(No Model.) 3 Sheets—Sheet 1.

J. C. MARET.

VELOCIPEDE.

No. 346,667. Patented Aug. 3, 1886.

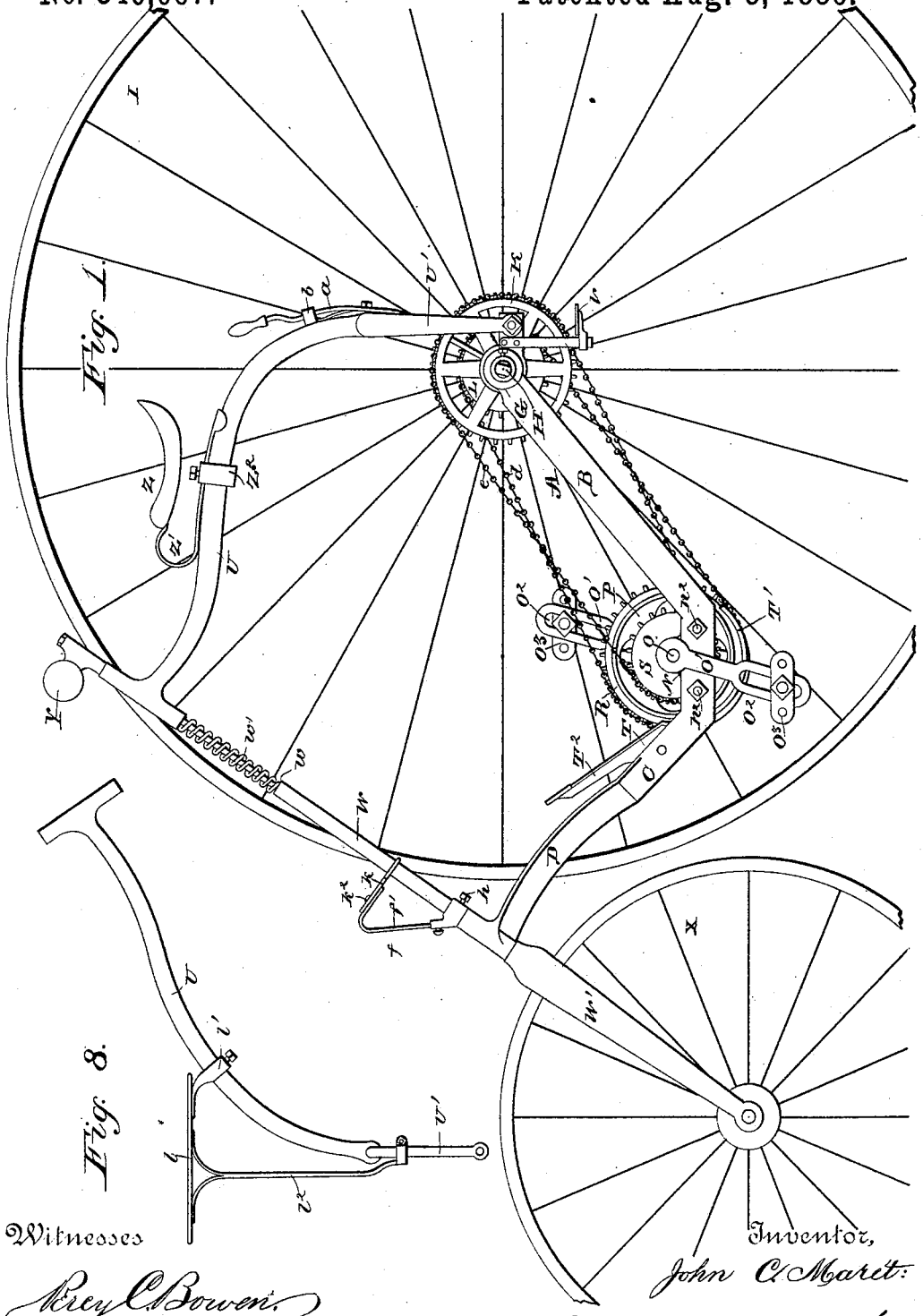

Fig. 1.

Fig. 8.

