

No. 762,392.

PATENTED JUNE 14, 1904.

H. P. DEUSCHER, DEC'D.

O. EHRESMAN, G. SCHWENN & F. H. BERK, EXECUTORS.

CULTIVATOR.

APPLICATION FILED JAN. 27, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

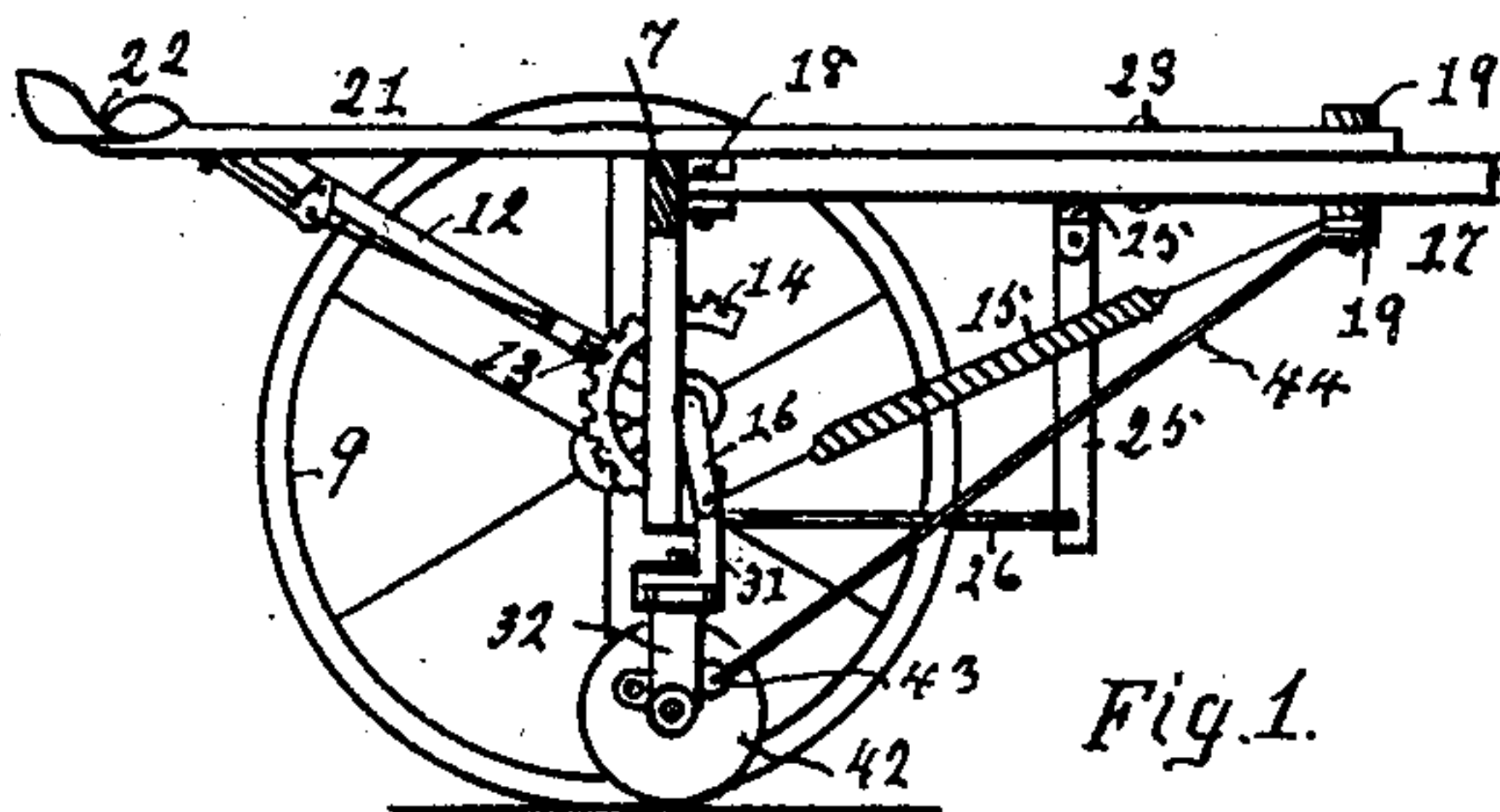


Fig. 1.

