(No Model.) 2 Sheets—Sheet 1.

# S. E. MOSHER.

## VELOCIPEDE.

No. 456,632. Patented July 28, 1891.

Fig. 1.

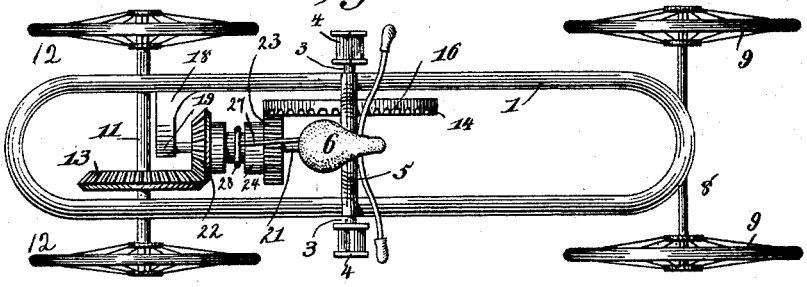
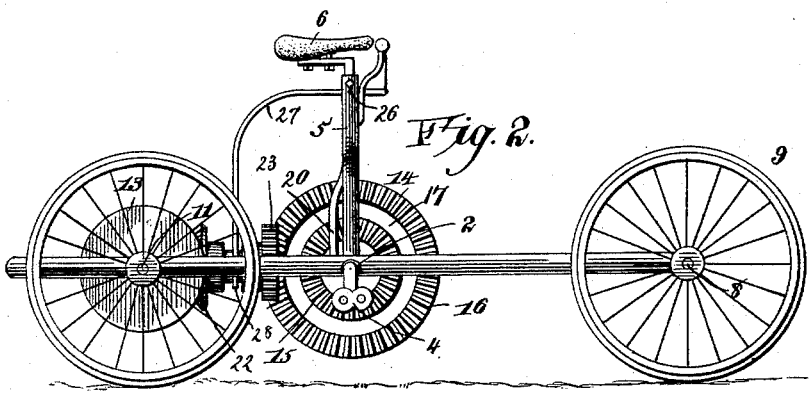



Fig. 2.




Witnesses
H. G. Dieterich
W. S. Duvall.

Inventor
S. Earl Mosher

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(No Model.) 2 Sheets—Sheet 2.

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## VELOCIPEDE.

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Fig. 3.

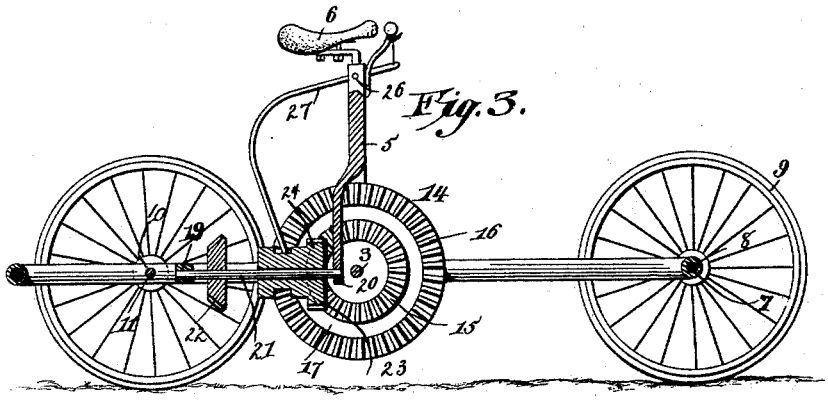



Fig. 4.

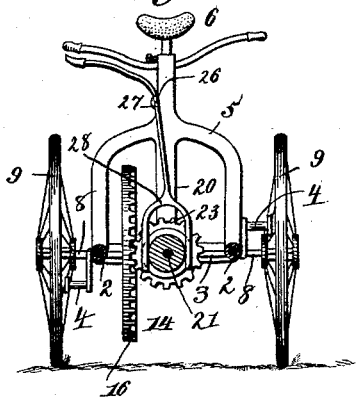
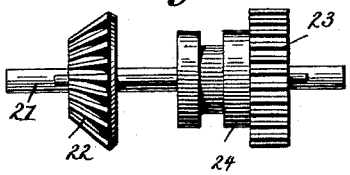



Fig. 5.

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# UNITED STATES PATENT OFFICE.

SAMUEL EARL MOSHER, OF CHILLICOTHE, OHIO.

## VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 456,632, dated July 28, 1891.

Application filed October 7, 1890. Serial No. 367,317. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL EARL MOSHER, a citizen of the United States, residing at Chillicothe, in the county of Ross and State of Ohio, have invented a new and useful Velocipede, of which the following is a specification.

This invention has relation to velocipedes; and the objects in view are to provide a movement for the same, which movement will be regulated for speed, power, or entirely thrown out of gear with the propelling medium, as may be desired.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a plan of a velocipede constructed in accordance with my invention. Fig. 2 is a side elevation; Fig. 3, a longitudinal section; Fig. 4, a transverse section; Fig. 5, a detail in elevation of the tumbler-shaft.

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

In practicing my invention I prefer to employ an oval light frame 1; but said frame may be varied in construction and form to suit various styles of machines, either of the two, three, or four wheeled patterns. In suitable boxes 2 formed in the frame there is journaled the power-shaft 3, the ends of which project beyond said frame in this instance and carry cranks or treadles 4, by which said shaft may be rotated. In rear of the power-shaft 3 is located the seat-standard 5, upon which is mounted the usual saddle 6. In bearing-boxes 7 in the opposite sides and at the front of the frame is journaled a shaft or axle 8, and upon said axle is mounted the front wheels 9. In bearing-boxes 10, formed in the opposite sides of the frame near its rear end, is journaled the rear drive shaft or axle 11, upon which are mounted the rear drive-wheels 12. Upon the shaft or axle 11 is mounted rigidly a gear-wheel 13, and upon the power-shaft 3 is rigidly mounted the master-gear 14. The inner face of the master-gear is provided with two concentrically-arranged series of teeth, the inner series 15 being considerably closer or nearer to the center of the gear than the outer series 16, and between the two series is formed a space or recess 17.

18 designates a bearing-bracket located in front of the rear drive-shaft 11, and the same is provided with a suitable bearing-box 19, longitudinally opposite a bearing 20, formed in the lower end of the seat-standard 5.

21 designates the tumbling-shaft journaled in the bearings 19 and 20. The shaft carries a bevel gear or pinion 22, which engages and drives the pinion 13. Upon the tumbling-shaft is mounted for reciprocation a toothed gear 23, at the rear side of which is formed a grooved hub or collar 24. At one side of the standard 5 there is pivoted, as at 26, a bell-crank lever 27, the lower end of which is bifurcated to form a yoke 28, which engages the groove of the collar 24. The periphery of the teeth of the gear 23 is in the same plane as the faces of the teeth 15 and 16, so that by a longitudinal movement of the gear 23 upon the tumbling-shaft said gear may be thrown into engagement with either of the concentric series of teeth 15 and 16. The movement from the part of the gear is accomplished by the bell-crank lever, which lever is operated by any suitable means, in this instance by a hand-lever 29, suitably connected to the bell-crank. By manipulating this hand-lever so as to throw the gear 23 into mesh with the outer or larger circle of teeth 15 it will be observed that the machine will be driven at a greater speed than when said gear 23 is in engagement with the inner circle of teeth, in which latter position great power is secured, by which the machine is designed to be forced with facility up inclines and over heavy roads. By shifting the bell-crank so as to throw the gear 23 between the two circles of teeth, or, in other words, opposite the annular recess 17, and therefore out of engagement with either circle of gears, it will be observed that motion from the cranks and the master-gear will not be imparted to the tumbling-shaft, so that said machine is thereby adapted for coasting, and the feet of the rider may rest upon the cranks while the machine is in motion, and thus the strength of the rider be economized.

Having thus described my invention, what I claim is—

In a velocipede, the combination, with the

frame, the front and rear axles provided with wheels, of a bevel-gear mounted upon the rear or drive axle, a seat-standard supported by the frame in front of the drive-axle and provided near its lower end with a box or bearing, and a bearing-bracket located in rear of the standard and having a box or bearing longitudinally opposite that of the standard, a tumbling-shaft journaled in the two bearings, a pinion mounted upon said shaft and engaging the gear upon the drive-axle, a loose gear mounted upon said tumbling-shaft provided upon its rear side with a grooved hub or collar, and a bell-crank lever pivoted to the standard and terminating at its lower end in a bifurcated yoke terminating in the grooved collar, said lever being adapted to throw the gear into and out of engagement with either of the series of teeth upon the master-gear, substantially as specified.

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

S. EARL MOSHER.

Witnesses:
CHARLES FREY,
CHAS. REED.