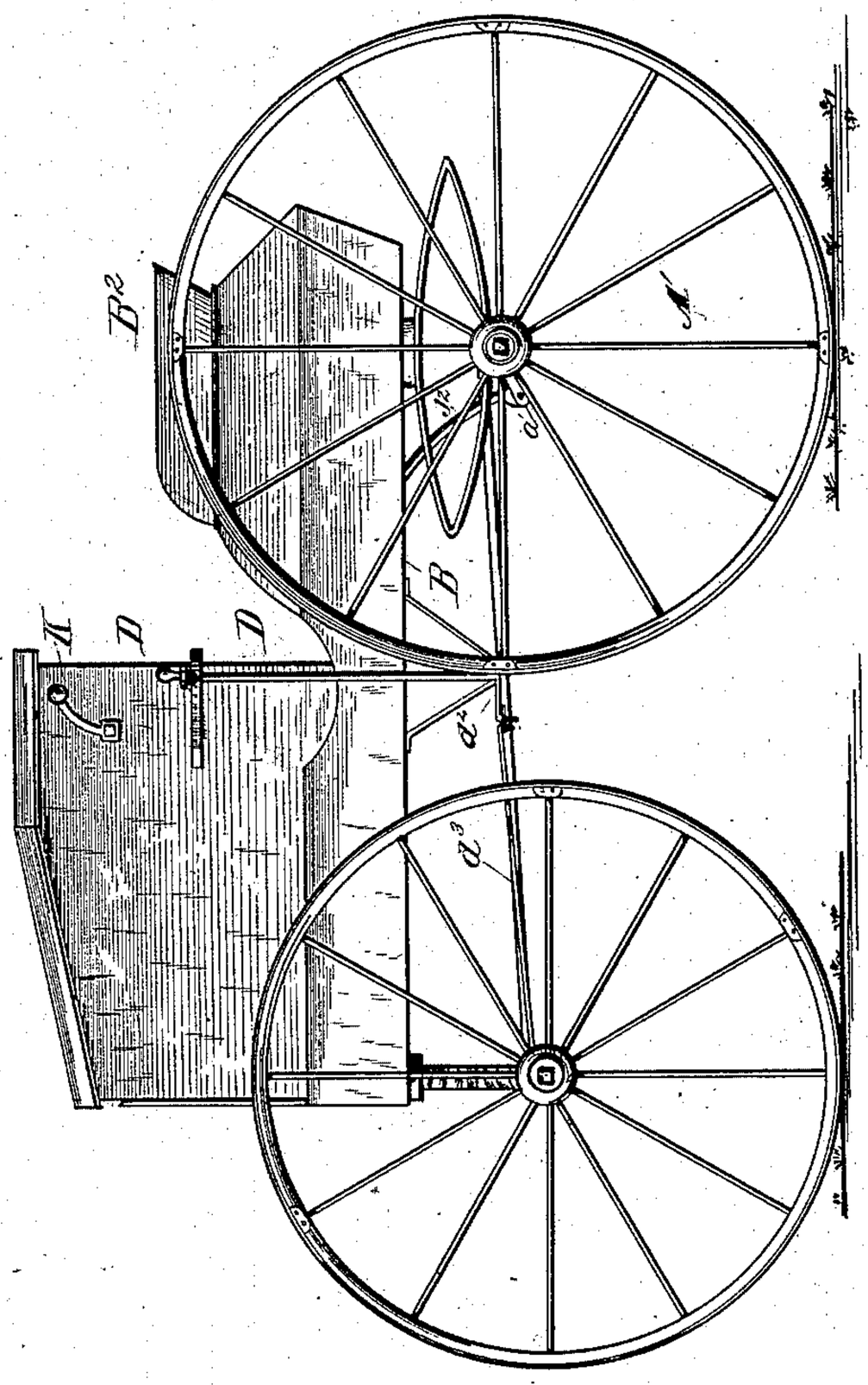
(No Model.) 3 Sheets—Sheet 1.

J. M. STAPLES.

VELOCIPEDE.

No. 293,536. Patented Feb. 12, 1884.

Fig. 1.