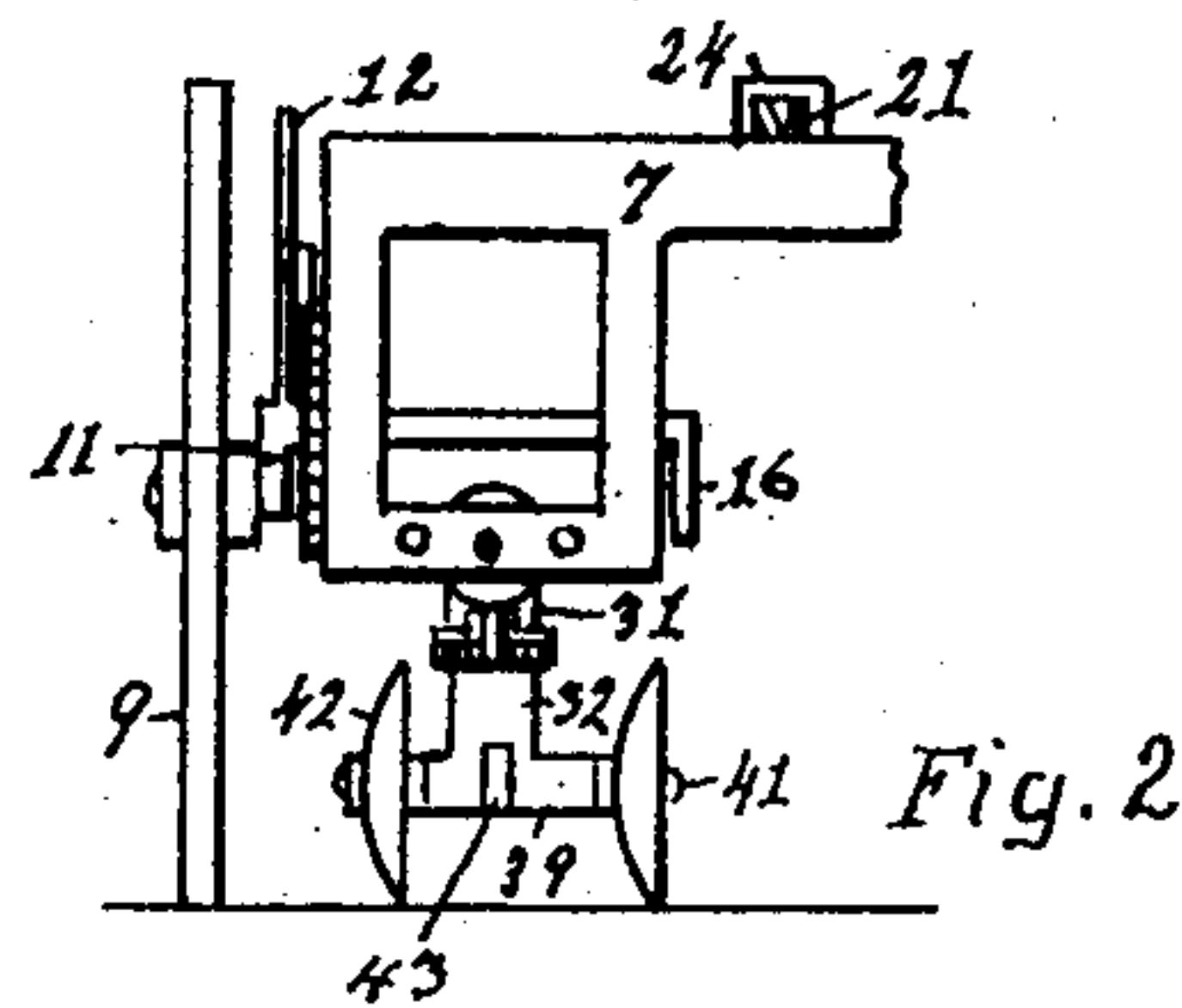


Fig. 2.

