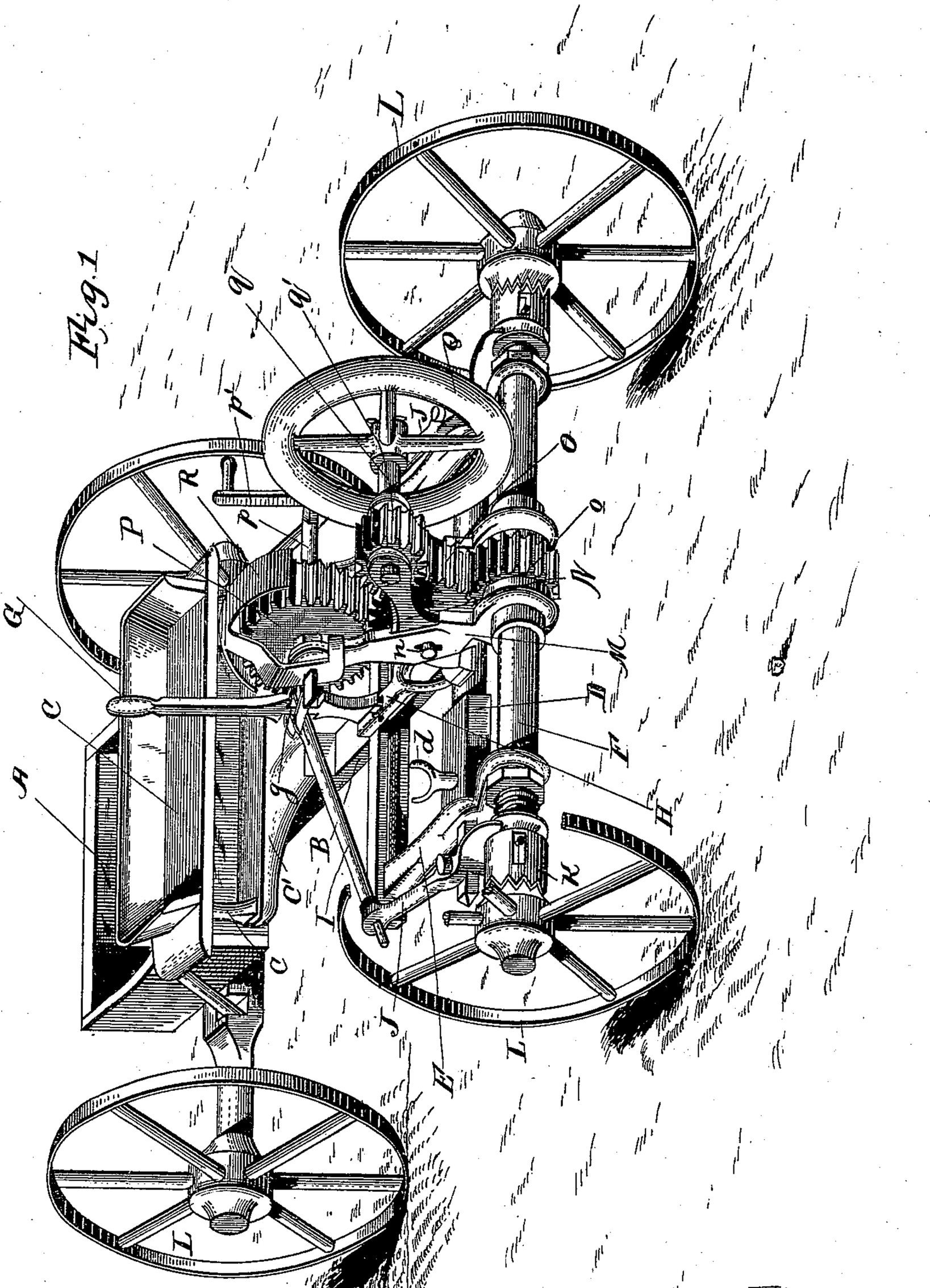
(No Model.) 2 Sheets—Sheet 1.