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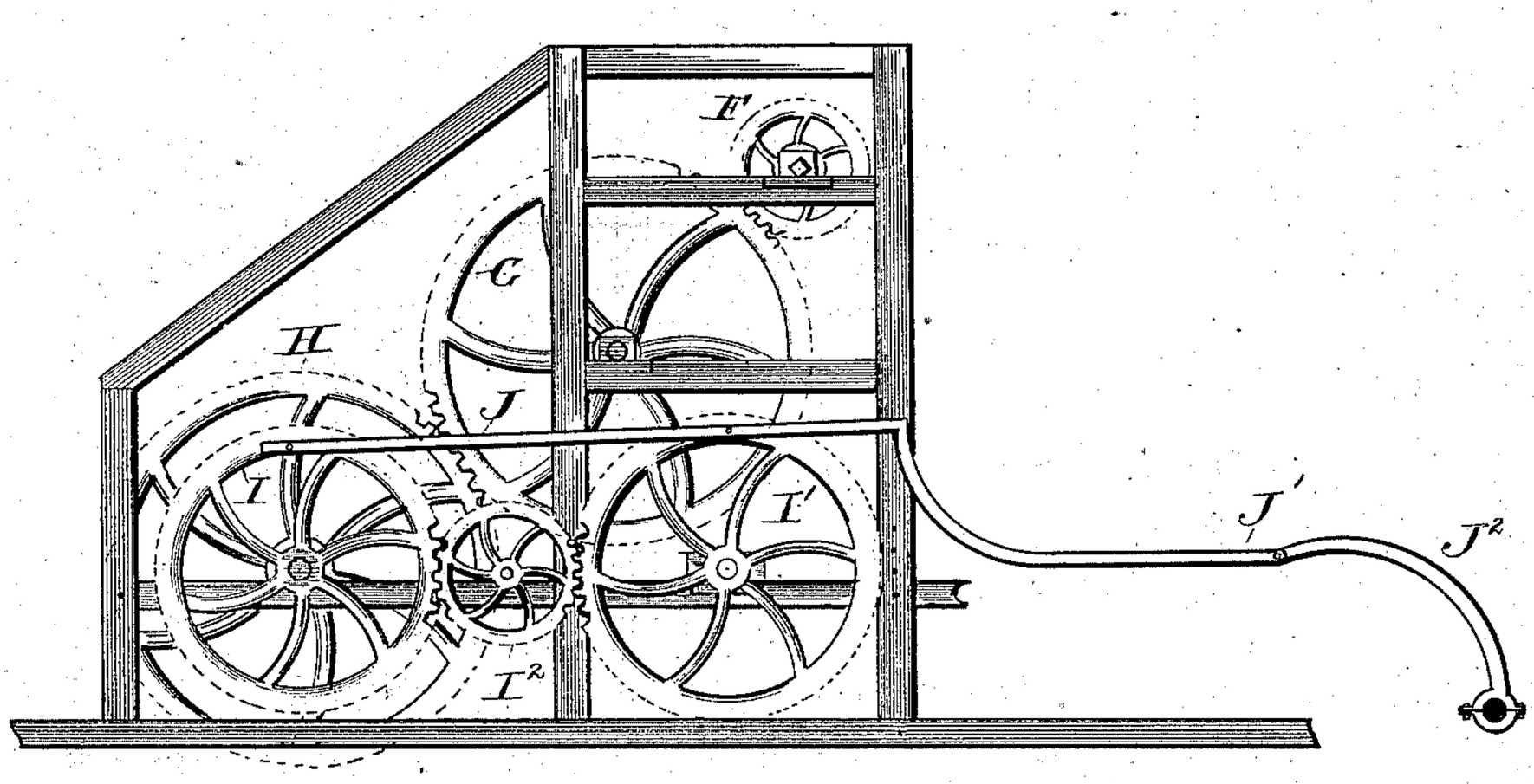

Fig. 2.