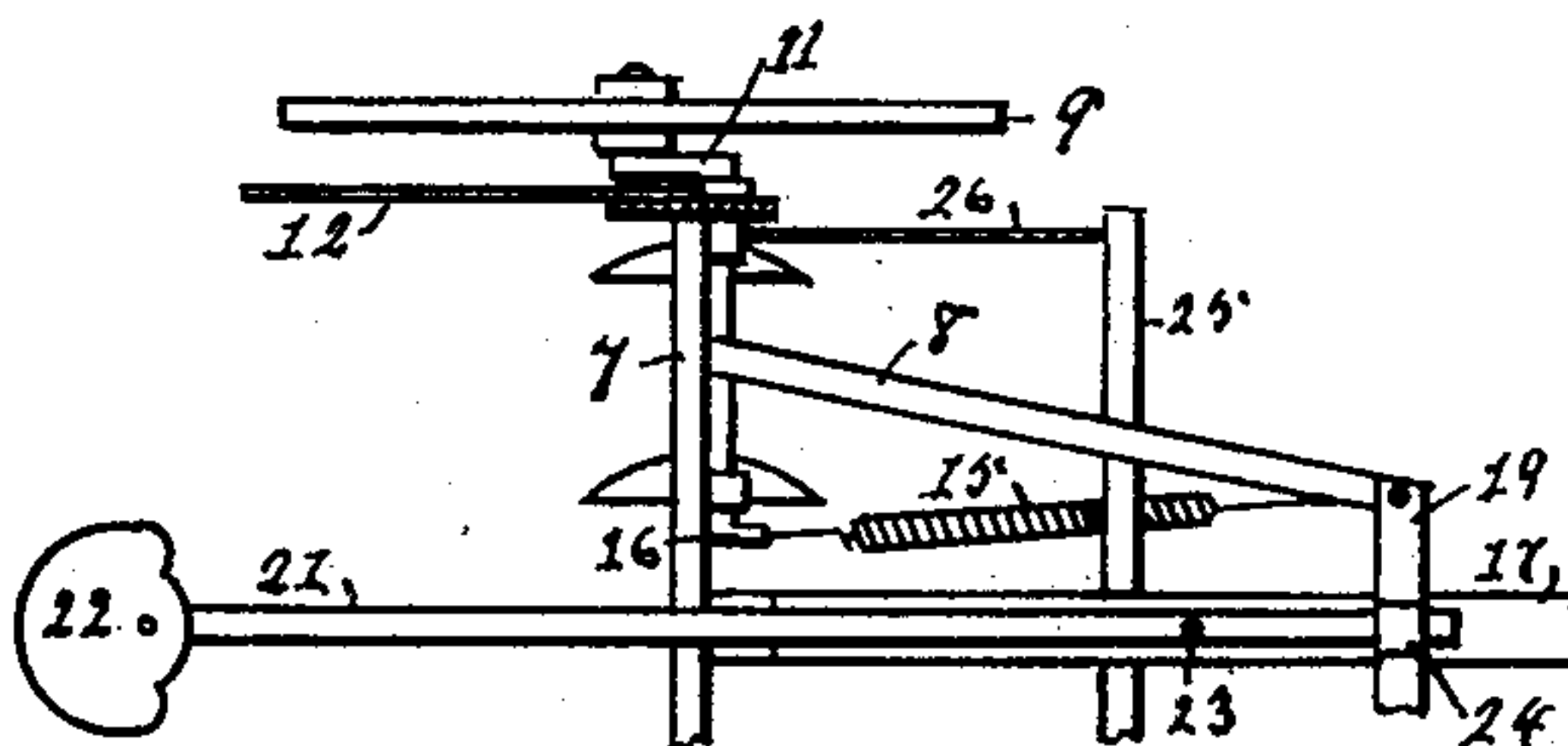


Fig. 3.

