

No. 682,355.

Patented Sept. 10, 1901.

W. T. GORDON.
TREADLE MECHANISM.
(Application filed June 7, 1901.)

(No Model.)

Fig. 1.

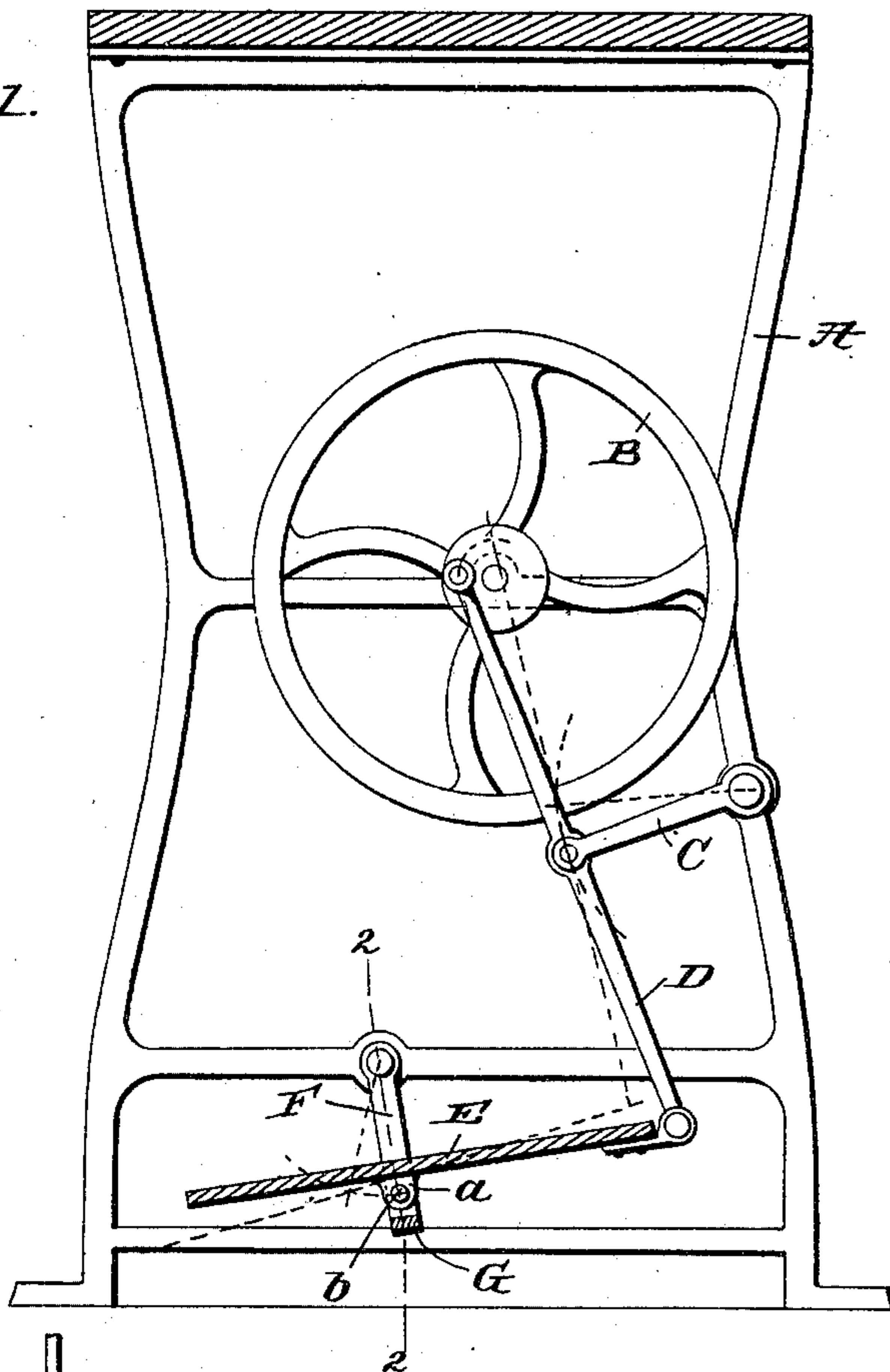


Fig. 2.