# L. F. MOHR.

## VELOCIPEDE.

No. 354,649. Patented Dec. 21, 1886.

Fig. 1.




Witnesses
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(No Model.) 2 Sheets—Sheet 2.

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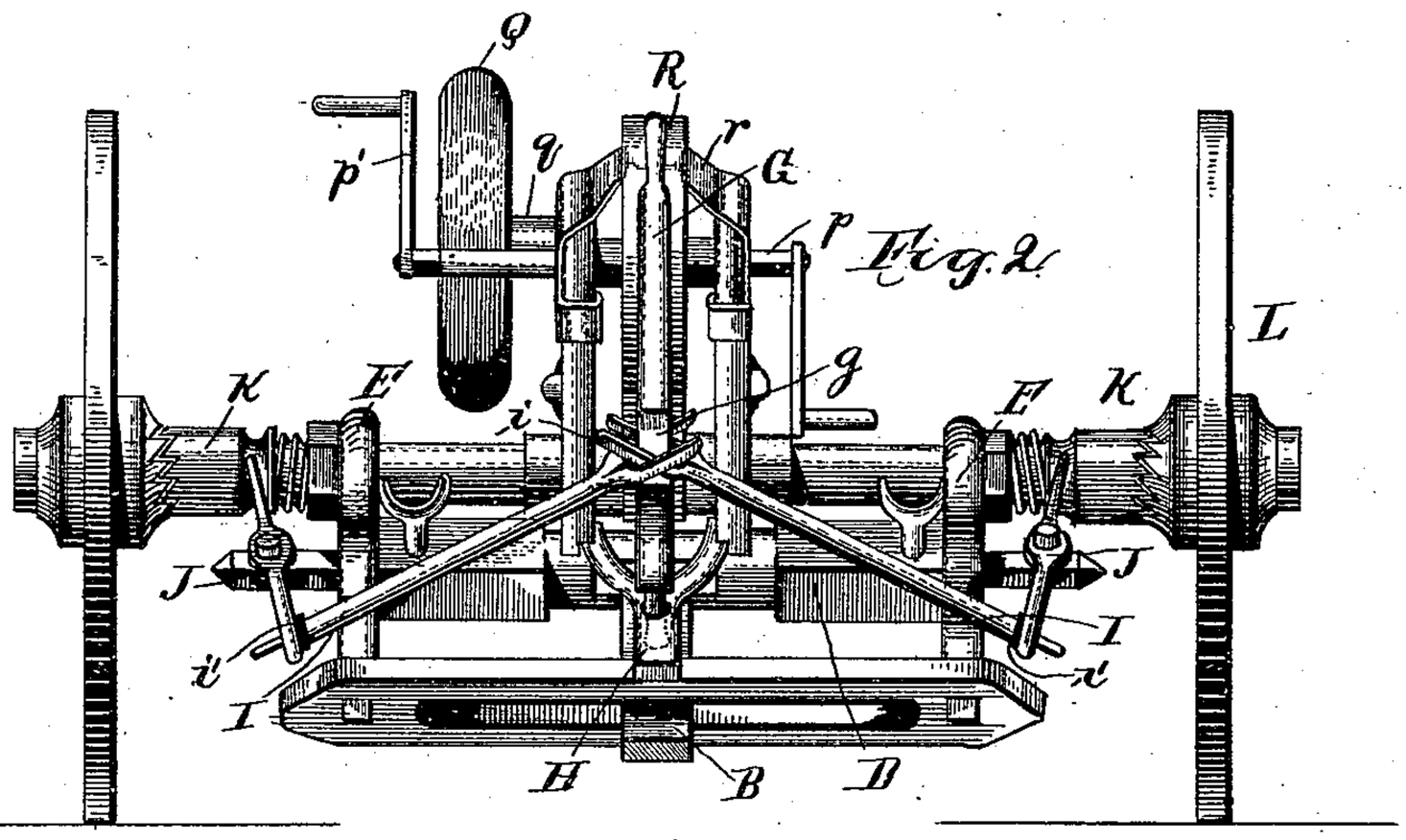



Fig. 2.