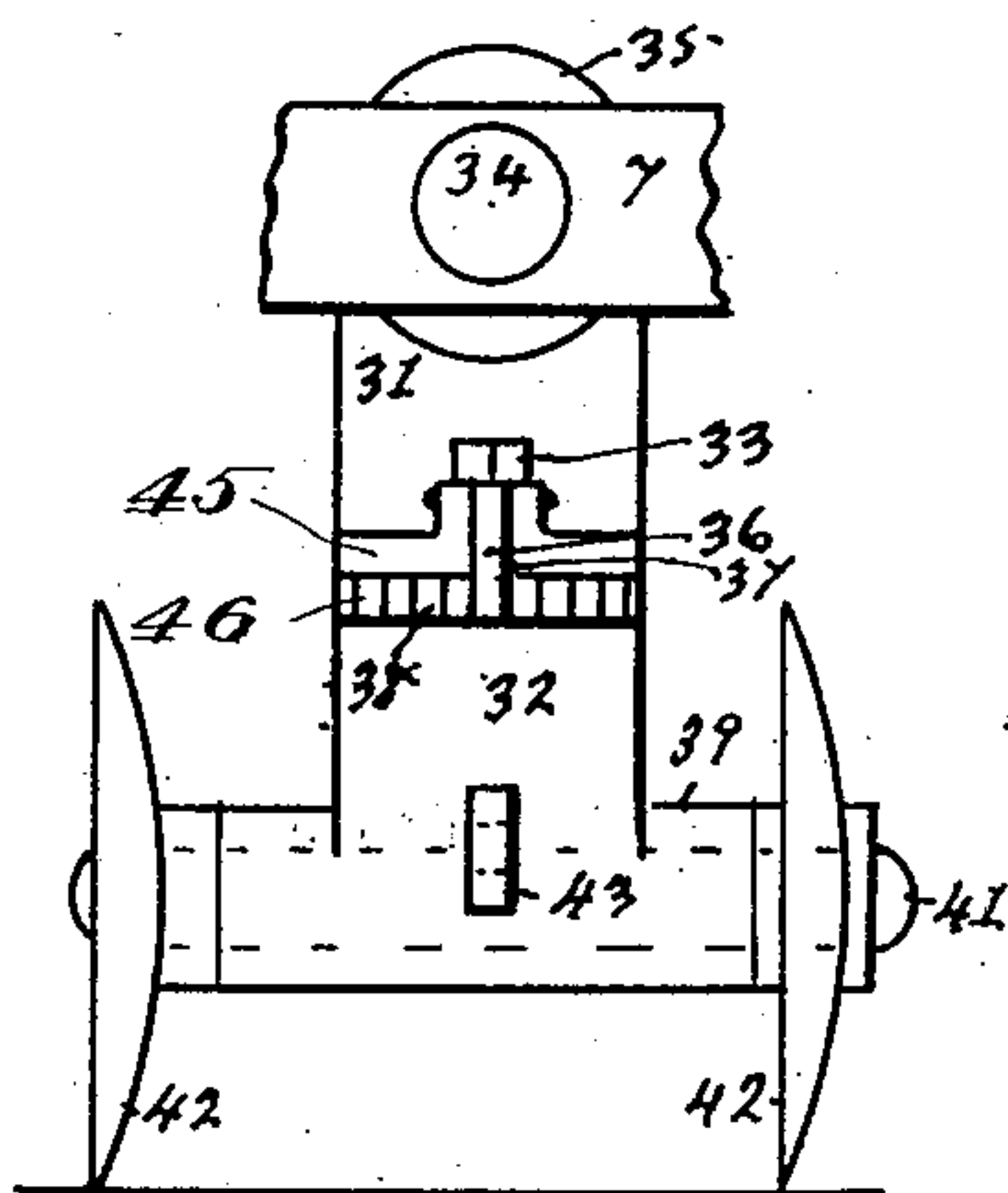


Fig. 5.

