

(No Model.)

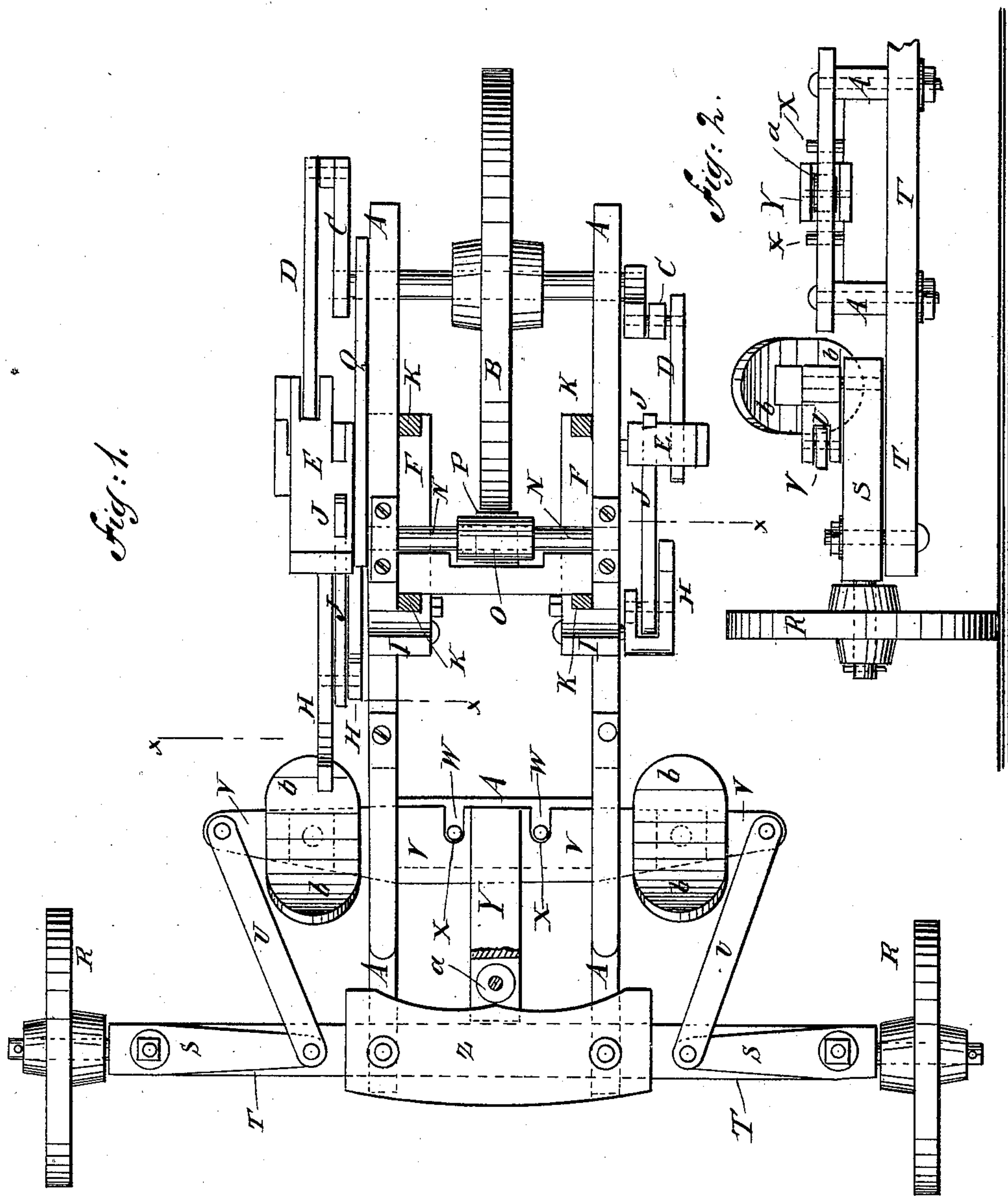
2 Sheets—Sheet 1.

M. M. & W. B. DEPUY.

TRICYCLE.

No. 349,145.

Patented Sept. 14, 1886.