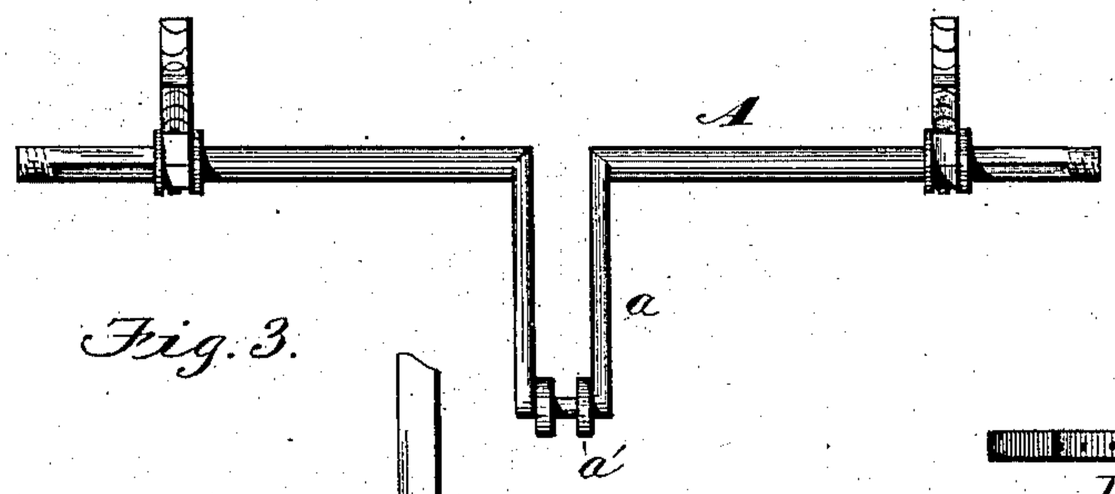

Fig. 3.

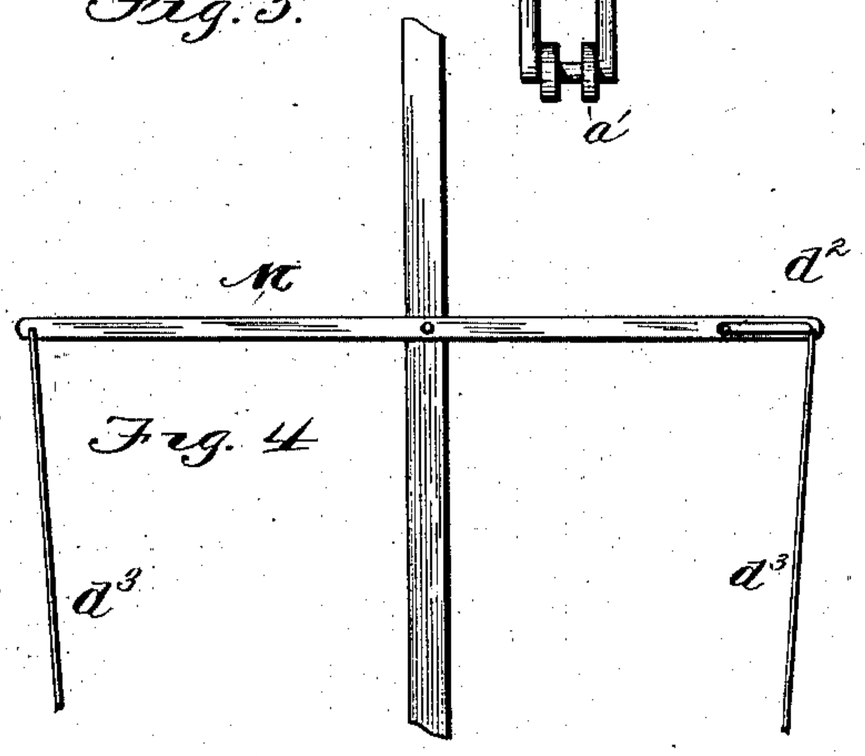

Fig. 4

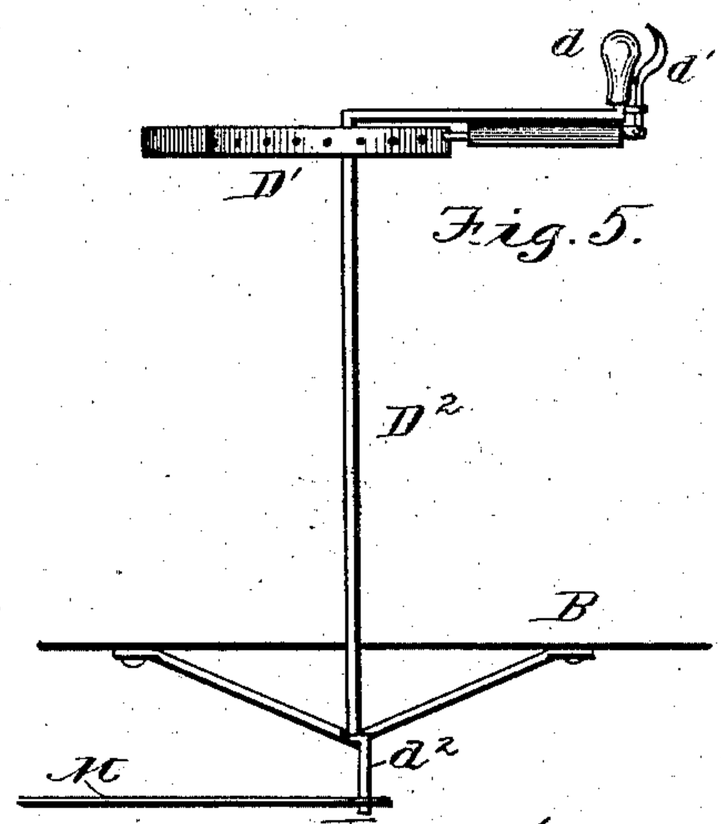

Fig. 5.