Witnesses

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(No Model.) 3 Sheets—Sheet 2.

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Fig. 6.

Fig. 2.

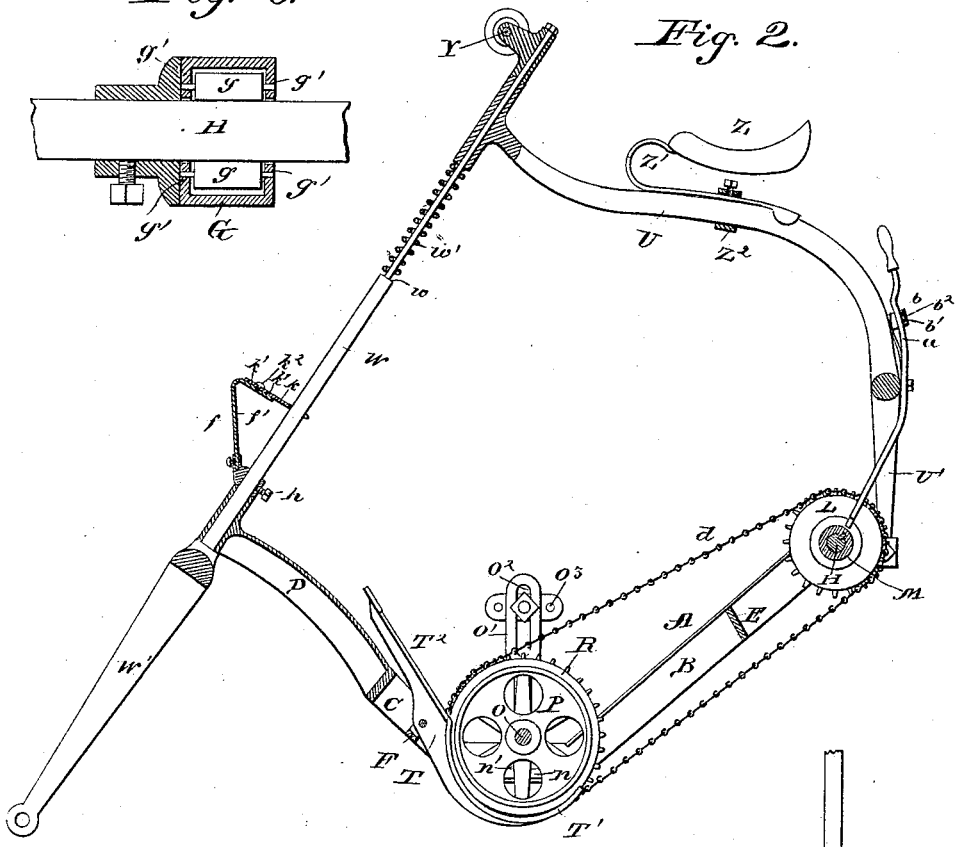
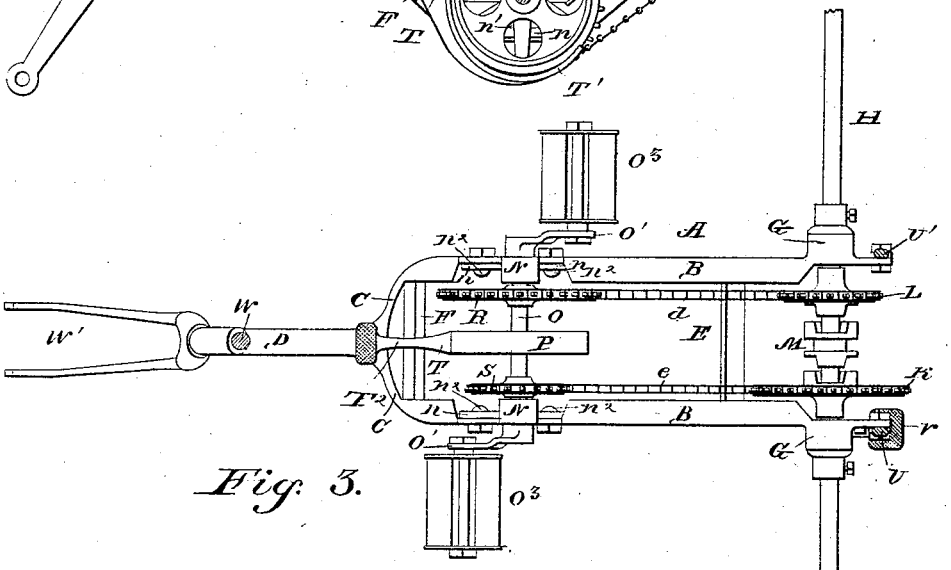


Fig. 3.