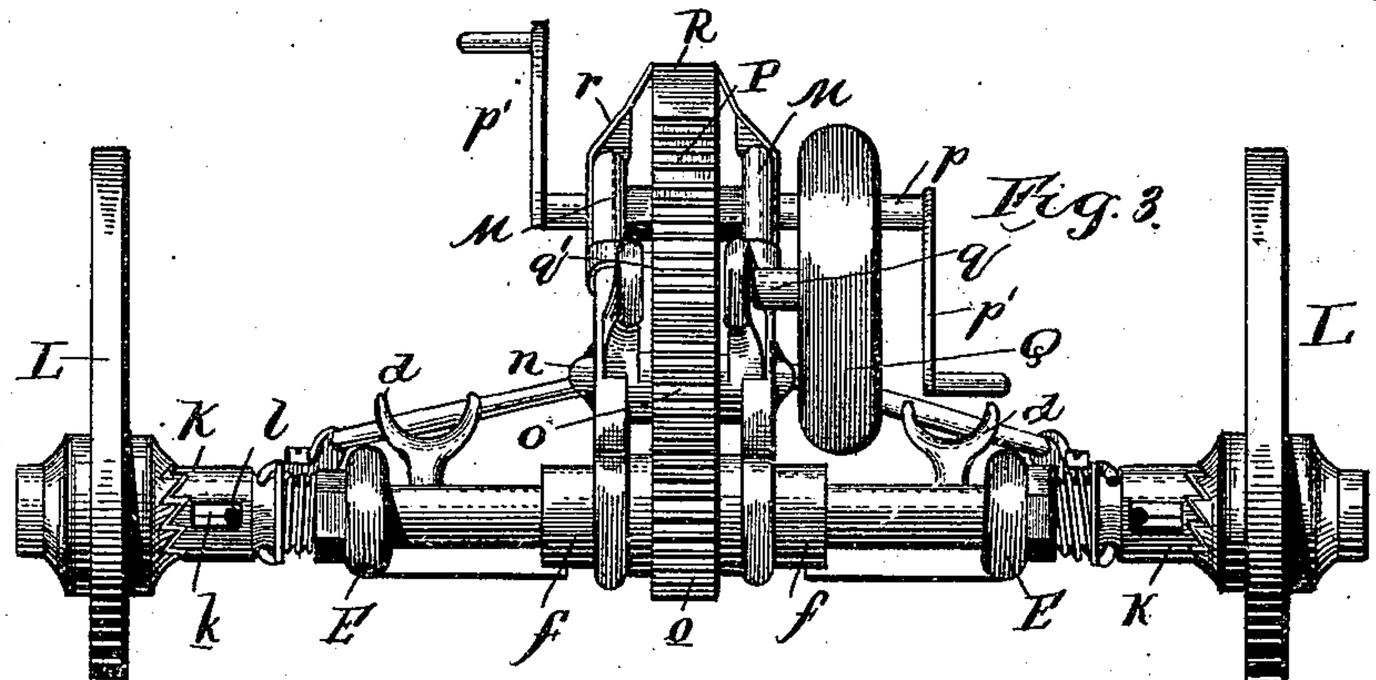



Fig. 3.

Fig. 4.

