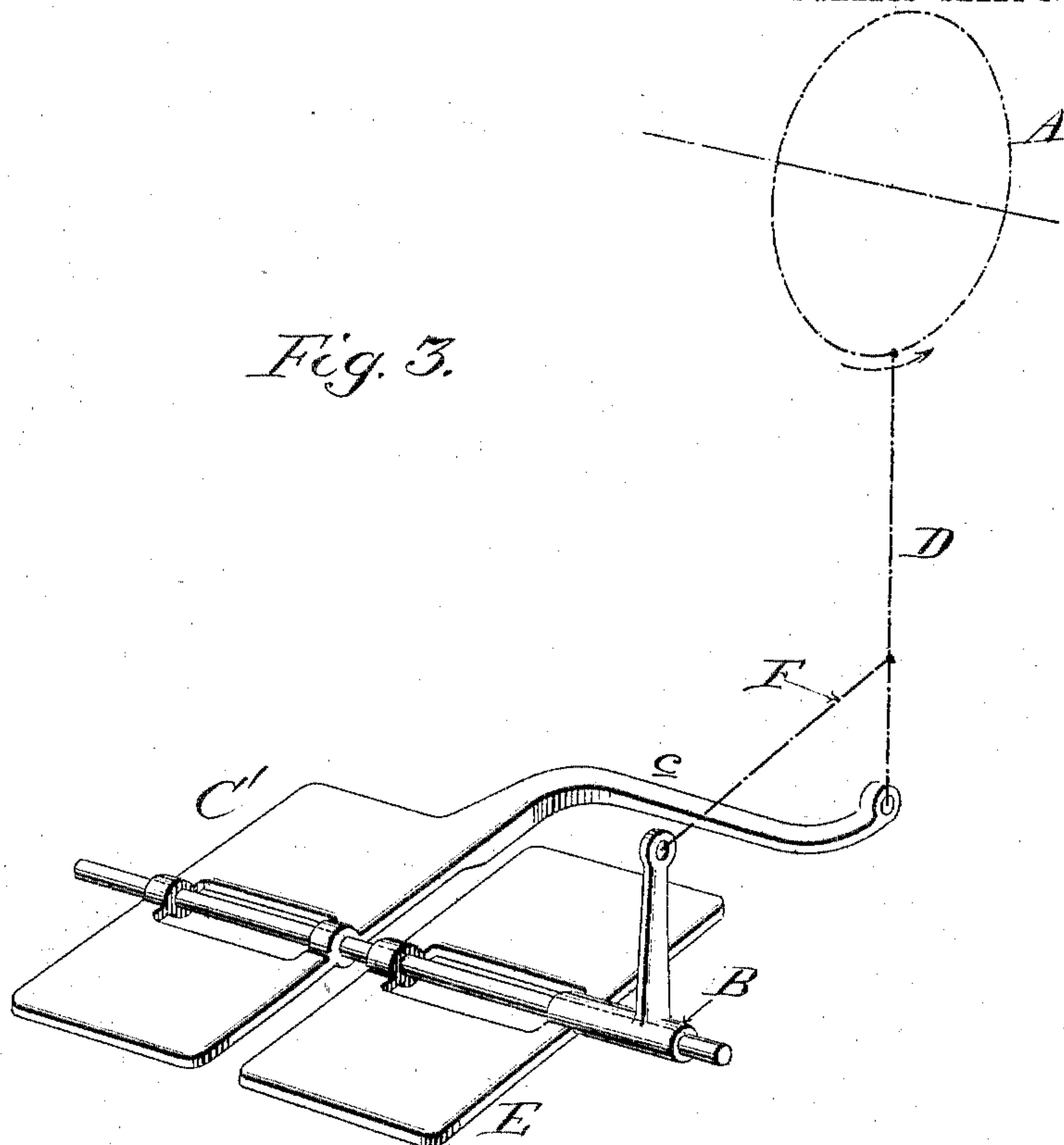
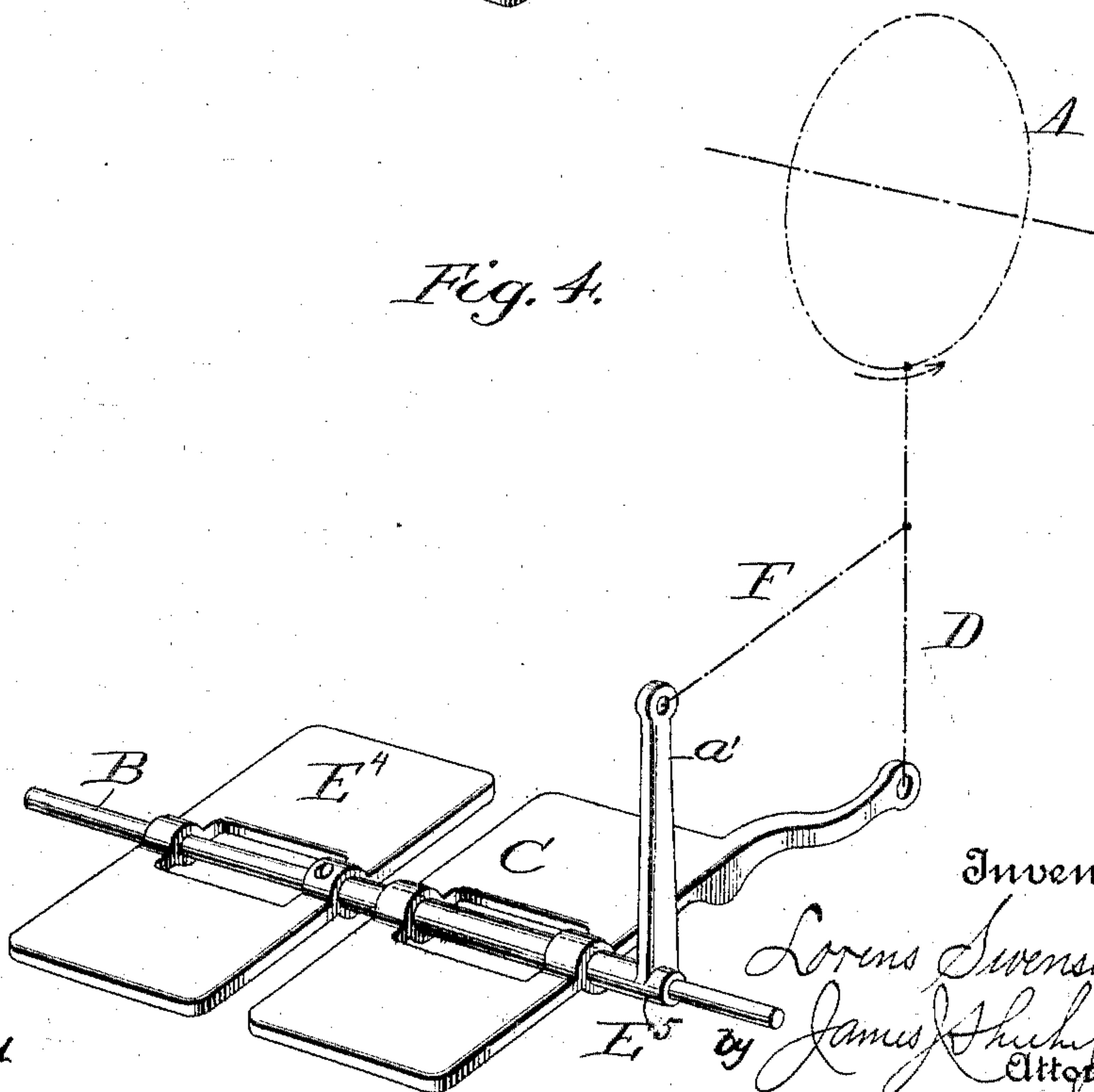