Witnesses

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(No Model.) 3 Sheets—Sheet 3.

J. C. MARET.

VELOCIPEDE.

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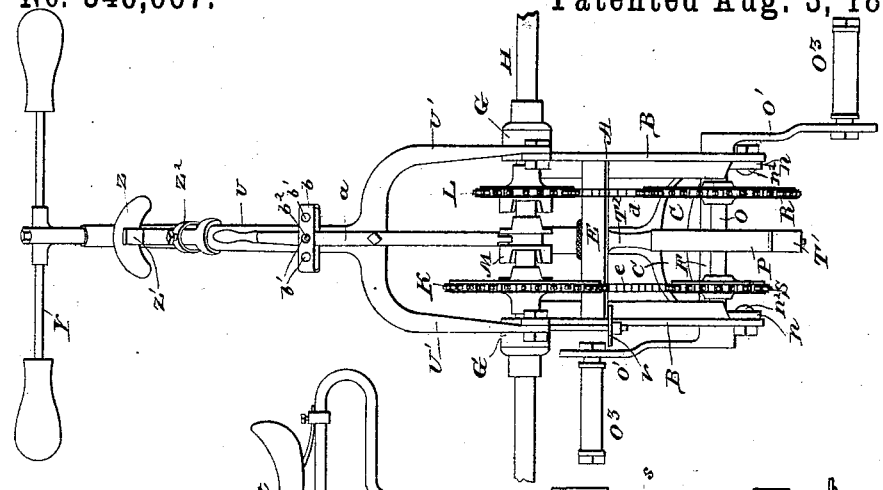

Fig. 4.

Fig. 5.

