

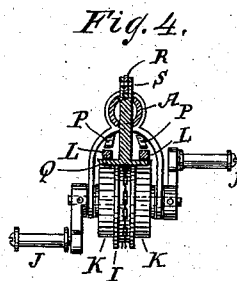
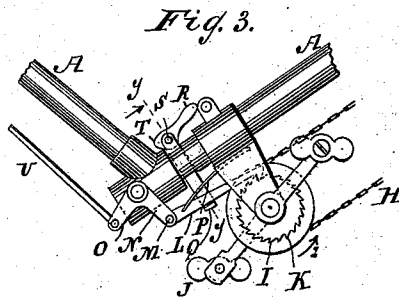
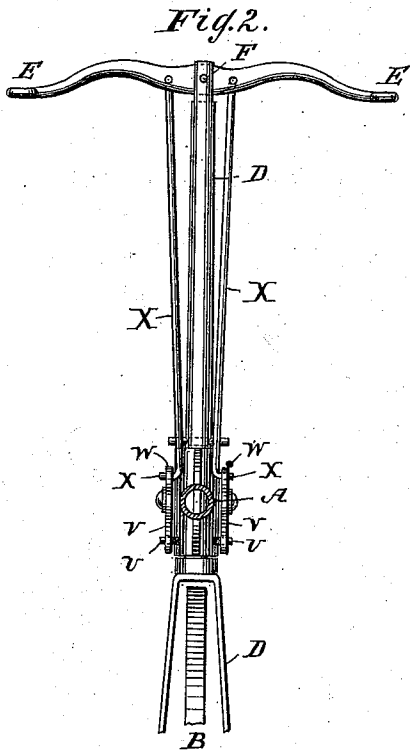
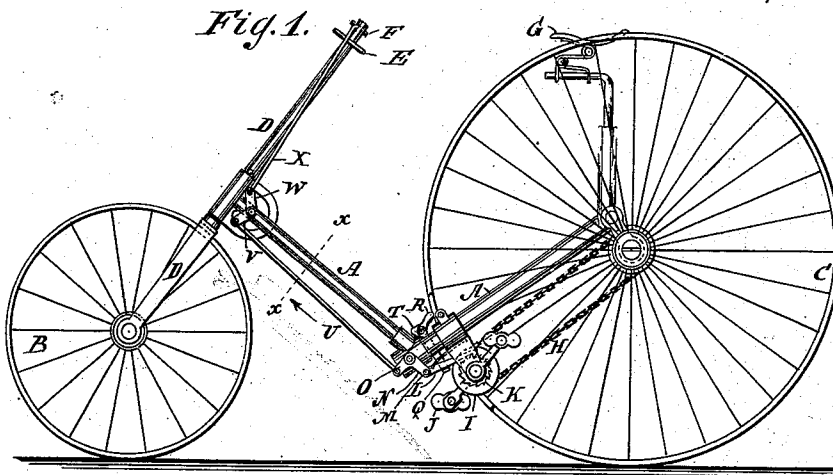
(No Model.)

C. H. GOODSSELL.

VELOCIPEDE.

No. 377,610.

Patented Feb. 7, 1888.



WITNESSES:

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CHARLES H. GOODSSELL, OF POUGHKEEPSIE, NEW YORK.

VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No: 377,610, dated February 7, 1888.

Application filed October 6, 1887. Serial No. 251,623. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. GOODSSELL, a citizen of the United States, residing at Poughkeepsie, in the county of Dutchess and State of New York, have invented new and useful Improvements in Velocipedes, of which the following is a specification.

This invention relates to improvements in velocipedes, whereby the velocipede can be readily operated, as set forth in the following specification and claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a velocipede. Fig. 2 is a section in the plane xx , Fig. 1. Fig. 3 is a detail view of actuating mechanism for a driving-wheel. Fig. 4 is a section in the plane yy , Fig. 3.

Similar letters indicate corresponding parts.

In the drawings, the letter A indicates a backbone or frame having a steering-wheel, B, and a driving-wheel, C. Two wheels C, one on each side of the vehicle, may be applied, and one or both of said wheels C may be made to act as a driving-wheel. The steering-wheel B is mounted in a frame or support, D, adapted to swivel or rotate so as to make the wheel B guide the device. A handle, E, is adapted to enable the frame D to be swiveled or turned. Said handle E is adapted to be oscillated about the pivot F, as will be hereinafter set forth.