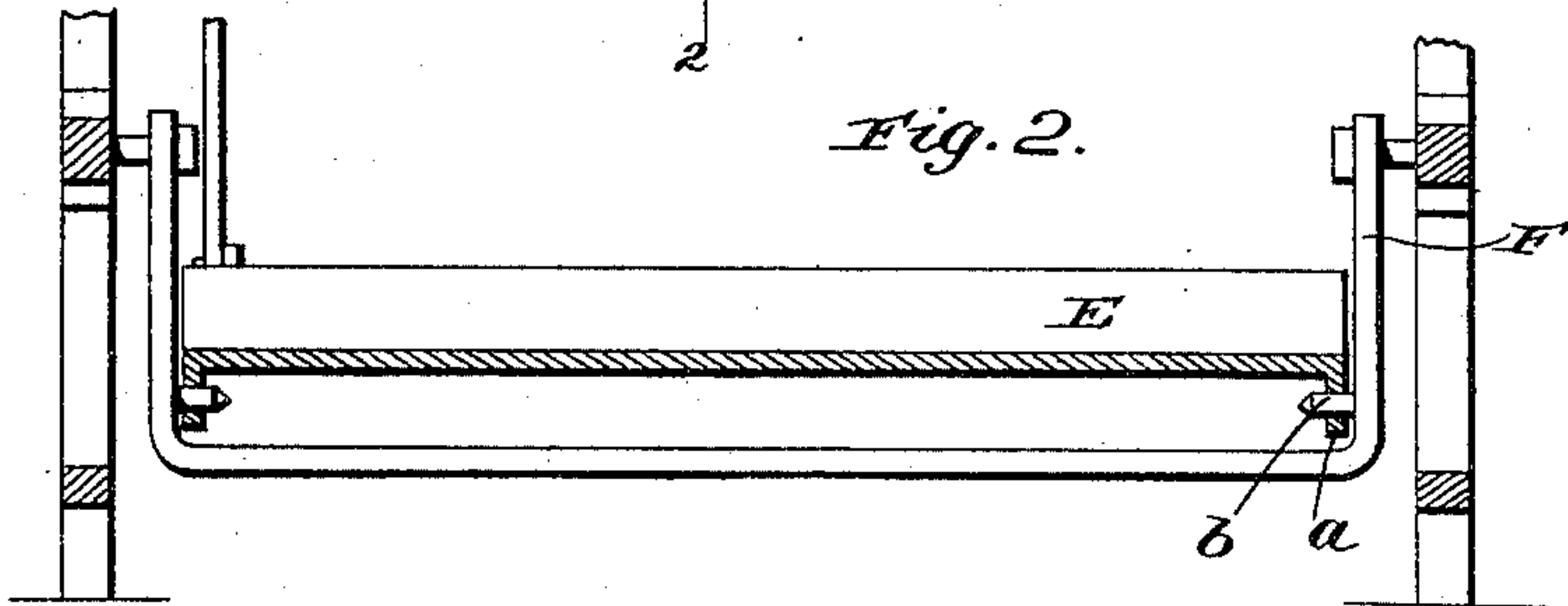
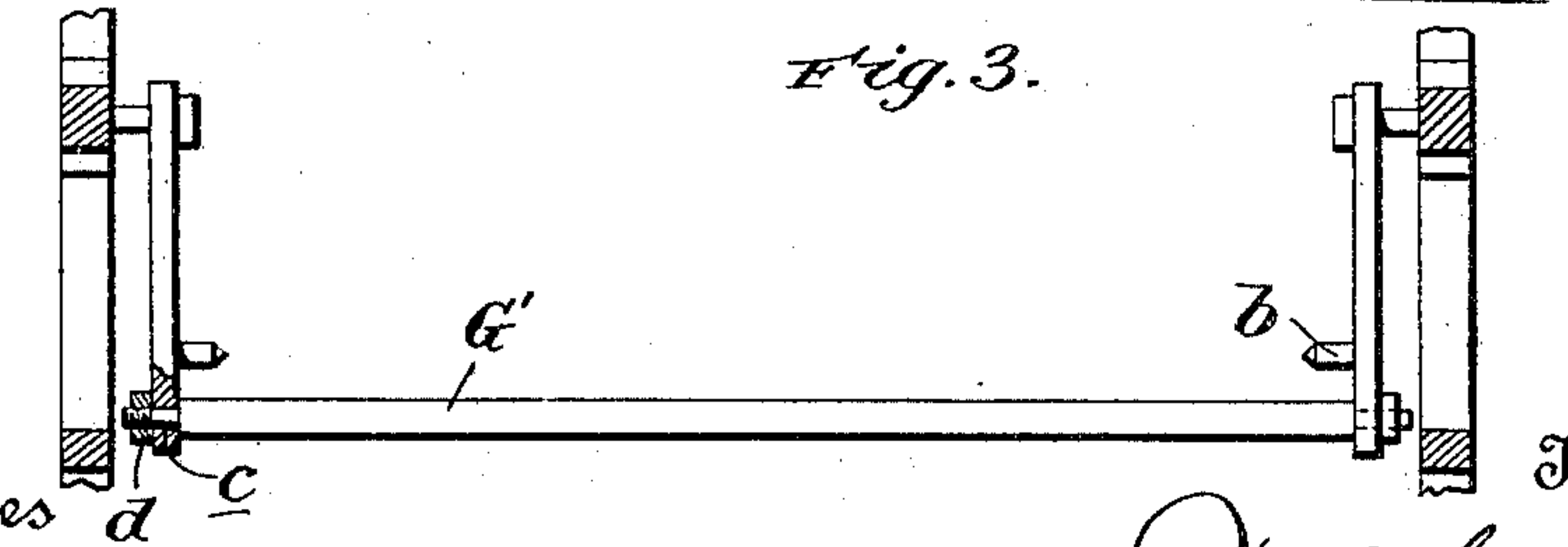