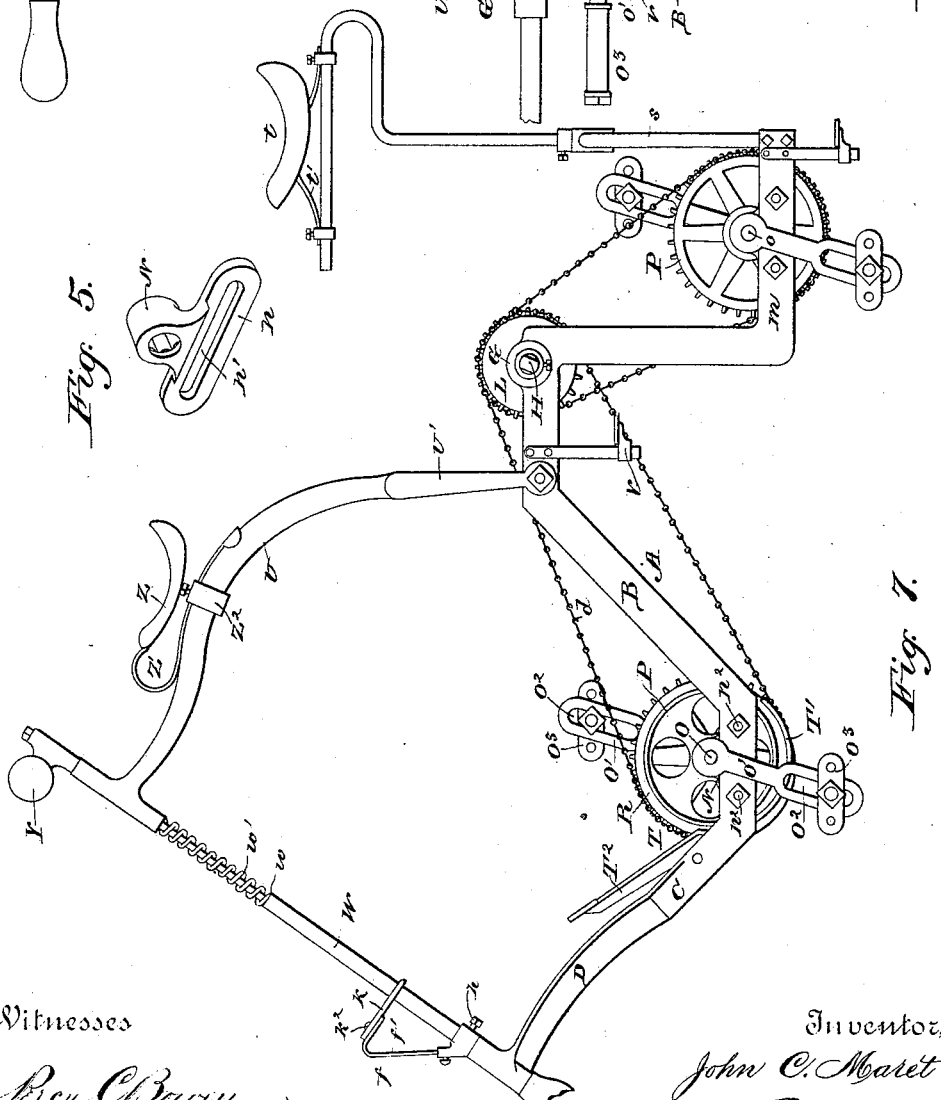

Fig. 7.

Witnesses

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UNITED STATES PATENT OFFICE.

JOHN CLAVERN MARET, OF PADUCAH, KENTUCKY.

VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 346,667, dated August 3, 1886.

Application filed May 21, 1886. Serial No. 202,881. (No model.)

To all whom it may concern:

Be it known that I, JOHN CLAVERN MARET, a citizen of the United States, residing in Paducah, in the county of McCracken and State of Kentucky, have invented a new and useful Improvement in Tricycles, of which the following is a specification.

My invention relates to an improvement in tricycles; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of my invention, with the near wheel removed. Fig. 2 is partly an elevation and partly a vertical sectional view of the same. Fig. 3 is a top plan view, partly in section. Fig. 4 is a rear elevation. Fig. 5 is a detail perspective view of one of the bearings for the driving-shaft. Fig. 6 is a vertical section of one of the bearings for the rear axle. Fig. 7 is an elevation of a modified form of my invention, with the near wheel removed. Fig. 8 shows an auxiliary seat attached to backbone.

A represents a frame, which is composed of parallel side arms, B, connected at their front ends by a curved arm, C, and provided with a forwardly-projecting shank or arm, D. The arms B are connected together by transverse bars E and F, which are arranged respectively near the rear and front ends of the frame. The central portion of the frame is bent downwardly from a horizontal line, as shown in Fig. 1. The rear ends of the arms B are provided with laterally-projecting bearing-boxes G, in which are arranged a series of anti-friction rollers, *g*, the projecting spindles at the ends of the said rollers being journaled in rings *g'*, which are placed in the ends of the bearing-boxes.

H represents a transverse shaft, which is journaled in the bearings G, and extends outwardly beyond the outer sides of the frame A. To one end of the said shaft is rigidly attached a large wheel, I, and to the other end of the said shaft is loosely attached a similar wheel.

K represents a sprocket-wheel, which is loose on the shaft H, and is located near one of the arms B, and L represents a smaller sprocket-wheel, which is also loose on the shaft, and is located near the opposite arm B. A sliding clutch, M, is placed on the shaft H, and is adapted to move back and forth thereon, so as to engage with either of the wheels K and L, or to be moved to the central portion of the shaft between the said wheels and out of engagement with either of them.

To the lower ends of the bars B are attached bearing-blocks N, which are provided with depending plates *n*, having longitudinal horizontal slots *n'*. Bolts n^2 pass transversely through the said slots and through the sides of the bars B, and thereby permit the boxes N to be moved forwardly or rearwardly in the frame A, and to be adjusted thereon at any desired point within the limit of the slot *n'*.