WITNESSES:

*Chas. Nida*  
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BY

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ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

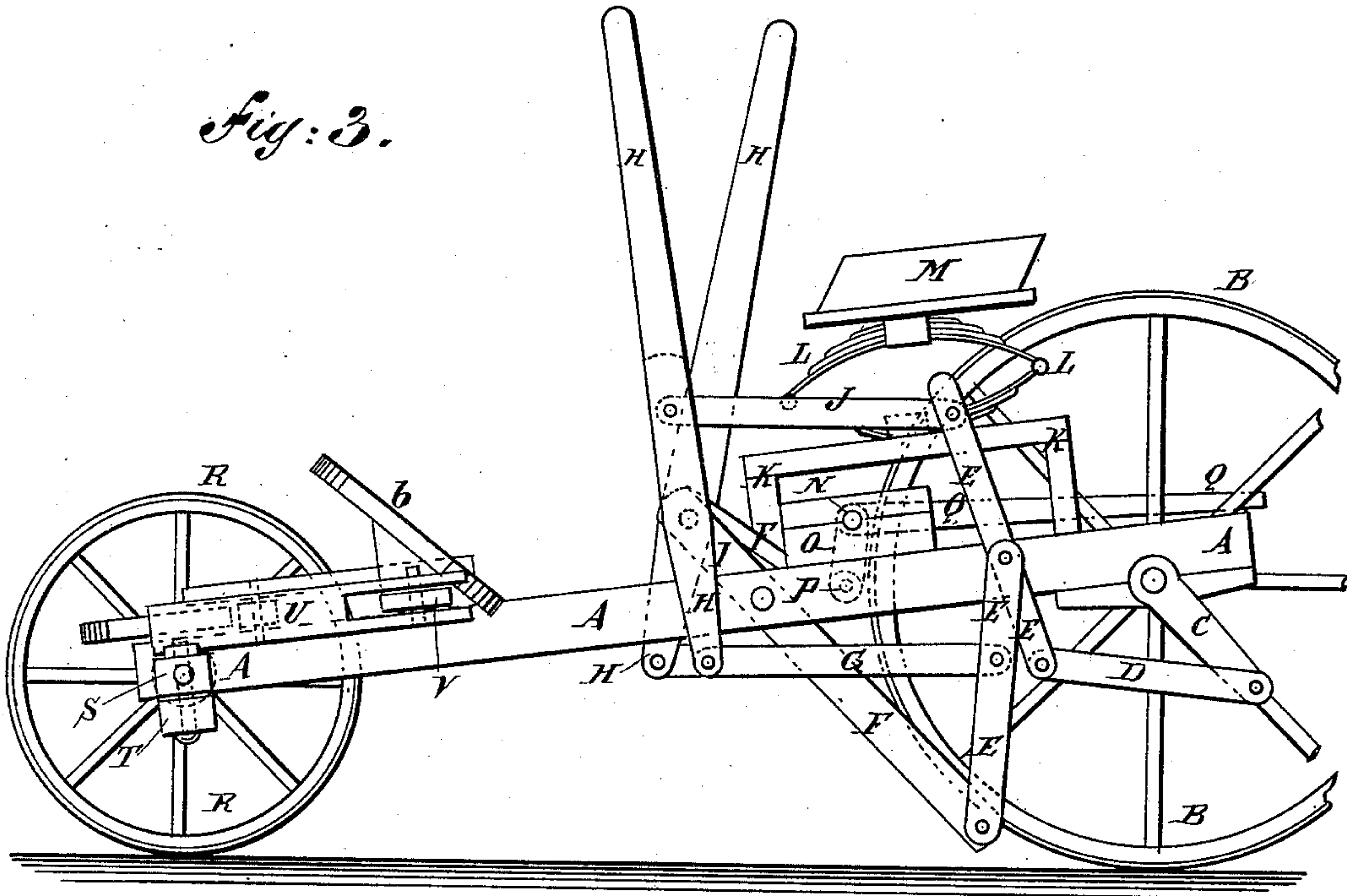
M. M. & W. B. DEPUY.

TRICYCLE.