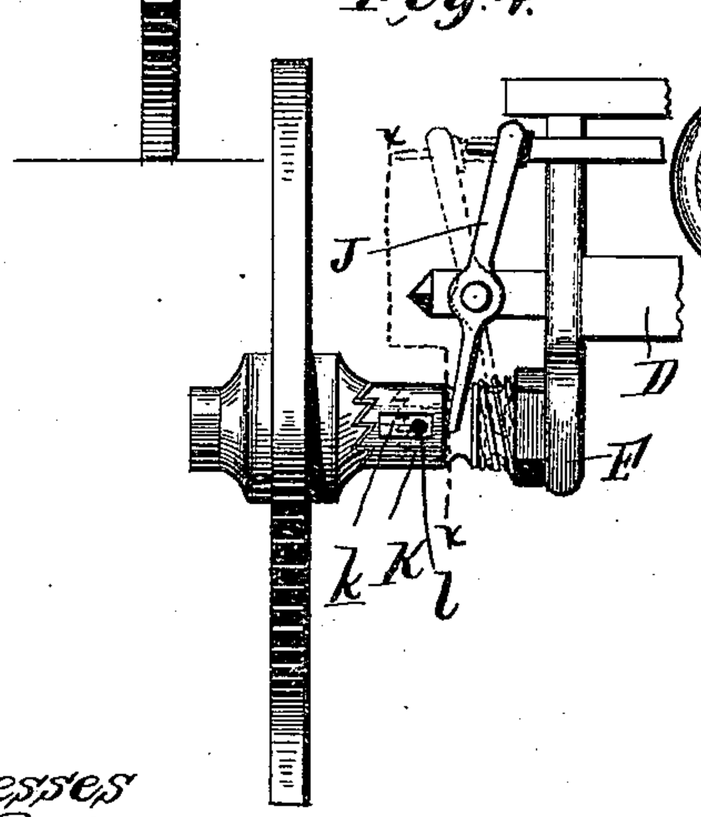



Fig. 5.

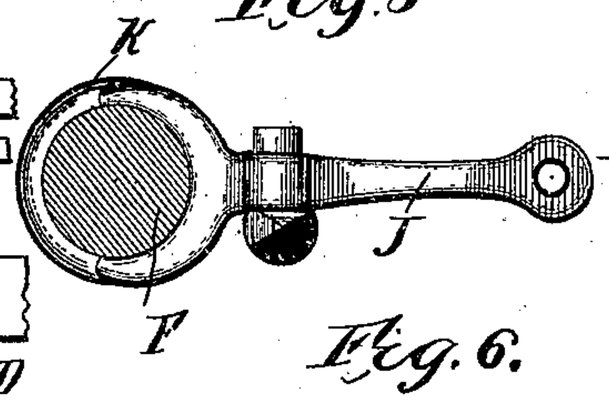
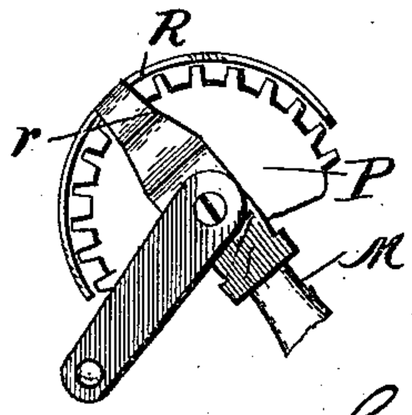



Fig. 6.




Witnesses
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# UNITED STATES PATENT OFFICE.

LUIE F. MOHR, OF HOWARD CENTER, IOWA.

## VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 354,649, dated December 21, 1886.

Application filed September 23, 1886. Serial No. 214,345. (No model.)

*To all whom it may concern:*

Be it known that I, LUIE F. MOHR, a citizen of the United States, residing at Howard Center, in the county of Howard and State of Iowa, have invented certain new and useful Improvements in Propellers for 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.

This invention relates to vehicles of that class driven by manual power through a system of gearing, and has for its object to simplify and improve the general structure of the vehicle and combine therewith a simple driving and clutch mechanism.

The improvement consists in the novel features more fully hereinafter set forth, claimed, and shown in the annexed drawings, in which—

Figure 1 is a perspective view of a vehicle of my construction embodying my improvements. Fig. 2 is a perspective view of the same on the line X X. Fig. 3 is a front view. Fig. 4 is a detail plan view of one end of the propeller. Fig. 5 is a sectional view on the line X X of Fig. 4, on an enlarged scale; and Fig. 6 is a detail view of the upper end of the standards, showing a portion of the driving gear-wheel and the guard.

