

No. 789,868.

PATENTED MAY 16, 1905.

M. MCGOWAN.
VELOCIPED.
APPLICATION FILED AUG. 12, 1904.

Fig. 1.

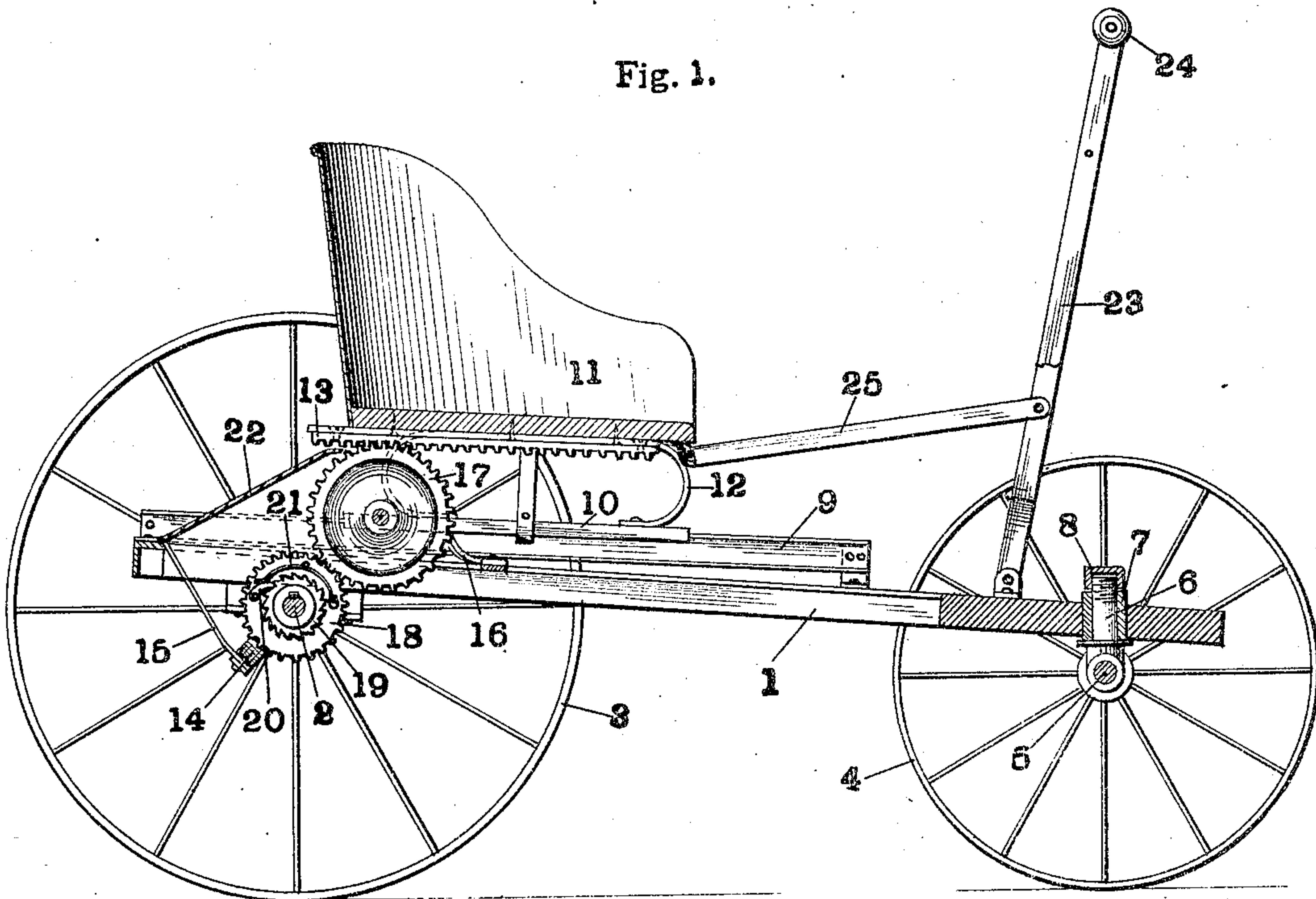
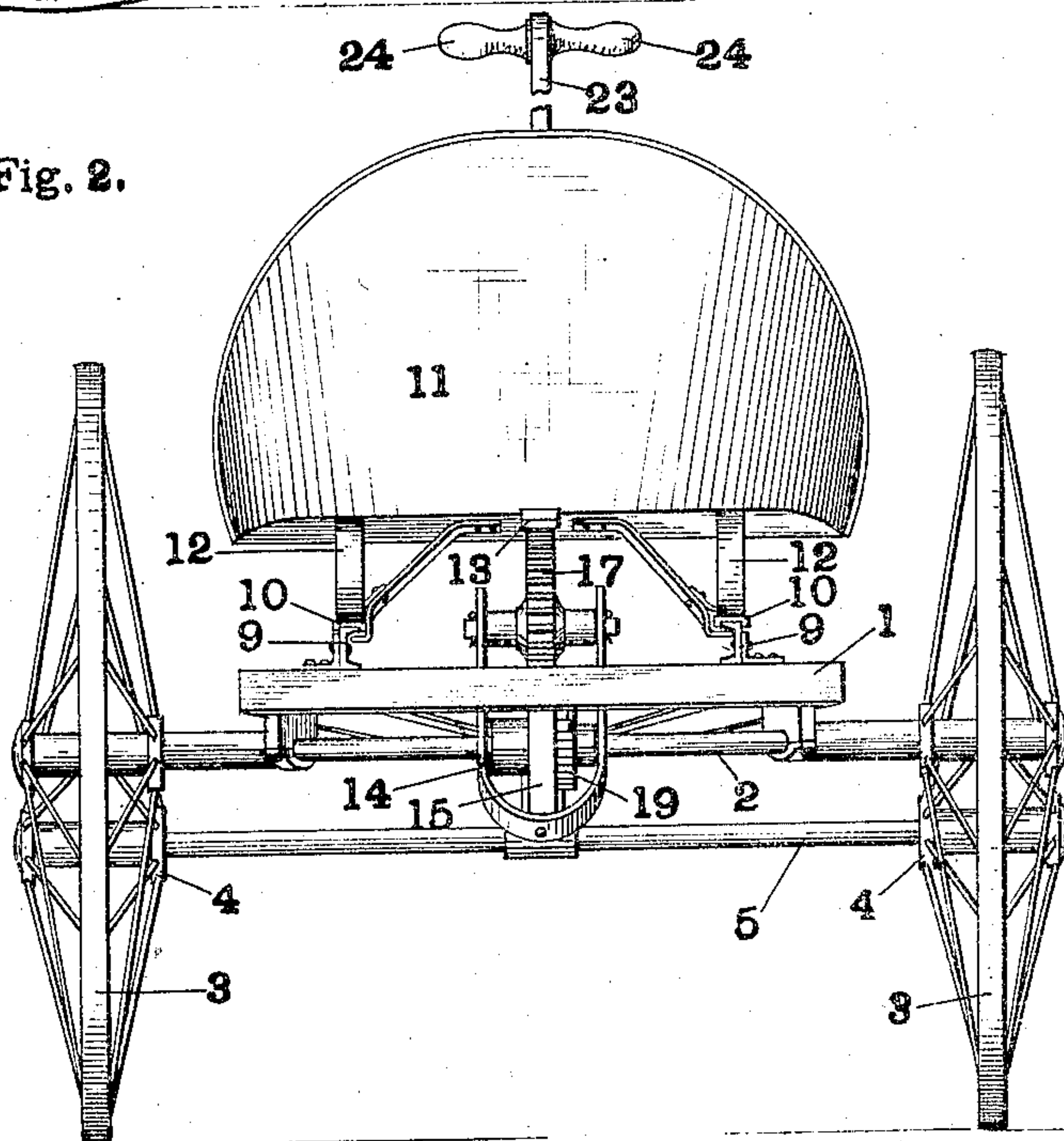


