(No Model.) 2 Sheets—Sheet 1.

# S. E. MOSHER.

## VELOCIPEDE.

No. 456,631. Patented July 28, 1891.

Fig. 1.

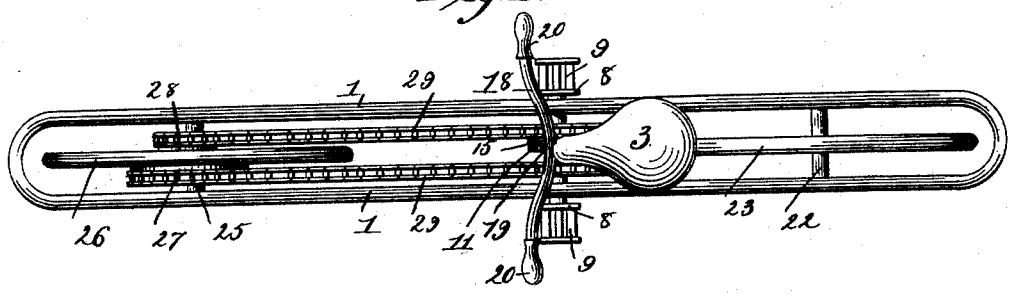
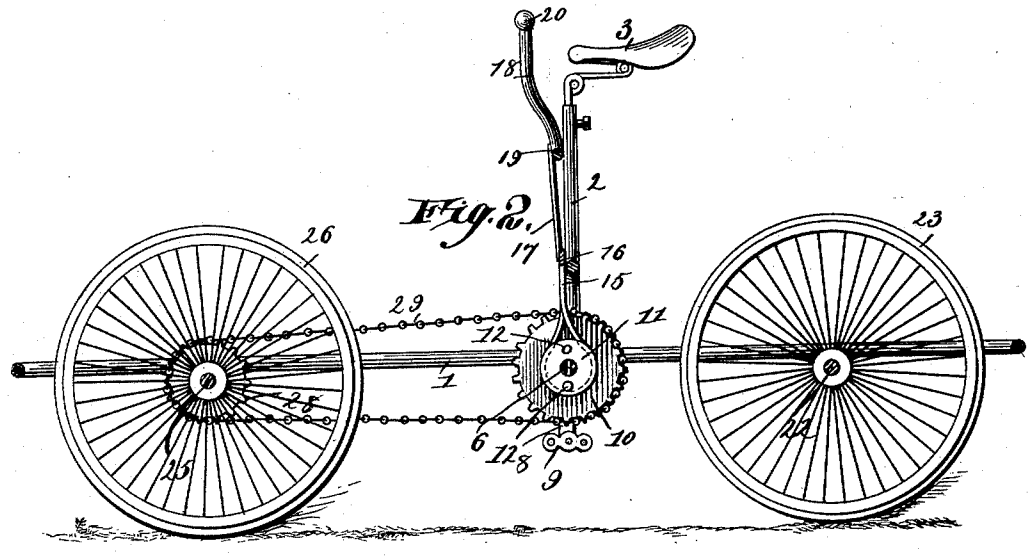



Fig. 2.




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

Inventor
Samuel E. Mosher

By his Attorneys,
C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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## VELOCIPEDE.

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Fig. 3.

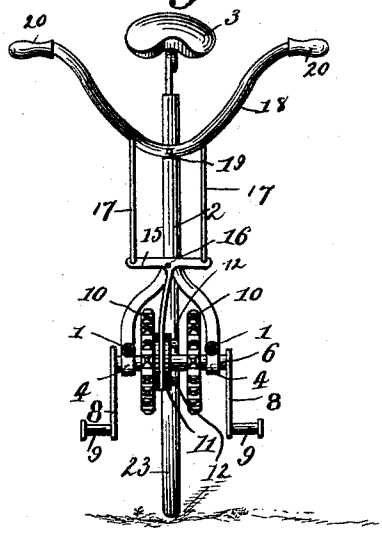



Fig. 4.

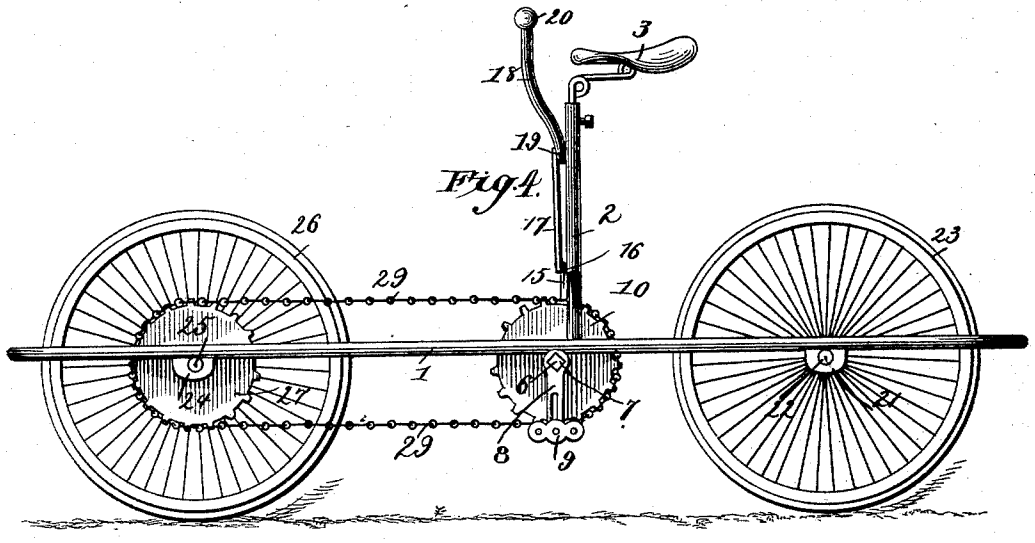
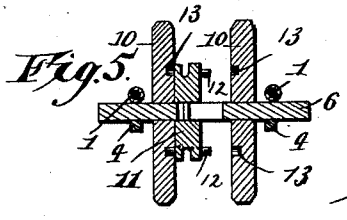