The vehicle comprises two parts, which, for the sake of convenience, I will designate as the "front" and "rear" parts. The rear part is provided with the body A, which has projecting thereon a reach or tongue, B, upon which the seat C is supported by means of the bolster C′ and the supports *c*. The front end of the tongue is pivotally connected with a reach, D, which is supported between arms E, extending from opposite ends of the axle F. It passes through a slotted guide, which unites the ends of the arms, as shown, and prevents the sagging of the parts, and also forms a foot-rest. A lever, G, having its lower end stepped in a connection, H, which unites the slotted guide with the reach midway of their ends, has its middle portion cut away on each side, forming the reduced portion *g*, which receives the bifurcated ends *i* of links I, which are interposed between it and clutch-levers J, mounted on extensions of the reach, as shown. The outer ends of the links are reduced and have shoulders *i′*, which engage with the ends of the clutch-lever and limit the movements of the links through the ends of the clutch-levers in their outward motion. The bifurcated ends of the clutch-levers fit into annular grooves in the clutch-sleeves K, which are located near each end of the axle F, and are adapted to engage with the inner ends of the hub of the wheels L, loosely mounted upon the ends of said axle. The adjacent faces of the hubs and clutch-sleeves are serrated or provided with teeth, to insure a positive connection between them. Pins *l*, projected laterally from the axle, enter slots *k*, formed in the sides of the clutch-sleeves, and cause them to turn with the axle and limit their movement thereon.

Standards M, arranged at a distance apart, have their lower ends mounted upon the axle F and held between the collars *f*. They incline rearwardly and are braced by uprights N, which cross them and are held thereto at the points of intersection by the cross-bar *n*. A gear-wheel, O, loosely mounted on the cross-bar, meshes with the pinion *o*, keyed to the axle between the standards, and with a gear-wheel, P, on the shaft *p*, mounted in the upper ends of the standards M. The ends of the shaft *p* project beyond the standards and have cranks *p′* secured thereto for propelling the vehicle. The shaft *q*, mounted in the outer ends of the uprights and having a pinion, *q′*, meshing with the gear-wheel O, has a fly-wheel, Q, on its outer end, by which the motion of the machine is steadied and a sufficient momentum acquired to carry the vehicle over light obstructions. The upper ends of the standards are united and braced by arms *r*, extending from the guard R, which surrounds the inner portion of the gear-wheel P.

The reach D has foot-rests *d*, swivelly supported near each end. The part provided with the propelling mechanism can be readily detached from the rear part and applied to any vehicle. By reason of the peculiar arrangement and connection of the links I with the clutch-levers and hand-lever G either of the

wheels can be thrown out of gear and the vehicle turned and guided as desired.

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

1. In a device for propelling vehicles, the combination, with the axle and suitable driving mechanism, of the wheels loosely mounted upon the ends of the axle, the clutch-sleeves, the clutch-levers, the hand-levers stepped in a support and having a reduced portion, and the links having bifurcated ends fitted in the reduced portion of the hand-lever, and reduced ends passed through the ends of the clutch-levers, substantially as set forth.

2. A propeller for vehicles, consisting of the following elements in combination: the axle, suitable driving mechanism, the wheels loosely mounted upon the ends of the axle, the clutch-sleeves, the clutch-levers, the hand-lever, the links, the arms extending from each end of the axle, the reach, and the slotted guide uniting the outer ends of the arms.

3. The combination, with the propeller comprising the axle, the driving mechanism, the wheels, the clutch-sleeves, the connections for operating the clutch-sleeves, the reach, slotted guide, and the arms for supporting them, of the vehicle consisting of the axle, the body, the seat, and the short tongue passed through the guide and having its forward end pivotally connected with the reach, substantially as set forth.

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

LUIE F. MOHR.

Witnesses:
H. T. REED,
FRIED. MOHR.