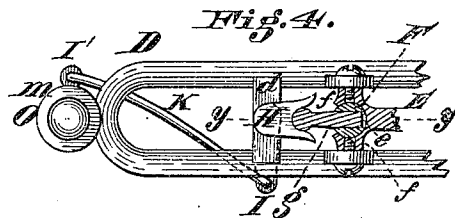
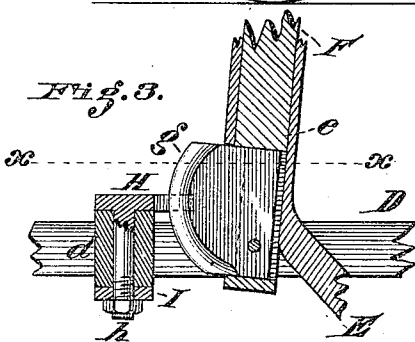
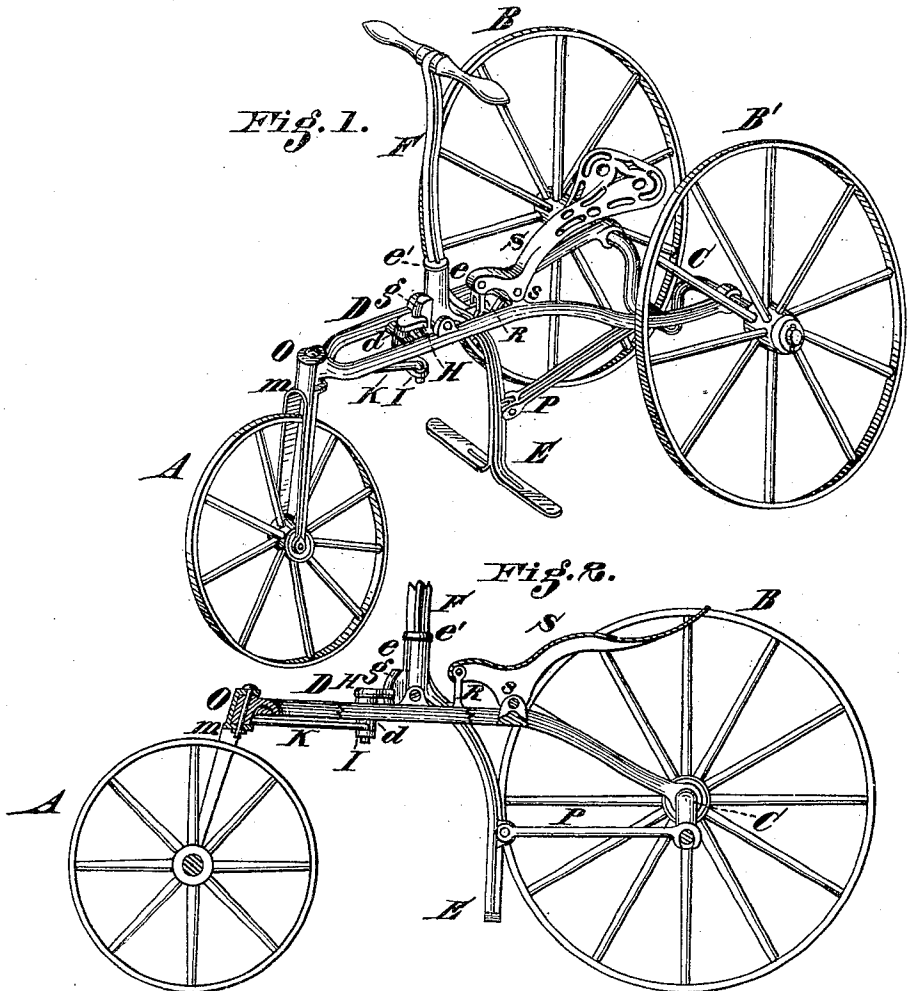


(No Model.)

C. M. TRAUTMANN.
VELOCIPÈDE.

No. 248,531.

Patented Oct. 18, 1881.



Attest
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UNITED STATES PATENT OFFICE.

CHARLES M. TRAUTMANN, OF TRAUTMANN STATION, ASSIGNOR TO WALTER W. BOSTWICK, OF CINCINNATI, OHIO.

VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 248,531, dated October 18, 1881.

Application filed September 5, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. TRAUTMANN, a citizen of the United States, and a resident of Trautmann Station, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Velocipedes, of which the following is a specification.