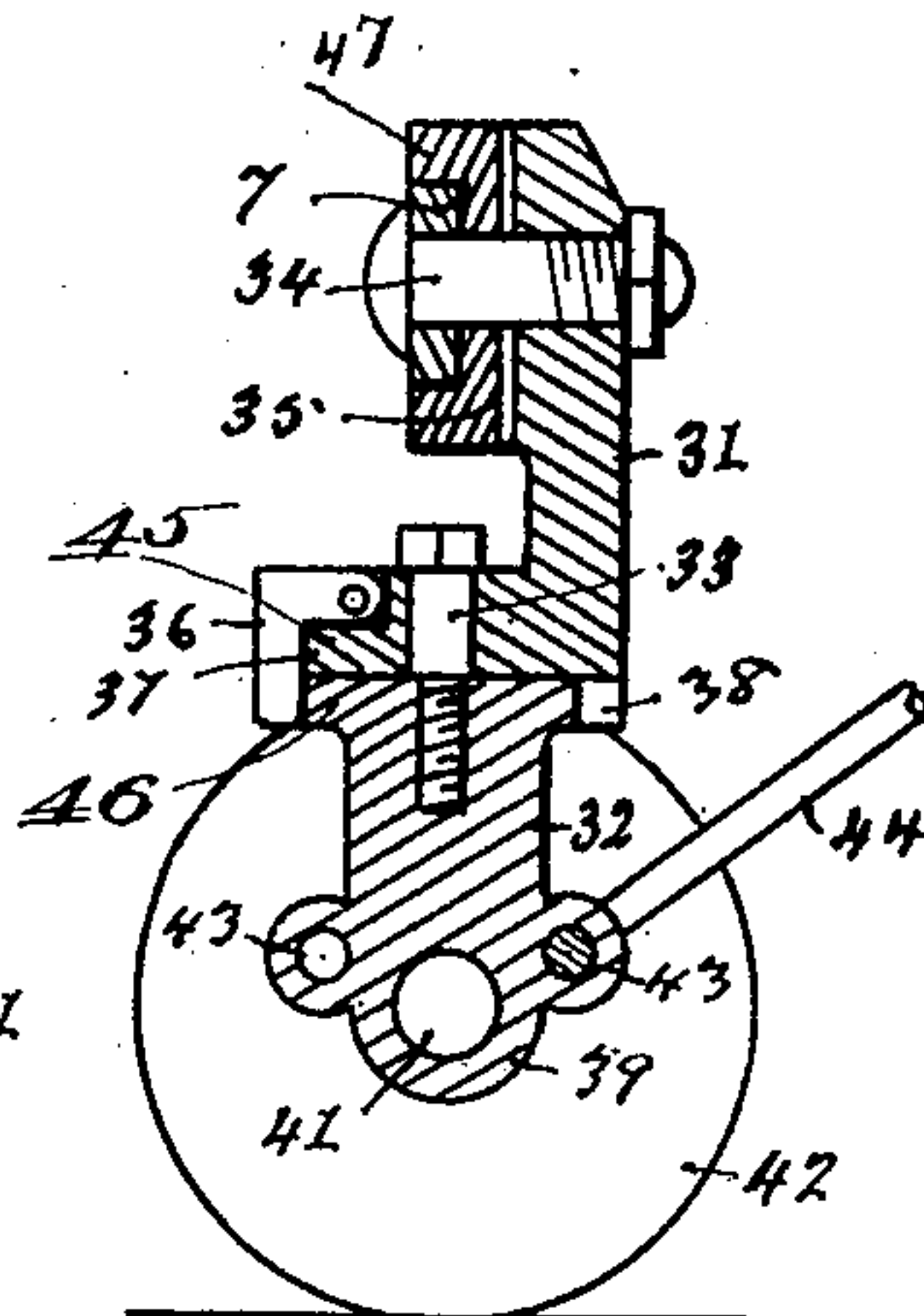


Fig. 4.

WITNESSES.