O represents the driving-shaft, which is journaled in the boxes N, the said boxes being provided with anti-friction rollers similar to the rollers *g* of the bearings G. To the center of the shaft O is attached a friction-wheel, P, and to the ends of the said shaft are attached crank-arms O'. The said arms are provided near their outer ends with slots O^2, and extend in opposite directions from the shaft O. Pedals O^3 are attached to the outer ends of the crank-arms by means of transverse bolts, which extend through the slots O^2 and are secured therein at any desired adjustment by means of clamping-nuts, which are screwed onto the inner ends of the said bolts. On one side of the friction-wheel P, and in a line with the small sprocket-wheel L, is a large sprocket-wheel, R, which is rigidly attached to the shaft O, and on the opposite side of the friction-wheel, and in a line with the large sprocket-wheel K, is a small sprocket-wheel, S, which is also rigidly attached to the shaft O.

T represents a brake, which is fulcrumed on the cross-bar F and is provided with a rearward-extending curved arm, T', having its inner side covered with rubber or leather or other suitable material and adapted to bear against the periphery of the friction-wheel. An arm, T^2, projects forwardly from the brake and is provided at its outer end with a suitable pedal.

U represents the backbone of the tricycle, which is provided at its lower rear end with the vertical forks U', which are attached to

the rear ends of the bars B. From one of the said bars depends a step, V. In the front ends of the frame A and of the backbone U is journaled a guiding-rod, W, which is provided at its lower end with the forks W', between which is journaled the small steering-wheel X, which runs in front of the large wheels I. The upper end of the guiding-rod is reduced, thereby forming a shoulder, *w*, and upon the said upper end of the rod is placed a coiled extensile spring, *w'*, the lower end of which bears upon the shoulder *w* and the upper end of which bears under the front end of the backbone. To the upper end of the guiding-rod W is attached the usual steering-arms, Y.

Z represents the seat, which is supported upon a curved flat spring, Z', the said spring bearing upon the backbone, and is provided with a clip, Z^2, having a set-screw, which embraces the backbone and permits the seat to be adjusted forwardly or rearwardly thereupon to suit the convenience of the rider.

a represents a lever-arm, which is fulcrumed to the backbone between the forks thereof, and extends downwardly and engages the feathered sliding clutch on the shaft H. The upper end of the lever *a* works in a transverse loop or keeper, *b*, which is secured to the backbone and is provided on its rear side with a series of openings, *b'*. The lever-arm has a stud, b^2, which projects from its rear side and is adapted to engage either of the series of openings *b'* and thus lock the said arm thereto. It will be readily understood from this description that when the upper end of the lever-arm *a* is moved to the right the sliding clutch will be moved to the left on the shaft H, so as to lock the large sprocket-wheel K to the said shaft, and that by moving the upper end of the lever-arm to the left the sliding clutch will be moved to the right, thereby disengaging the large wheel K and locking the small wheel L to the shaft H. When the lever-arm *a* is in a vertical position, the sliding clutch is arranged between the wheels K and L and out of engagement with both of them, and therefore the said wheels are both loose on the shaft H. An endless sprocket-chain, *d*, connects the small wheel L with the large wheel R, and a similar endless chain, *e*, connects the large wheel K and the small wheel S. By thus providing the driving-shaft with the large and small wheels, which are connected, respectively, to the small and large wheels of the main shaft of the tricycle, and by providing means for throwing either of the wheels out of gear with the main shaft of the tricycle, it will be readily understood that the machine may be caused to run either very rapidly or not so fast, as may be desired, by moving the lever *a*, and without altering the speed of the driving-shaft O. The tricycle may be thus propelled very rapidly on level ground and caused to run slowly up an incline, and thus avoid excessive fatigue on the part of the rider.