Fig. 3.



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WALTER T. GORDON, OF JUNIPER, OREGON.

TREADLE MECHANISM.

SPECIFICATION forming part of Letters Patent No. 682,355, dated September 10, 1901.

Application filed June 7, 1901. Serial No. 63,580. (No model.)

To all whom it may concern:

Be it known that I, WALTER T. GORDON, a citizen of the United States, residing at Juniper, in the county of Umatilla and State of Oregon, have invented new and useful Improvements in Treadle Mechanism, of which the following is a specification.

My invention relates to improvements in that class of treadles for sewing and other light foot-power machines which are adapted to swing as well as oscillate, and thereby render easy the starting of a machine, irrespective of the positions of the parts when at rest.

It consists in a certain peculiar construction which is advantageous in that it is extremely simple and inexpensive and at the same time strong and durable. Such construction will be fully understood from the following description and claims, when taken in connection with the accompanying drawings, in which--

Figure 1 is a view, partly in vertical section and partly in elevation, illustrating my improved mechanism and a frame in which the same is mounted. Fig. 2 is a detail transverse section taken in the plane indicated by the line 2 2 of Fig. 1, and Fig. 3 is a detail section taken at the same point and illustrating a modification.

Referring by letter to the said drawings, and more particularly to Figs. 1 and 2 thereof, A is a frame, which may be that of a sewing or other light foot-power machine.

B is a crank or fly wheel from which motion is taken to drive the sewing or other machinery. (Not illustrated.)

C is a swinging arm pivotally connected to the frame A.