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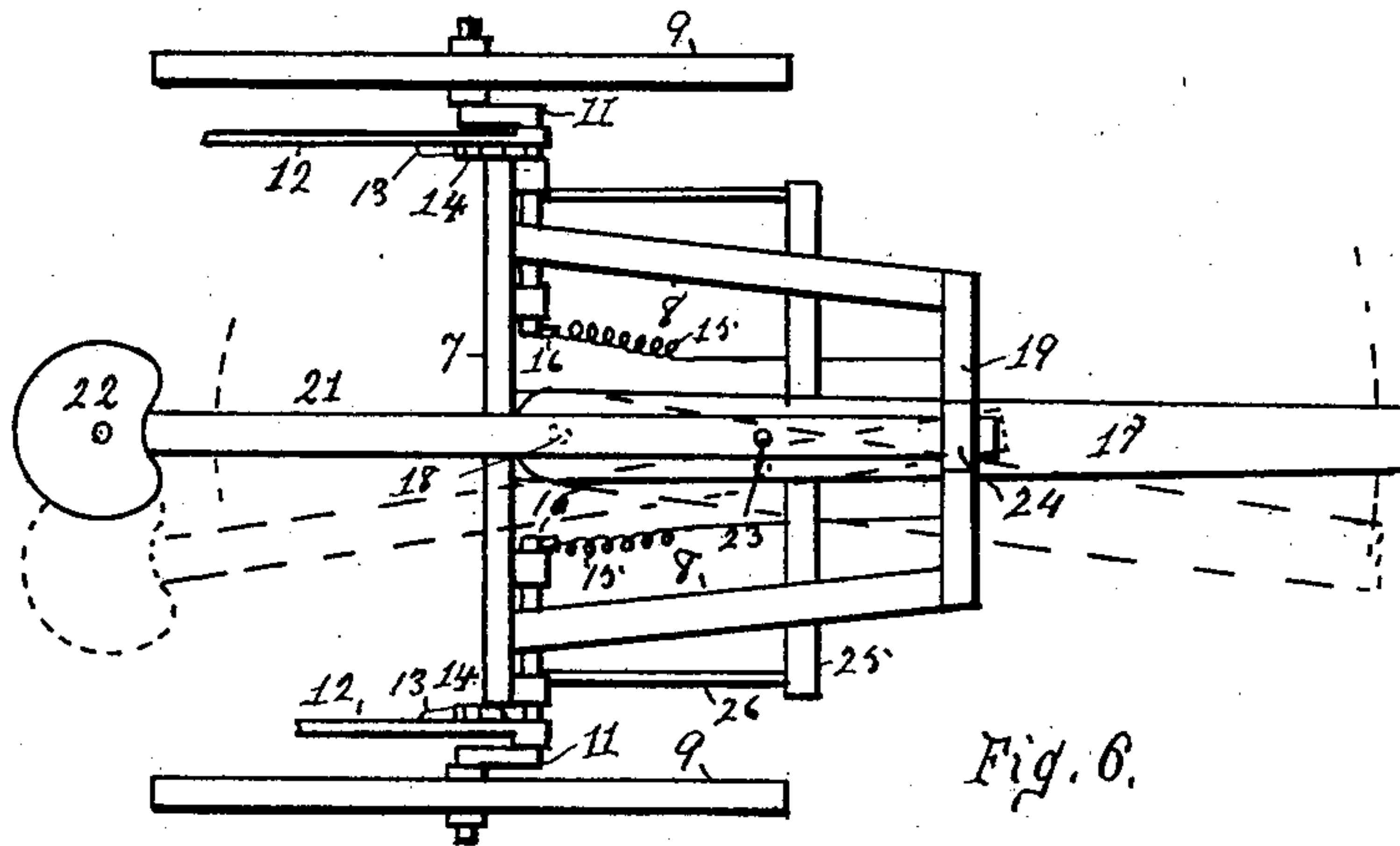
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NO MODEL.

2 SHEETS—SHEET 2.



WITNESSES,

Samuel S. Carr.

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UNITED STATES PATENT OFFICE.

HENRY P. DEUSCHER, OF HAMILTON, OHIO; OTTO EHRESMAN, GUS SCHWENN, AND FRED H. BERK EXECUTORS OF SAID HENRY P. DEUSCHER, DECEASED.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 762,392, dated June 14, 1904.

Application filed January 27, 1902. Serial No. 91,302. (No model.)

To all whom it may concern:

Be it known that I, HENRY P. DEUSCHER, a citizen of the United States, residing at Hamilton, Ohio, have invented a new and useful Improvement in Cultivators, of which the following is a specification.

My invention relates to cultivators of the class known as "riding" disk cultivators; and the objects of my improvement are to provide a positive vertical movement of the disks with the main frame and to provide means for reversing the direction of the disks and maintaining them in adjustment in different horizontal angles. These objects are attained in the following described manner, as illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section showing one of the two similar sides of a cultivator embodying my improvement; Figs. 2 and 3, a rear elevation and plan, respectively, of Fig. 1; Fig. 4, a longitudinal section of the shank; Fig. 5, a rear elevation of the shank, and Fig. 6 a plan showing in dotted lines the lateral movement of the pole.

In the drawings, 7 represents the main frame, provided with hounds 8 and mounted on ground-wheels 9 by means of short crank-axles 11. Hand-levers 12, provided with detent-catches 13, adapted to engage with notched racks 14, which are mounted upon the frame, are secured to the respective axles adjacent to the wheels and serve to move and maintain said frame in different positions of vertical adjustment.