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

LORENS SWENSON, OF CRESCO, IOWA.

DEVICE FOR OVERCOMING DEAD-CENTERS.

SPECIFICATION forming part of Letters Patent No. 766,914, dated August 9, 1904.

Application filed March 14, 1904. Serial No. 198,106. (No model.)

To all whom it may concern:

Be it known that I, LORENS SWENSON, a citizen of the United States, residing at Cresco, in the county of Howard and State of Iowa, have
5 invented new and useful Improvements in Devices for Overcoming Dead-Centers, of which the following is a specification.

My invention pertains to devices for overcoming dead-centers; and it has for its object
10 to provide such a device designed more particularly for use in sewing and other foot-power machines and one which is simple and inexpensive in construction and is calculated
15 in all directions on the wrist-pin of a wheel or on any other crank.

With the foregoing in mind the invention will be fully understood from the following description and claims when taken in connection with the accompanying drawings, forming
20 part of this specification, in which—

Figure 1 is a view showing one embodiment of my invention in side elevation as the same appears when embraced in a sewing or other
25 foot-power machine. Fig. 2 is a perspective view illustrating my improvements with the pitman in dotted lines and one of the treadles disconnected. Figs. 3 and 4 are perspective views illustrating modified embodiments of
30 the invention hereinafter referred to.

Referring by letter to the said drawings, and more particularly to Figs. 1 and 2 thereof, A is a crank, preferably a wheel mounted in the frame of a sewing or other machine
35 and having a wrist-pin *a*. B is a transverse rod supported in the machine-frame and disposed in a plane below the wheel A; C, a pedal loosely mounted on the rod B and connected, through the medium of a pitman D, with the
40 wrist-pin *a*; E, a pedal loosely mounted on the rod B at the side of the pedal C and having an arm E', which extends laterally from it and then upwardly, as indicated by *a'*, and F a link which is designed to serve in the connection of the upwardly-extending portion of
45 the arm E' with the wrist-pin *a*. I prefer to interpose the said link F between and connect the same to the pitman D and the arm portion *a'*, as shown, as it renders the construction
50 lighter and cheaper; but it is obvious that the

arm portion *a'* may be made sufficiently long to render it expedient to interpose the link F directly between the said arm portion *a'* and the wrist-pin *a*, and this may be done when
55 desired without involving a departure from the scope of my invention. The wheel A and the pitman D are of the ordinary well-known construction, and in order to better differentiate my improvements from what is old I
60 have in some of the figures of the drawings shown the said elements A and D in dotted lines. I have also in Figs. 3 and 4 shown the link F in dotted lines, said link F being identical in construction with that shown in full
65 lines in Figs. 1 and 2.