My invention relates to an improvement in velocipedes; and it relates more particular to the steering apparatus of three-wheeled velocipedes containing an actuating-seat, in combination with rocking hand and foot levers to drive the wheel, whereby the weight of the rider is added to the hand and foot power.

It consists, first, in providing a socket with gudgeons or pivots for attaching the hand and foot levers to the frame of the velocipede, so that both hands and feet may be used to actuate the lever and drive the wheels, the hand-lever swiveling in the socket so as to allow it to be turned in horizontal as well as vertical planes, but independent of the latter motion, so as to allow it to be turned horizontally to turn the pilot-wheel for steering the velocipede.

A second feature of my invention consists in combining with swiveling hand-lever a cam which is attached by crank-and-lever connections to the pilot-wheel in such a manner that the hand-lever can be turned in its swivel-joint, and by means of crank and pitman turn the pilot-wheel to the right or left and steer or guide the velocipede in straight or curved right and left lines.

Other features of my invention will be fully explained in the description of the accompanying drawings, in which—

Figure 1 is a perspective view of my invention. Fig. 2 is a sectional elevation through the center of the machine longitudinally. Fig. 3 is a broken sectional elevation on line *yy*, Fig. 4. Fig. 4 is a sectional plan on line *xx*, Fig. 3.

A represents a pilot-wheel.

B B' represent the rear driving-wheels for supporting the crank-axle C, one of which is made fast to the axle, and the other wheel running loose.

D represents the frame of the machine, which is preferably made of malleable iron, of the form here shown, with the rear or forked end

of the frame provided with wrist-bearings, in which the crank-axle C journals.

E represents a foot-lever.

e represents a socket, formed upon the upper end thereof to receive the hand-lever F, which swivels on the socket-plate *e'*.

f represents gudgeons, which turn or pivot on the frame D. The gudgeons attach the hand and foot levers to the frame D and form the bearings for the forward and backward rocking motion of the hand and foot levers E F.

g represents a cam rigidly attached to the hand-lever F, and projecting through a slot in socket *e* and lower end of lever F, as shown in Figs. 3 and 4. The forward edge of cam *g* is a segment of a circle the center of which is the center of gudgeon *f*.

H represents a slotted crank-arm, rigidly attached to a vertical axle, which is supported on a cross-piece, *d*, of the frame. Cam *g* engages in the slot or notch of crank-arm H. As the hand-lever is turned in circular planes to the right or left, the arm H is correspondingly turned by the cam *g*, and as the periphery of the cam *g* always maintains the same vertical plane when it is rocked by means of the hand or foot lever, it will readily turn the arm H at all points of its circular movement imparted by the hand and foot levers.

I represents a crank-arm attached to the lower end of axle *h* of crank-arm H.

K represents a link, rigidly attached to a secondary crank-arm, *I'*, which is attached to the swiveling forked standard *m*, which supports the pilot-wheel A. This standard *m* is swiveled in the usual manner on the frame D, so as to freely turn to the right and left.

O, Fig. 3, represents the swivel-joint attaching the fork-standard *m* to frame D.

P represents a pitman, connecting the crank-axle C to the foot-lever E.

R represents a link, connecting the actuating-seat S to the foot-lever E.

s represents gudgeons, on which the actuating-seat is mounted so as to rock freely back and forth from the frame D by the motion of the body of the operator.

It is obvious that the form of the cam, link, and crank mechanism for moving the pilot-wheel so as to cause it to travel in right or left

lines by turning the swiveling hand-lever F can be variously modified, and mechanical substitutes used for different parts thereof, without departing from the principal features of my invention.

I claim—

1. In combination with a velocipede having an oscillating seat to assist in driving the wheels, the combination of the pivoted rocking hand and foot lever by means of a swivel-joint connection, whereby the hand-lever is allowed to turn in horizontal as well as vertical circular planes, substantially as herein set forth.

2. In a velocipede having the hand-lever F attached to the oscillating foot-lever by a swivel-joint connection, the combination, with said hand and foot levers, of crank-link devices for turning the pilot-wheel and steering the machine, substantially as herein set forth.

3. In combination with the pivoted lever E, socket *e*, and swiveling-lever F, the oscillating cam *g*, adapted to operate the crank-arm H and turn or steer the pilot-wheel, substantially as herein set forth.

4. In combination with the pivoted lever E, socket *e*, and swiveling-lever F, the oscillating cam *g*, the periphery of which is the segment of a circle whose center is the axis of the supporting oscillating lever, to which it is attached.

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

CHARLES M. TRAUTMANN.

Witnesses:

JOHN E. JONES,

J. H. CHARLES SMITH.