Springs 15, connected to the front end of the hounds 18 or to the plates 19, as desired, and to crank-arms 16, formed on the inner end of the respective axles, serve to relieve the hand-levers of a portion of the weight of the frame and connected parts. Pole 17 is hinged at its rear end to the middle portion of the top of the frame by king-bolt 18 and is laterally movable between guide-plates 19, which connect the front end of the hounds together. Bar 21, provided with seat 22, is pivotally secured to the pole by means of bolt 23 and is fulcrumed at its front end in stirrup 24, which is formed in the top guide-plate 19.

The lateral movement of the seat by the driver throws the frame and ground-wheels at an angle to the pole and changes the course of the wheels in relation thereto. Drop-hitch 25 is pivotally secured to the pole and connected by braces 26 to each side of the bottom portion of the frame in the usual manner.

The shanks each consist of an upper member 31 and a lower member 32, swiveled together in the direction of their length by means of bolt or cap-screw 33. Said upper members are secured to the bottom portion of the respective sides of the frame and are independently maintained in adjustment in different vertical angles thereon by means of bolts 34 and serrated washers 35, which engage with corresponding serrations formed on the contiguous portion of said upper members. Said washers are each formed with flanges 47, which extend over frame-bar 7 to prevent it from turning thereon. The lower end of each upper member terminates in a step 45, which is turned rearwardly at right angles thereto and contains a gap 37, formed in its edge. The upper end of each lower member terminates in a flange 46, which is formed with a series of notches 38 in its front and rear edges. Gravity-latches 36, mounted on the steps 45 of the respective upper members of the shank, depend through gaps 37, formed in their rear edges, and detachably engage with either of the notches 38 formed in the front and rear edge of the flanges 46, formed on the contiguous top portion of said lower members, whereby said lower members may be maintained in adjustment to different horizontal angles in relation to the upper members. The bottom of each of the lower members terminates in a transverse sleeve 39, wherein the respective shafts 41 are rotatively mounted. A plural number of concavo-convex disks 42 are secured on each of said shafts and are positively adjustable to different depths in or above the soil by the vertical adjustment of the frame. Eyes 43 are formed on opposite sides of each sleeve, and by reversing the direction of the sleeve on the swivel-joint either of them may be caused to

register with brace 44 and detachably engaged therewith to relieve the frame of excessive strain.

In operation a positive vertical adjustment 5 of the disks with the movement of the frame is obtained by means of the respective hand-levers. The horizontal angle of either of the disk gangs in relation to the frame may be changed by means of the serrated plate 35 and 10 element 31, and the direction of the disks may be entirely reversed by the engagement of the respective latches with different notches in the lower members of the shank. The disks 15 may be adjusted in different vertical angles on the frame in the usual manner by means of the serrated plates and clamping-bolts.

Having fully described my improvement, what I claim as my invention, and desire to 20 secure by Letters Patent of the United States, is—

1. The combination with a frame vertically adjustable on ground-wheels, a shank adjustably secured thereon, said shank consisting of an upper and a lower member swiveled together in the direction of their length, of 25 flanges formed on the contiguous ends of said members, that on the lower member being formed with a series of notches in its opposite edges, a latch mounted on the upper member and movably engaging with said notches, 30 and a plural number of disks rotatively mounted on the lower member.

2. The combination with a frame mounted on ground-wheels, and lever mechanism arranged to move and maintain said frame in 35 different vertical positions thereon, of a shank consisting of an upper and a lower member, the upper member being adjustably secured on the frame and formed with a rearwardly-projecting step on its lower end, a gravity-latch mounted on the step and movable through 40 a notch formed in the rear edge thereof, said lower member being formed with a flange on its upper end, said flange containing a series of notches in its front and rear edges to detachably engage with the latch, a bolt movably connecting the contiguous ends of said 45 members together in the direction of their axes, and a plural number of disks rotatively mounted on said lower member. 50

3. The combination with a frame mounted on ground-wheels, hounds projecting forwardly therefrom, and straps connecting the front end of the hounds together, of a pole 55 hinged to the frame and movable laterally between the straps, a lever fulcrumed at its front end in one of the straps and pivotally secured to the pole between the straps and frame, and a seat mounted on its rear end.

H. P. DEUSCHER.

Witnesses:

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