In the practical use of my novel device for overcoming dead-centers the treadle or pedal C is operated in the usual manner—i. e., is
70 rocked on the rod B—and motion is transmitted from said treadle to the wheel A through the medium of the pitman D. The treadle E is also rocked on the rod B, but in the opposite direction with reference to the treadle C, and motion is transmitted from the said treadle E to the wheel A through the medium of
75 the arm E', the link F, and the pitman D. In virtue of the treadle E being rocked in one direction incident to the movement of the treadle C in the opposite direction it will be observed that the parts cannot rest in a dead-
80 center, and hence the wheel A may always be started through the medium of the treadles, and it is never necessary to apply the hand to said wheel. The facility with which the wheel A may be started through the medium of the
85 pedals C and E irrespective of the positions of the parts when idle is due to the fact that the power of the treadle E is exerted on the pitman D in a lateral direction or sidewise, and continuous power is exerted in all direc-
90 tions on the crank or wrist pin *a*.

In the modified construction shown in Fig. 3 the pedal C' is provided with a lateral arm *c* for connecting it to the pitman D, while the
95 arm E² of the pedal E³ is in the form of a sleeve, which is loosely mounted, together with the pedal E³, on the rod B and is provided with an upwardly-extending portion *a'*, connected to the pitman D through the medium of a link F. The treadle or pedal C' of the modified
100

construction is also loosely mounted on the rod B, and said modified construction is adapted to be operated in the same manner as the construction shown in Figs. 1 and 2. The modified construction is possessed of all of the advantages ascribed to the construction in Figs. 1 and 2 and is further advantageous because of the compact arrangement of its parts and the strength and durability thereof.

In the modified construction shown in Fig. 4 the pedal C is arranged at the right, as in Figs. 1 and 2, and is connected to the pitman D in the manner common to Figs. 1 and 2, while the pedal E⁴ is loosely mounted on the rod B and is provided with a lateral arm E⁵ in the form of a sleeve. This sleeve-like arm receives the rod B and extends loosely through and forms the direct support of the pedal C and is provided beyond said pedal with an upwardly-extending portion d', which is connected, through the medium of a link F, with the pitman D. The construction shown in Fig. 4 is designed to operate and serve the purposes of the constructions shown in Figs. 1, 2, and 3.

Notwithstanding the practical advantages of my invention it will be noticed that the same is simple and inexpensive in construction and may be embodied in sewing and other foot-power machines without materially increasing the cost thereof.

I have entered into a detailed description of the construction and relative arrangement of the parts embraced in the present embodiments of my invention in order to impart a full, clear, and exact understanding of the same. I do not desire, however, to be understood as confining myself to such specific construction and relative arrangement of parts, as such changes or modifications may be made in practice as fairly fall within the scope of my invention as claimed.

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

1. In a device for overcoming dead-centers, the combination of a crank, a treadle, a pitman interposed between and connecting the treadle and the crank, a treadle movable independently of the first-mentioned treadle, and

a connection between the second-mentioned treadle and the pitman at an intermediate point in the length of the latter, whereby said second-mentioned treadle is enabled to exert power on the crank in a direction lateral to the pitman.

2. In a device for overcoming dead-centers, the combination of a crank, a pitman connected to the crank, a treadle having a lateral arm connected to the pitman, a treadle movable independently of the first-mentioned treadle and having a sleeve-like lateral arm provided with an upwardly-extending portion, a connection between said upwardly-extending portion of the arm and the crank, and a supporting-rod extending loosely through the treadles and through the lateral sleeve-like arm of the second-mentioned treadle.

3. In a device for overcoming dead-centers, the combination of a crank, a treadle, a pitman interposed between and connecting the treadle and the crank, a treadle movable independently of the first-mentioned treadle, and having an arm which extends laterally from it and then upwardly, and a link interposed between and connecting the upwardly-extending portion of the said arm and the pitman at an intermediate point in the length of the latter.

4. In a device for overcoming dead-centers, the combination of a crank, a pitman connected to the crank, a treadle having a lateral arm connected to the pitman, a treadle movable independently of the first-mentioned treadle, and having a sleeve-like lateral arm provided with an upwardly-extending portion, a supporting-rod extending loosely through the treadles and through the sleeve-like arm of the second-mentioned treadle, and a link connecting the upwardly-extending portion of said sleeve-like arm and the pitman at an intermediate point in the length of the latter.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LORENS SWENSON.

Witnesses:

MARCUS O. SWENSON,
GUY DOW.