The seat G for the driver is placed so as to allow ready grasping of the handle E, and the feet of the driver are used to work the treadles J. About the driving-wheel or about its hub or axle is led a belt or chain, H, which passes about a pulley, I, to which pulley the treadles J are connected. The treadles can thus be actuated to turn the pulley I and the driving-wheel C.

To the pulley I are connected one or more ratchet-wheels, K. A pawl, L, engages each ratchet-wheel. The pawl L is pivoted or jointed to the bell-crank lever N O. A pivot, M, is shown as connecting the pawl and bell-crank lever. A spring, P, is arranged to press the pawl L into engagement with the ratchet-wheel K.

To the pawl L is connected a link or rod, Q, which rod is jointed at S to the lever R. The lever R has a shoulder, T, Fig. 3. When the lever R is in the position shown in Figs. 1 and 3, the pawl L is in gear with the ratchet

K. By swinging the lever R about the pivot or joint S, so that the shoulder T will strike against the backbone A, a pull will be exerted by the lever R upon the link Q, whereby said link will be moved so as to carry the pawl L out of gear with the ratchet K. The pawl L can thus be put into gear or out of gear with the ratchet K, as may be desired, by the lever R, which can be made to act as a releasing mechanism.

To the bell-crank lever N O is jointed the connection or rod U, said connection or rod being also jointed to the bell-crank lever V W. A connection or rod, X, is jointed to the bell-crank lever V W and to the handle E.

The operation of the device is as follows: The driver, sitting at G, operates the treadles J with the feet, thereby actuating the driving-wheel C. If said driver desires to impart additional force to the driving-wheel, the pawl L is put into engagement with the ratchet K, and then the hands of the driver are used to oscillate or reciprocate the handle E about the pivot or fulcrum F, thereby oscillating the connections X U and the levers V W and N O, as also the pawl L. The reciprocations of the pawl L rotate the ratchet K in the direction of arrow 1, Fig. 3. As the teeth of the ratchet K allow the pawl L to glide over said teeth when moving in one direction, but to catch the ratchet K when moving in the other direction, the rotation of the ratchet K will rotate the pulley I and move the chain H, so as to properly actuate the driving-wheel C. As the handle E is detachably connected to the driving-wheel by reason of the pawl L being capable of being put out of gear with the ratchet K, the driving-wheel C can at any time be actuated by the treadles J alone, if desired. By having the handle F oscillating considerable force can be brought to bear on it, as the driver can use the weight of a large part of his body to press on the handle, so as to oscillate said handle, while at the same time the various parts of the handle remain at a practically-uniform distance from the seat G. The oscillating handle is thus preferable to a rotating or crank handle.

The connections X U, with their bell-cranks, and also the pawls L and ratchets K, are shown applied in duplicate, so as to increase their efficiency. If desired, the driver may rest his

feet at certain periods and operate the driving-wheel merely by the handle E.

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

5 1. In a velocipede, the combination, with a backbone or frame, a driving-wheel, and a steering-wheel, of a steering-bar centrally pivoted to the frame of the steering-wheel, a pulley geared to the driving-wheel and having a ratchet on its shaft, and connections between 10 the pivoted steering-bar and a pawl or pawls engaging with the ratchet, substantially as described.

2. The combination, with a backbone or 15 frame and a steering and driving wheel, of ratchets on the shaft of the driving-pulley, pawls engaging with the ratchet, a steering-bar centrally pivoted to the frame, and links and bell-cranks connecting said steering-bar 20 to the pawls, substantially as described.

3. The combination, with a backbone or 25 frame and a steering and driving wheel, of a ratchet connected to said driving-wheel, a pawl made to engage said ratchet, and a rocking-actuating-handle and releasing mechanism connected to said pawl, substantially as set forth.

4. The combination, with a backbone or frame, a steering and driving wheel, and a ratchet connected to said driving-wheel, of an 30 actuating-handle, a bell-crank lever connected to said handle, and a pawl jointed to said bell-crank lever and made to engage said ratchet, substantially as set forth.

5. The combination, with a backbone or 35 frame and with a driving and a steering wheel, of ratchets on the shaft of the driving pulley, pawls engaging with said ratchets, bell-cranks mounted on the frame and connected to said ratchets, links connected to the bell-cranks, 40 and a steering-bar centrally mounted to oscillate on the frame and connected to said links, a loop being carried around the pawl and held by a cam-lever to throw the pawl out of gear 45 with the ratchet, substantially as shown and described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

CHARLES H. GOODSSELL. [L. S.]

Witnesses:

W. C. HAUFF,
E. F. KASTENHUBER.