Fig. 5.

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# UNITED STATES PATENT OFFICE.

SAMUEL E. MOSHER, OF CHILLICOTHE, OHIO.

## VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 456,631, dated July 28, 1891.

Application filed August 28, 1890. Serial No. 363,261. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL E. 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 improvements in velocipedes of either the two, three, or four wheel styles.

The objects in view are to provide a machine the speed of which may be increased or decreased, and in the latter instance converted to power to be applied to inclines without increasing the rapidity of the propelling-treadles and without the necessity of the rider stopping the machine or leaving the same for the purpose.

Various other but minor objects of the invention will hereinafter appear in the following description, 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 embodying my invention. Fig. 2 is a longitudinal section. Fig. 3 is a transverse section taken in front of the clutch mechanism. Fig. 4 is a side elevation, and Fig. 5 is a transverse section through the clutch.

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

In practicing my invention I prefer to employ an elliptical or oblong frame 1, of hollow tubing; or said frame may be of any other shape consistent with the style of the machine in which my invention is embodied. From the frame, in this instance near its center, rises a vertical seat-standard 2, upon which is mounted in an adjustable manner a saddle or seat 3, upon which the rider sits.

In bearings 4, formed in the sides of the frame 1, there is journaled a propelling-shaft 6, the ends of which project beyond the ends of the frame 1, and are squared, as at 7, to receive a pair of ordinary drive-cranks 8, having pedals 9. Loosely mounted upon the shaft between the sides of the frame 1 is a pair of sprocket-pulleys 10, and between said pulleys there is splined upon the shaft a reciprocating grooved clutch-sleeve 11, the opposite faces of which are provided with a concentric series of pins 12, designed to take into a corresponding series of openings 13, formed in the inner faces of the pulleys 10.

15 designates a T-shaped shifting-lever pivoted, as at 16, at its center to the standard 2. The lower end of the lever loosely engages the groove of the clutch, while the outer upper ends of said lever are connected by rods 17 to the ends of an upper hand-lever 18, pivoted, as at 19, to the seat-standard 2 and terminating beyond the rods 17 in hand-grips 20. In rear of the seat-standard there is journaled in bearings 21 a rear transverse shaft 22, upon which is mounted rigidly a rear ground-wheel 23.

In advance of the standard 2, in journals 24 formed in frame 1, is a front transverse shaft 25, upon which is rigidly mounted at its center a front ground-wheel 26, and at each side of the ground-wheel there is rigidly mounted upon the shaft a small sprocket-pulley 28 and a large sprocket-pulley 27, each of which is in line with one of the sprockets 10, and is connected to said sprockets by light sprocket-chains 29. If desired, the pulleys 27 and 28 may be located upon the rear shaft 22; but I prefer the construction shown.

It will be obvious that while the machine is in motion the rider may, by means of the lever 18, throw the clutch into connection with either of the sprocket-pulleys 10, and thus operate that sprocket-pulley which is then and thereby made rigid with the drive-shaft, and by such operation transfer the motion from said sprocket-pulley to the large or small sprockets 27 and 28 in accordance with the one with which the sprocket 10 is engaged. In the present instance, if the sprocket at the right is thrown into operation, the small pulley 27 drives the shaft 25, and the machine is then adapted for power and for climbing inclines, and by throwing the large pulley 27 into operative position the power is converted into speed for traveling upon flat surfaces.

It will be obvious that numerous modifications of my invention will readily suggest themselves to those conversant with the construction and operation of velocipedes in general, and I therefore do not limit my invention in regard to detail.

Having described my invention, what I claim is—

The combination, with the frame-work, the

axle 25, the large sprocket-wheel 27, and the small sprocket 28, mounted thereon, of the drive-shaft 6, terminating at its ends in cranks, the sprockets 10, mounted upon the shaft and having their inner faces provided with the annular series of openings 13 and the sliding sleeve 11, peripherally grooved and having its opposite sides provided with an annular series of pins for engaging the holes of the sprockets 10, the standard 2, the handle-bar 18, pivoted, as at 19, thereto, the T-shaped lever 15, pivoted at its upper end to said standard below the handle-bar and terminating at its lower end in a bifurcation embracing the peripheral groove of the sleeve, and the links 17, loosely connecting the ends of the T-lever with the handle-bar at each side the pivot of the latter, substantially as specified.

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

SAMUEL E. MOSHER.

Witnesses:
CHARLES FREY,
J. R. WIREHART.