Fig. 2.



Witnesses.

H. J. Delcher.
Fred T. Reines.

Inventor, Matthew McGowan,
By *Carroll Carr*,
Attorneys.

UNITED STATES PATENT OFFICE.

MATTHEW MCGOWAN, OF ST. LOUIS, MISSOURI, ASSIGNOR OF FORTY-FIVE ONE-HUNDREDTHS TO HERMAN H. C. HUGO, OF ST. LOUIS, MISSOURI.

VELOCIPED.

SPECIFICATION forming part of Letters Patent No. 789,868, dated May 16, 1905.

Application filed August 12, 1904. Serial No. 220,457.

To all whom it may concern:

Be it known that I, MATTHEW MCGOWAN, a citizen of the United States, and a resident of the city of St. Louis and State of Missouri, have invented a new and useful Improvement in Velocipedes, of which the following is a specification.

My invention relates to velocipedes, and has for its principal objects to produce a velocipede which may be propelled by both the legs and arms of the rider or by either, to produce a velocipede having a sliding seat as an element of the means for propulsion, and other objects hereinafter more fully appearing.

My invention consists in the parts and in the arrangements and combinations of parts hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, and wherein like symbols refer to like parts wherever they occur, Figure 1 is a longitudinal vertical sectional view of my velocipede; and Fig. 2 is a rear view of the same, the gear-casing being removed.

The running-gear of the velocipede comprises a frame 1, which may be of any desired form, but is preferably substantially triangular in plan. A driving-axle 2 is mounted at the rear end of the frame and carries the drive-wheels 3. The front wheels 4 are mounted on an axle 5, which is provided at its center with a rigidly-mounted pin 6, screw-threaded at its upper end. The pin 6 extends through a sleeve 7 in the front end of the frame and is secured by a cap-nut 8. Thus the front axle is pivotally mounted in the frame to furnish means for guiding the velocipede. Upon the frame parallel slide-bars 9 are mounted. Slides 10 are arranged on the slide-bars and are connected to a seat 11 by means of curved legs 12. The legs 12 are preferably slightly flexible, though not necessarily so. A rack 13 is secured to the bottom of the seat and is the primary element of a train of driving-gears. The driving-gears are secured in position by a frame consisting of a U-shaped member 14, held in an inclined position by a strap 15, connecting its rear end with the run-

ning-gear frame, and by brackets 16, connecting the front end with the running-gear frame. The rear axle 2 passes through the frame member 14. Near the front end of the latter a gear-wheel 17 is mounted in position to mesh with the rack 13. A second gear-wheel 18 is rotatably mounted on the rear axle 2 in position to mesh with the gear-wheel 17. A ratchet-wheel 19 is rigidly mounted on the rear axle 2 by the side of the gear-wheel 18 in position to be engaged by a pawl 20 on the latter, which is held to its work by means of a spring 21. The gearing is protected by a casing 22, mounted on the running-gear frame and extending over the gearing as far as possible without interfering with the rack 13.

A lever 23, provided with handles 24, is pivoted near the front end of the running-gear frame and is connected to the seat 11 by means of a link 25.

The rider seats himself in the seat 11 and places his feet on the front axle 5 and his hands on the handles 24. Rearward movement is then imparted to the seat and the rack 13 attached thereto by pulling with the arms on the handles 24 and pushing with the legs on the axle 5. The seat being moved to its rearmost position, it is moved forward either by pushing on the handles or by contracting the muscles of the legs. Then the rearward or driving movement may be repeated. On a straightaway course both arms and legs, or either, may be brought into play. When turning corners, the velocipede is guided by the feet and propelled by means of the arms. Thus the velocipede is always under complete control, and when a high speed is desired the maximum effort can be exerted. It is to be noted that the recovery of the rider after each actuating stroke is in the direction of the movement of the velocipede. Hence the momentum of the rider's body due to the movement of recovery does not oppose the momentum of the velocipede. This is advantageous, since the velocipede moves only under its own momentum during the recovery of the rider, and it is desirable that nothing shall occur to diminish it.

Obviously my device is capable of considerable modification within the scope of my invention, and therefore I do not wish to be limited to the specific construction shown and
5 described.

What I claim as new, and desire to secure by Letters Patent, is—

10 A velocipede comprising a running-gear having a drive-wheel, a seat movably mounted on said running-gear, a rack mounted on said seat to move therewith, a frame mounted on said running-gear, a gear-wheel mounted in said frame in position to mesh with said rack, a second gear-wheel pivotally mounted con-

centrically with said drive-wheel and meshing 15 with said first-mentioned gear-wheel, a ratchet-wheel rigidly connected with said drive-wheel and a pawl mounted on said second-mentioned wheel and coöperating with said ratchet-wheel. 20

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, at St. Louis, Missouri, this 10th day of August, 1904.

MATTHEW MCGOWAN.

Witnesses:

FRED F. REISNER,
J. B. MEGOWN.