D is a pitman, and E is a treadle. The pitman D is connected at its upper end by a wrist-pin or other suitable means to the wheel B at a point off the center thereof and is fulcrumed at its middle on the swinging arm C. The treadle E is interposed between two arms F, pivotally connected at a point above the treadle to the frame A, and is provided at its opposite side edges with two depending apertured lugs *a* to receive studs *b*, extending laterally inward from the lower portions of the arms, as illustrated. By reason of this construction it will be observed

that the treadle is pivotally connected to and free to oscillate on the arms F and also that the said arms constitute a swing for the treadle, whereby the latter is capable of longitudinal reciprocatory movement with the swinging arms, as well as an oscillatory or rocking movement on the same, for a purpose presently pointed out. The lower portions or ends of the arms F are connected together by a cross-bar G, such as shown in Fig. 2, or a cross-bar G', such as shown in Fig. 3, the bar G in Fig. 2 being formed integral with the arms, while the bar G' (shown in Fig. 3) is connected to the arms preferably in the manner shown—that is to say, the ends of the bar are reduced and passed through apertures *c* in the arms and are threaded to receive retaining-nuts *d*, while the main portion of the bar is interposed between the arms to hold said arms at the proper distance apart and preclude casual inward movement of the same. By virtue of the arms being joined together, as described, perfect alinement of the treadle-bearings is insured and frictional wear or straining of the bearings due to one arm of the swing moving in advance of the other is precluded. The connection of the arms is, moreover, advantageous, because the swing is thereby adapted to afford a firm and substantial support for the treadle and one which is durable in practice. At its forward end the treadle is pivotally connected to the lower end of the pitman D, as plainly shown in Fig. 1, and consequently it will be seen that through the medium of the treadle the operator is enabled to start the machine from any point within the scope of the movement of the treadle. For instance, if the center of movement of the wheel B, the point at which the pitman D is connected to said wheel, and the connection between the pitman D and treadle E are in alinement a simple movement of the treadle E in the direction of its length will carry the connection between it and the pitman out of the dead-center, when pressure applied to the treadle will start the machine. It will also be observed that the construction shown and described affords considerable leverage and enables the operator to drive the wheel B and the machinery connected therewith with but a minimum amount of effort, and, further,

that notwithstanding its advantages my improved mechanism is very simple and may therefore be produced at a cost but slightly in advance of that of the ordinary treadle mechanism at present in use.

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

1. The herein-described treadle mechanism
10 for sewing and other foot-power machines, consisting essentially of the main frame, the crank or fly wheel, the arm C pivotally connected to the main frame and arranged to swing in a vertical plane, the pitman D piv-
15 otally connected to the crank or fly wheel at a point off the center thereof, and pivotally connected to the arm C, the arms F pivotally connected to and depending from the frame, and having inwardly-extending lateral studs
20 or projections on their lower portions, means connecting the arms below the inwardly-extending lugs or projections whereby said arms are caused to move together, and a treadle E fulcrumed at an intermediate point of its
25 length on the inwardly-directed studs or projections of the arms and interposed between the arms and pivotally connected at its forward end to the lower end of the pitman D.

2. The herein-described treadle mechanism

for sewing and other foot-power machines, 30
consisting essentially of the main frame, the crank or fly wheel, the arm C pivotally connected to the main frame and arranged to swing in a vertical plane, the pitman D piv-
otally connected to the crank or fly wheel at 35
a point off the center thereof and pivotally connected to the arm C, the arms F pivotally connected to and depending from the frame and having inwardly-extending lateral studs
or projections on their lower portions, a cross- 40
bar formed integral with and connecting the portions of the arms below the said studs or projections and serving in conjunction with
said arms to form a swing; and a treadle F ful- 45
crumed at an intermediate point of its length on the inwardly-directed studs or projections
of the arms of the swing, and interposed be-
tween said arms, and pivotally connected at
its forward end to the lower end of the pit- 50
man D.

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

WALTER T. GORDON.

Witnesses:

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EDITH ISAAC.