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(No Model.) 3 Sheets—Sheet 3.

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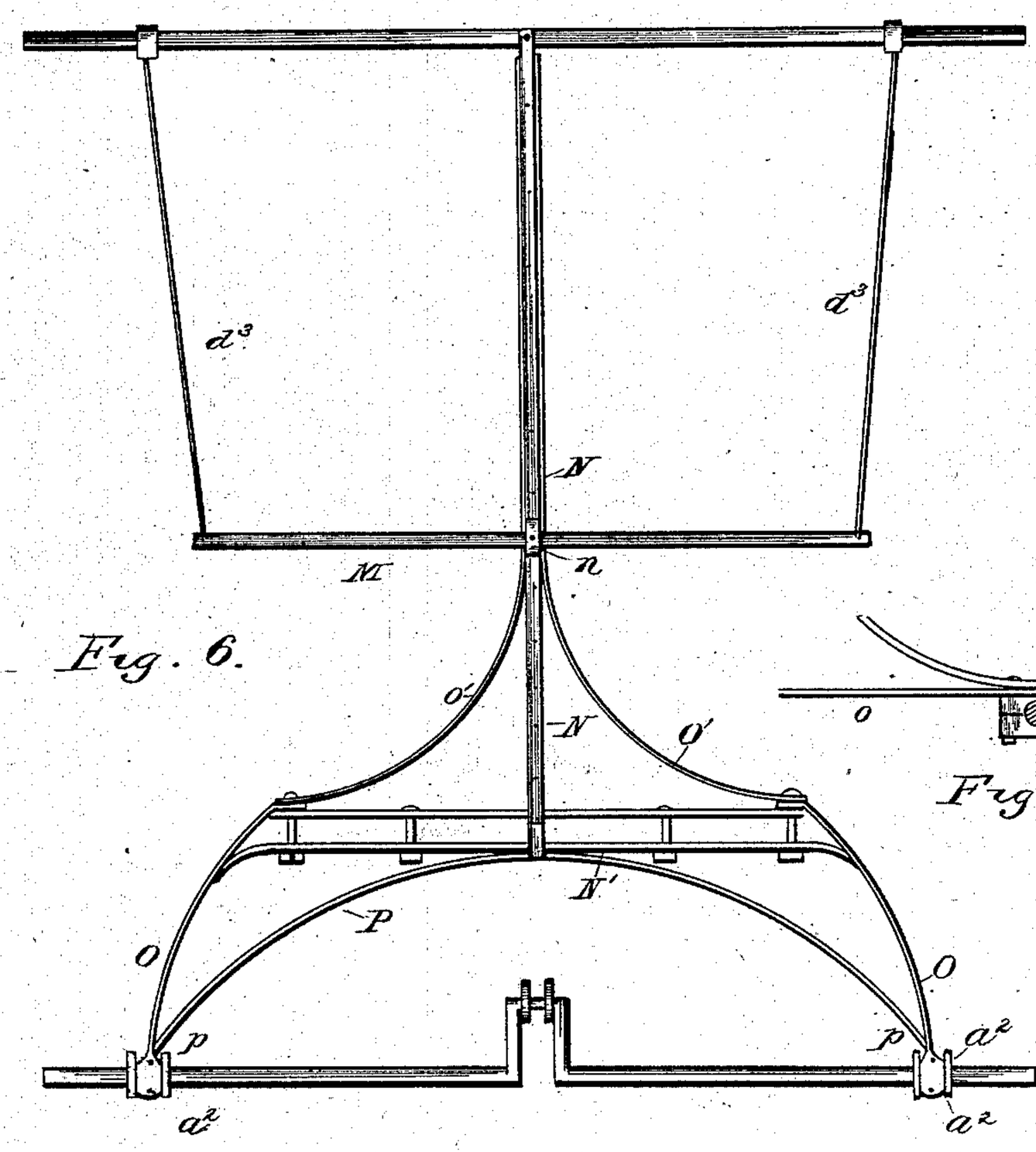

Fig. 6.

Fig. 7.

