

(No Model.)

W. P. AKERS.
VELOCIPED.

No. 433,508.

Patented Aug. 5, 1890.

FIG. 1.

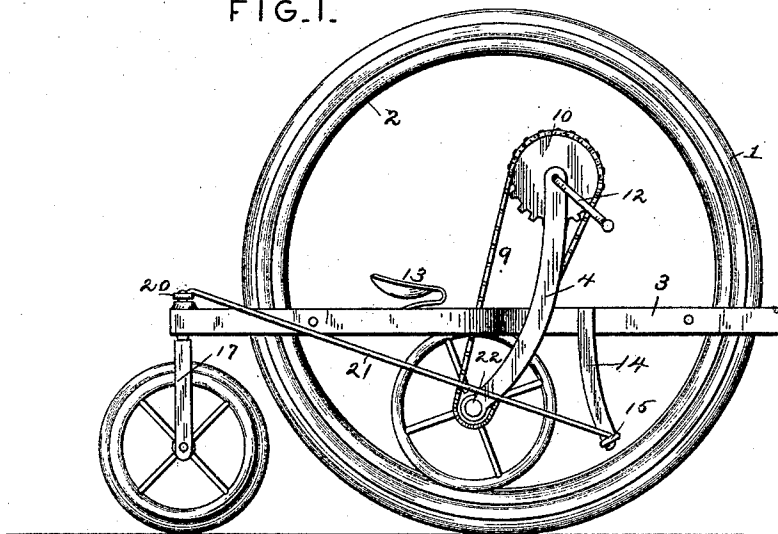


FIG. 2.

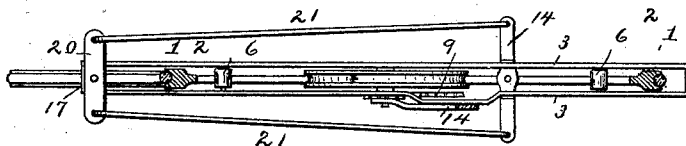
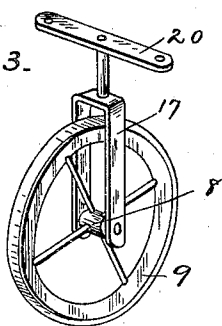


FIG. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

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VELOCIPEDÉ.

SPECIFICATION forming part of Letters Patent No. 433,508, dated August 5, 1890.

Application filed January 17, 1890. Serial No. 337,221. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. AKERS, a citizen of the United States, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented a new and useful Velocipede, of which the following is a specification.

This invention has relation to that class of velocipedes in which the rider is suspended within a large wheel impelled by frictional contact between the inner periphery of the same and the driving-wheel, and the objects and advantages of the invention, together with the novel features thereof, will hereinafter appear, and be particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a side view of a velocipede constructed in accordance with my invention; Fig. 2, a horizontal section of the same; and Fig. 3, a perspective of the guide-wheel detached.

Like numerals indicate like parts in all the figures of the drawings.

The many advantages arising from the employment of a large wheel are readily recognized by those familiar with this class of machines, as it is well known that by the increased size of wheel not only is speed gained, but the same may be propelled with greater ease over rough or smooth roads and with greater comfort to the rider, in that the jolt is less, and yet at the same time all the benefits arising from this class of exercise are obtained.

In practicing my invention I provide a large wheel 1, the inner periphery of which is provided with a continuous circular rib or track 2. The wheel is embraced at each side by a transverse frame 3, comprising opposite parallel bars 4 connected at their ends, and of such a length as to permit of lateral oscillations of the frame upon the wheel. The bars are connected inside of the periphery of the wheel by spindles 5, upon each of which is mounted a friction-roller 6, so that during the oscillations of the frame upon the wheel the contact of the same therewith will not tend to retard the revolutions of the wheel. From each of the bars 5 there projects vertically above and below the same a standard 7, in

the lower ends of which, upon a shaft 8, is mounted a wheel 9, the periphery or rim of which is concaved in cross-section, so as to fit over the track or bead 2, upon which the wheel rides. The hub of the wheel is provided with a small gear 8, over which runs a sprocket-chain 9^a, which latter also passes around and is operated by a master-gear 10, mounted upon a shaft 11, journaled in the upper ends of the two standards and provided with operating-cranks 12, one at each end of the shaft. In rear of the standards and upon the side bars of the frame is mounted a seat 13, which seat is directly over, or nearly so, the friction-wheel, whereby the weight of the occupant of the seat serves to maintain said wheel in close frictional contact with the rib 2.

In front of the standards there depends from the side bars a bracket 14, and pivoted in the lower end of the same is a foot-rest 15, which near its pivot at each side thereof is provided with perforations 16.

The rear end of the frame projects considerably beyond the periphery of the wheel 1, and is provided with a vertical bearing 17, in which is mounted for pivotal movement the spindle 18 of a fork 19, the upper end of said spindle being provided with a tiller-bar 20, the ends of which are by rods or ropes 21 connected to the openings 16 formed in the foot-rest. An axle 22 passes through the lower end of the fork, and mounted for free rotation on the same is a guide-wheel 23.

The operation of my invention will be readily understood from the foregoing description and may be briefly stated as follows: The operator, being mounted upon the seat, revolves the cranks by hand, thus imparting motion to the master-gear and through the sprocket-chain to the small pinion or gear, and from thence to the friction-wheel, which revolves the large wheel 1 and sets the velocipede in motion. By operating the foot-rest the tiller is inclined in either direction and causes a corresponding movement of the fork and guide-wheel, as will be readily understood. The obstructions passed over by the small wheel, which follows in the wake of the large wheel, will only serve to give the frame a vertically-rocking movement not unpleasant

to the occupant of the machine, and will not in the least disturb the uniform revolutions and even speed of the large wheel.

Having thus described my invention, what I claim is—

5 The combination, with the large wheel provided with an inner convex track, of the opposite bars connected at their ends to form an embracing-frame and terminating at one
10 end beyond the frame in a vertical bearing, a fork carrying a wheel and provided with a shank mounted in the bearing and a tiller-bar mounted on the shank, standards projecting from each of the side bars above and below the same, a shaft mounted in the upper
15 ends of the standards, a master-gear mounted on the shaft, cranks applied to the ends of the shaft, an axle mounted in the lower ends of the standards, a wheel mounted on the axle

and provided with a concaved periphery or rim having frictional contact with and embracing the convexed track of the large wheel and provided with a pinion, a sprocket-chain connecting the gear and pinion, a seat arranged in rear of the standards upon the side
25 bars, a bracket projecting from the same in front of the bars, a foot-rest pivoted in the lower end of the bracket, and tiller ropes or rods connecting the opposite ends of the foot-rest with the corresponding ends of the tiller, substantially as specified. 30

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

WILLIAM P. AKERS.

Witnesses:

JNO. C. ARMS,
F. W. CHILES.