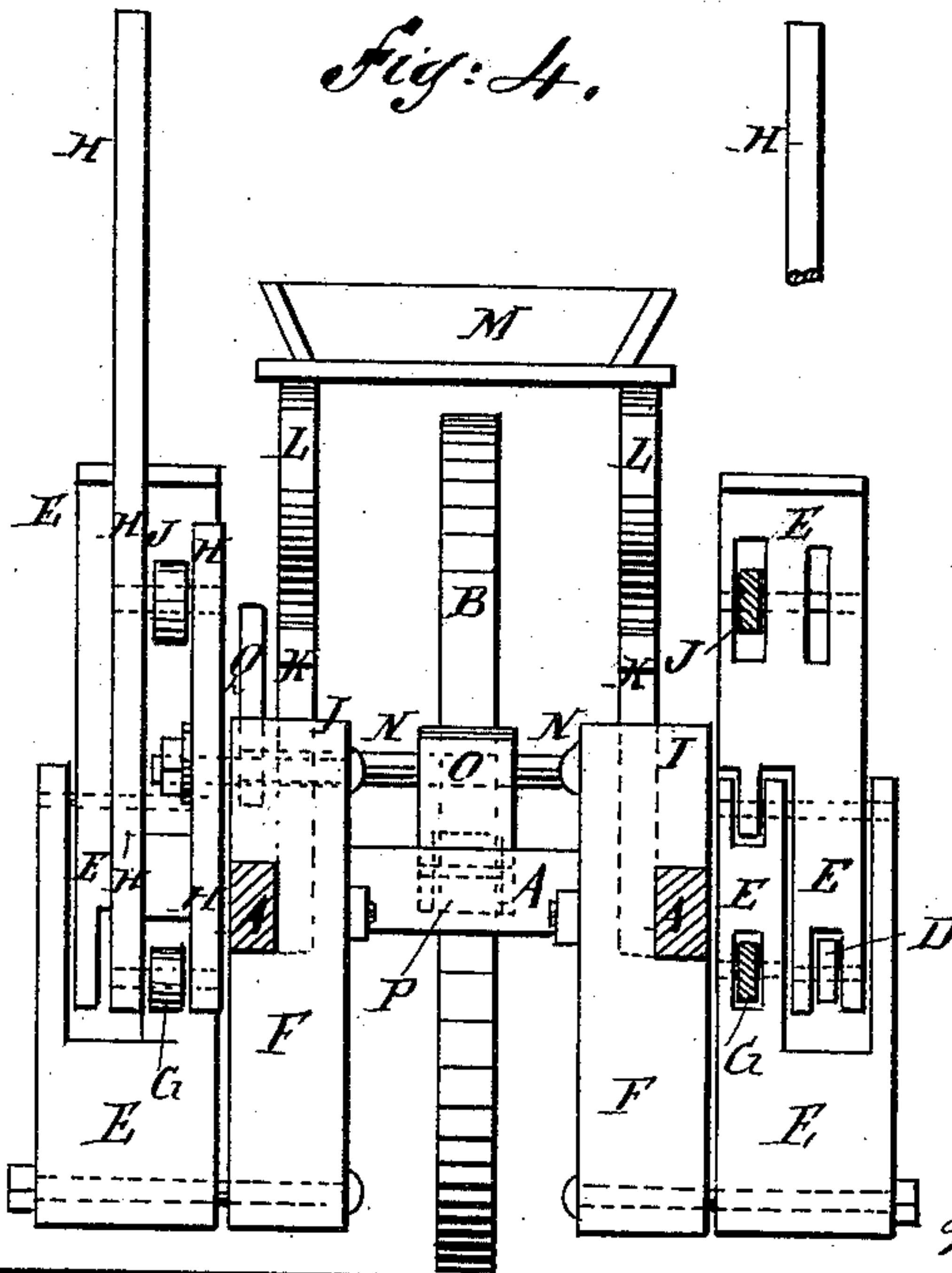
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*Fig: 3.*



*Fig: 4.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

MARTIN M. DEPUY AND WILLIAM B. DEPUY, OF ROWLAND, PENNSYLVANIA.

## TRICYCLE.

SPECIFICATION forming part of Letters Patent No. 349,145, dated September 14, 1886.

Application filed July 16, 1886. Serial No. 208,208. (No model.)

*To all whom it may concern:*

Be it known that we, MARTIN M. DEPUY and WILLIAM B. DEPUY, of Rowland, in the county of Pike and State of Pennsylvania, have  
5 invented a new and useful Improvement in Tricycles, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification,  
10 in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of our improved tricycle, the seat being removed and the seat-supporting springs shown in section. Fig. 2  
15 is a front elevation of a part of the same. Fig. 3 is a side elevation of the same, the rear forward wheel being removed, and parts being broken away. Fig. 4 is a sectional front elevation of the same, taken through the broken  
20 line *xx*, Fig. 1.

The object of this invention is to provide tricycles constructed in such a manner that they can be driven at greater speed and with more ease than tricycles constructed in the  
25 ordinary manner, and which can be easily turned and accurately guided.

The invention consists in the construction and combination of various parts of the tricycle, as will be hereinafter fully described.

30 A represents the frame of the machine, to the rear ends of the side bars of which is journaled the drive-wheel B. To the projecting ends of the journals of the drive-wheel B are rigidly attached cranks C, which stand at an angle of about forty-five degrees ( $45^{\circ}$ ) with each  
35 other, so that they can never be on the dead-point at the same time. To the cranks C are pivoted the rear ends of connecting-bars D, the forward ends of which are pivoted to the  
40 downwardly-projecting ends of the upper parts of the jointed levers E at a little distance below their joints. The lower ends of the jointed levers E are pivoted to the rearwardly-inclined lower ends of hangers F, the  
45 upper parts of which are rigidly attached to the side bars of the frame A. To the lower parts of the jointed levers E, and about upon a level with the forward ends of the connecting-bars D, are pivoted the rear ends of the  
50 connecting-bars G, the forward ends of which are pivoted to the lower ends of the hand-le-