By providing the guiding-rod W with the spring *w*, to support the front end of the backbone, an easy and pleasant motion is imparted to the tricycle, and the latter is thus prevented from jarring and jolting the rider.

f represents a lamp-holder, which is composed of a bent arm, *f'*, that is attached to the guiding-rod W by means of a set screw, *h*, and bears upon the front end of the pivotal part of the frame A, thus preventing the latter from rising on the driving-rod.

k represents an arm, which engages the guiding-rod W, and the front end of said arm is provided with a series of openings, *k'*. Through one of these openings passes a bolt, k^2, which connects the said arm with the bent arm *f'* of the lamp-holder. By means of this construction it will be understood that the front arm of the lamp-holder may be adjusted forwardly or rearwardly with relation to the guiding-rod W, so as to throw the light from the lamp either to the ground directly in front of the machine, or at a considerable distance ahead.

l represents a seat or platform, which is attached to the rear lower side of the backbone U by means of a clip, *l'*, and the said seat or platform is provided with depending supporting-arms l^2, which are attached to the forks U' of the backbone. The said seat or platform enables the machine to carry two persons.

In Fig. 7 I illustrate a modified form of my invention, in which the frame A is provided with a rearward extension, *m*, which carries a driving-shaft, *o*, having a gear-wheel, *p*, connected to one of the wheels on the shaft H by means of an endless belt, and the shaft *o* is also provided at its ends with oppositely-extending crank-arms provided with the pivoted pedals. From the rear end of the extension *m* rises a vertical standard, *s*, which carries a vertically-adjustable seat, *t*, supported upon a spring, *t'*. When the tricycle is provided with this apparatus, it is adapted to be used double, and each person riding the tricycle can assist in propelling it.

Having thus described in my invention, I claim—

1. The combination, in a tricycle, of the frame A, the backbone attached thereto, the steering-rod W, carrying the front wheel, and pivoted to the front ends of the frame A and the backbone, and the spring *w'* on the upper end of the steering-rod and bearing under the front end of the backbone, for the purpose set forth, substantially as described.

2. The combination, in a tricycle, of the frame A, the backbone and the steering-rod attached to opposite ends thereof and to each other above the frame, the main shaft having the rear wheels journaled to the rear of frame A, the driving-shaft also journaled in the said frame and having the friction-wheel P, and the brake-lever T, fulcrumed to frame A, and having the curved arm T' to bear under the friction-wheel, and the pedal-arm T^2, substantially as described.

3. The combination, in a tricycle, of the frame A, the backbone attached to the rear end of the said frame, the steering-rod pivoted to the front end of the frame and to the front end of the backbone, and the lamp-holder attached to the steering-rod and bearing upon the front end of the frame, for the purpose set forth, substantially as described.

4. The combination, with the steering-rod, of the lamp-holder comprising the arm *k* engaging the said rod, and the arm *f'*, having its lower end attached to the guiding-rod, and its upper end adjustably attached to the arm *k*, for the purpose set forth, substantially as described.

5. The combination, in a tricycle, of the frame A, the main shaft H, journaled therein and having the sprocket-wheel, (one or more,) the movable bearings N, attached to the frame A and adjustable thereon, and the shaft O, journaled in the said bearings, and having the sprocket-wheels, (one or more,) and an endless chain connecting the sprocket-wheels of the driving and main shafts, substantially as described.

6. The lamp-holder having the movable arm *f'*, whereby the light of the lamp may be thrown to the ground immediately in front of the tricycle or velocipede or at a distance therefrom, substantially as described.

7. In a tricycle, the combination of the frame A, the backbone attached thereto, the guiding-rods pivoted to the front ends of the backbone and the frame A, and carrying the front wheel, X, the main shaft H, journaled to the frame A and carrying the rear wheels, the sprocket-wheels K and L, loose on the said shaft, the sliding clutch M, for engaging either of the said wheels, a lever, *a*, fulcrumed to the backbone and attached to the sliding clutch for moving the latter, the driving-shaft O, having the rigid wheels R and S, and the operating-pedals, and the endless sprocket-chains connecting the sprocket-wheels K and S and L and R, substantially as described.

8. In a tricycle, the combination of the frame A, the main shaft H, journaled therein and having the sprocket-wheel, (one or more,) the movable bearings N, having the longitudinal slots *n'*, the bolts passed through the said slots to secure the bearings to the frame, and the shaft O, journaled in the said bearings and having the sprocket-wheels, (one or more,) and the endless chain or chains connecting the sprocket-wheels of the shafts H and O, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN CLAVERN MARET.

Witnesses:
J. WM. FISHER,
W. Z. SPENCER.