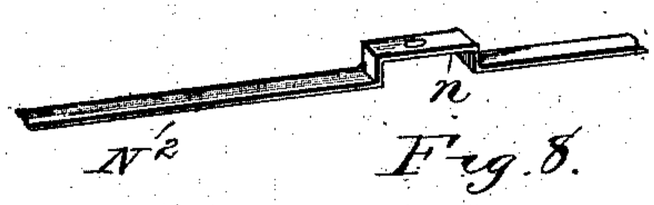

Fig. 8.

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UNITED STATES PATENT OFFICE.

JOHN MORRIS STAPLES, OF ROSE MILLS, VIRGINIA.

VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 293,536, dated February 12, 1884.

Application filed December 1, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. STAPLES, a citizen of the United States, residing at Rose Mills, in the county of Amherst and State of Virginia, have invented certain new and useful Improvements in Vehicles; and I do 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 the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to a class of velocipedes or road-wagons driven by hand-power; and the novelty consists in the construction and arrangement of parts and in their adaptation for service required, as will be more fully hereinafter set forth, and specifically pointed out in the claims.

The object of the invention is to provide a hand-power wagon which shall be light, easy to propel, and which will give a maximum of speed and power to a minimum of force expended, one which shall be comparatively inexpensive of manufacture, simple in construction, and reliable in operation.

To these ends the invention consists in the mechanisms and combinations fully illustrated in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation of a road-buggy having my improvements. Fig. 2 is a longitudinal section, showing the driving mechanism. Fig. 3 is a detail view of the rear axle. Fig. 4 is a detail view of the body-bar and the means for guiding. Fig. 5 is a detail view of the guiding means elaborated. Fig. 6 is a plan view of the running-gear, and Figs. 7 and 8 are details.

Referring to the drawings, in which similar letters of reference indicate like parts, A designates the rear axle of the vehicle, having crank *a*, with friction roller or strap *a'*. The wheels A' are hung upon the axle A in such manner as to revolve therewith. The front axle is pivoted to the king-bolt, and the front wheels revolve thereon.

B designates the body of the vehicle, B^2 the seat, and D a frame located within the body. In this frame D are located or journaled the shafts of the gears, which are hereinafter mentioned. The power-gear F has secured to it outside the frame the crank K, by which the several gears are operated. It meshes with a gear, G, which gear meshes with a gear, H. Rigid with this gear H is a gear, I, which is connected with a gear, I', of similar size by a gear, I^2, and also by a connecting-rod, J. This rod J, at J', is pivoted to a pitman, J^2, which is connected to the friction-strap *a'* on the crank of the rear axle, A, and through this train of mechanism motion is imparted to the vehicle by the driver. Secured upon the outside of the frame D is a segment, D', having notches or holes which receive the spring locking-pin *d'* of the crank-arm *d* of the guiding-lever, the vertical part D^2 of which is journaled above and below, as shown. The lower crank-arm, d^2, is loosely attached to the cross-bar M, pivoted centrally to the reach N, and rods d^3 connect this bar with the forward axle, the wheels upon which revolve independently. The cross-bar N is mortised to receive the reach N, and is bolted to the front and rear ends, respectively, of the rods O and braces O', as clearly shown in Fig. 6. The rear ends of said braces are bolted between the blocks a^2 and the axle-springs. (See Fig. 7.) A curved brace, P, has its ends welded at the rear ends of the rod O, and is bolted to its center to the cross-bar N. The braces O' extend forward nearly to the front axle, and are bolted to the reach N, which is provided on its upper surface with a strap, N^2, having a loop, *n*, with an aperture therein for the insertion of the pin which pivots the cross-bar M to the reach. A foot-brake of any approved construction may be provided.

Modifications in details of construction may be made without departing from the principle or sacrificing the advantages of my invention—as, for instance, the wheel or gears may be varied in size to accommodate speed or power. The guiding-lever may be otherwise located, &c. I would therefore have it understood that I do not limit myself to the exact construction shown and described, but hold myself at liberty to make such changes and

alterations as fairly fall within the scope of my invention.

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

1. In combination with the axle A, having crank *a* and friction-roller *a'*, and with the wheels A', rigidly hung upon said axle, the pitman J^2, wheels I I', connected by the rod J and gear I^2, and the gears F G H, the crank K, and frame D, as and for the purpose set forth.

2. In combination with the forward axle pivoted at the king-bolt, the frame D and segment D', the shaft D^2, having cranks *d* d^2, the spring-bolt *d'*, the bar M, and links d^3, as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN MORRIS STAPLES.

Witnesses:
EDWD. D. SLAUGHTER,
J. R. FREEMAN.