vers H. The hand-levers H are pivoted to the forwardly-inclined upwardly-projecting ends I of the hangers F, or other suitable supports attached to the side bars of the frame A. To  
55 the upper parts of the levers H, and about equally distant from their joints with the forward ends of the connecting-bars G, are pivoted the forward ends of the connecting-bars J, the rear ends of which are pivoted to the  
60 upper ends of the jointed levers E at about the same distance from their joints as the ends of the bars D G, or at a little greater distance. With this construction long cranks can be  
65 worked on the drive-wheel journals with a comparatively short movement of the hand-lever, so that great power can be applied to the drive-wheel cranks, and consequently great speed attained.

To frames K, or other supports attached to  
70 the side bars of the frame A, are secured the lower parts of the springs L, to the upper parts of which is attached the driver's seat M.

In bearings attached to the side bars of the frame A, a little in front of the drive-wheel B,  
75 is journaled a shaft, N, to the middle part of which is attached an arm, O, having a friction-roller, P, pivoted to its slotted outer end. One of the journals of the shaft N projects, and to it is attached the end of a lever, Q,  
80 the other end of which extends back into such a position that it can be readily reached and operated by the rider from his seat to swing the roller P against the face of the drive-wheel B, and thus check or stop its movement.  
85

R are the guide-wheels, the inner parts of the axle-arms S of which rest upon the end parts of the axle-tree T, and are pivoted at points near the inner ends of the wheel-hubs to the ends of the said axle-tree. The middle  
90 part of the axle-tree T is rigidly attached to the lower side of the forward end of the frame A. To the inner ends of the axle-arms S are pivoted the forward ends of the connecting-bars U, the rear ends of which are pivoted to  
95 the ends of a lever, V, shorter than the axle-tree T, but longer than the space between the inner ends of the axle-arms S.

In the rear edge of the lever V, upon the opposite sides of, at equal distances from, and  
100 near, its center, are formed slots W to receive pins X, rigidly attached to a cross-bar of the



frame A, and one or the other of which serve as fulcrums, according as one or the other end of the lever V is pushed forward. To the center of the lever V, between the slots W, is rigidly attached the rear end of an arm, Y, the forward end of which is slotted to receive the rear edge of the guide-board Z, and has a roller, *a*, pivoted to its slotted forward end to lessen the friction against the said rear edge of the said guide-board.

The rear edge of the guide-board Z is concaved upon the arcs of two circles, having their centers in the axes of the fulcrum-pins X, the said arcs intersecting in the central line of the arm Y when the lever V is parallel with the axle-tree T, to which the said guide-board Z is rigidly attached. To the end parts of the lever V are attached rests *b*, for the operator to place his feet upon when riding upon the machine, and which are inclined upward toward their forward ends, so that the operator's feet will rest easily upon them. With this construction, when the rider forces the left-hand end of the lever V forward, it turns upon the right-hand fulcrum-pin, X, so that the left-hand wheel, R, will be turned back by the long arm of the lever V, and will be moved farther than the right-hand wheel R, which will be turned forward by the short arm of the lever. By this construction the machine can be turned within a small space, and can be guided with ease and precision.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. In a tricycle, the combination, with the frame A and the drive-wheel B, of the crank-arms C, attached to the journals of the said drive-wheel, the jointed levers E, fulcrumed

at their lower ends to hangers attached to the frame A, the bars D, connecting the said lever E with the crank-arms C of the drive-wheel, the hand-levers H and the bars G J, connecting the said jointed levers with the said hand-levers H above and below their fulcrum-points, substantially as herein shown and described, whereby the tricycle can be driven at great speed, as set forth.

2. In a tricycle, the combination, with the frame A and the drive-wheel B, of the recessed arm O, provided with a roller, P, the shaft N, journaled to the frame A, and carrying the arm O, and the hand-lever Q, attached to the said shaft, substantially as herein shown and described, whereby the movement of the drive-wheel can be readily checked or stopped, as set forth.

3. In a tricycle, the combination, with the frame A, the axle-tree T, and the guide-wheels R, of the axle-arms S, pivoted to the said axle-tree, the bars U, pivoted to the said axle-arms, and the foot-lever V, provided with foot-rests *b*, having two slots, W, in its rear edge to receive the two fulcrum-pins X, attached to a cross-bar of the frame A, and provided with a rigid forwardly-projecting arm, Y, slotted at its forward end to receive the roller *a*, and the recessed rear edge of the guide-board Z, substantially as herein shown and described, whereby the tricycle can be readily turned and accurately guided, as set forth.

MARTIN M. DEPUY.

WILLIAM B. DEPUY.

Witnesses:

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S. J. DE WITT.