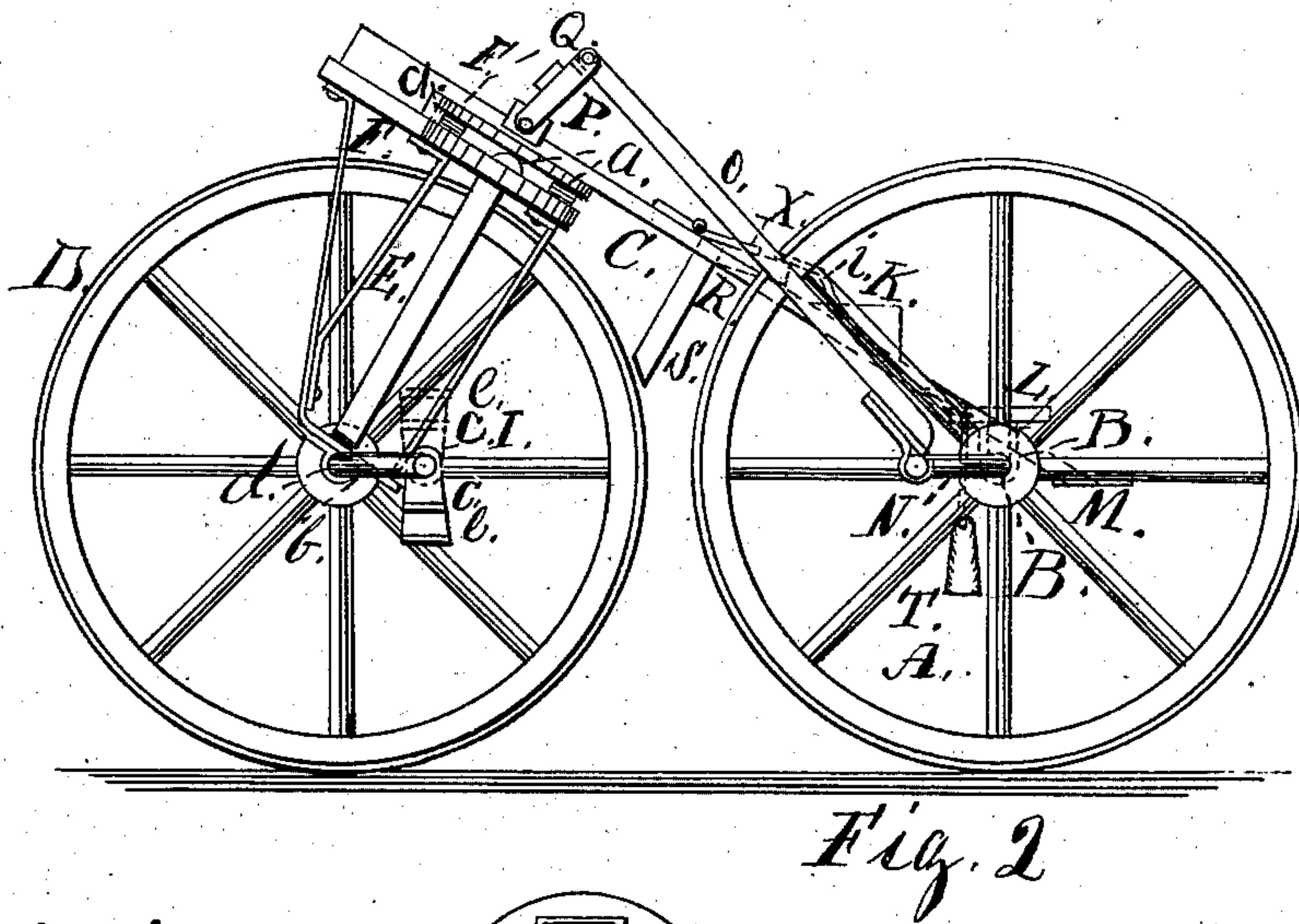
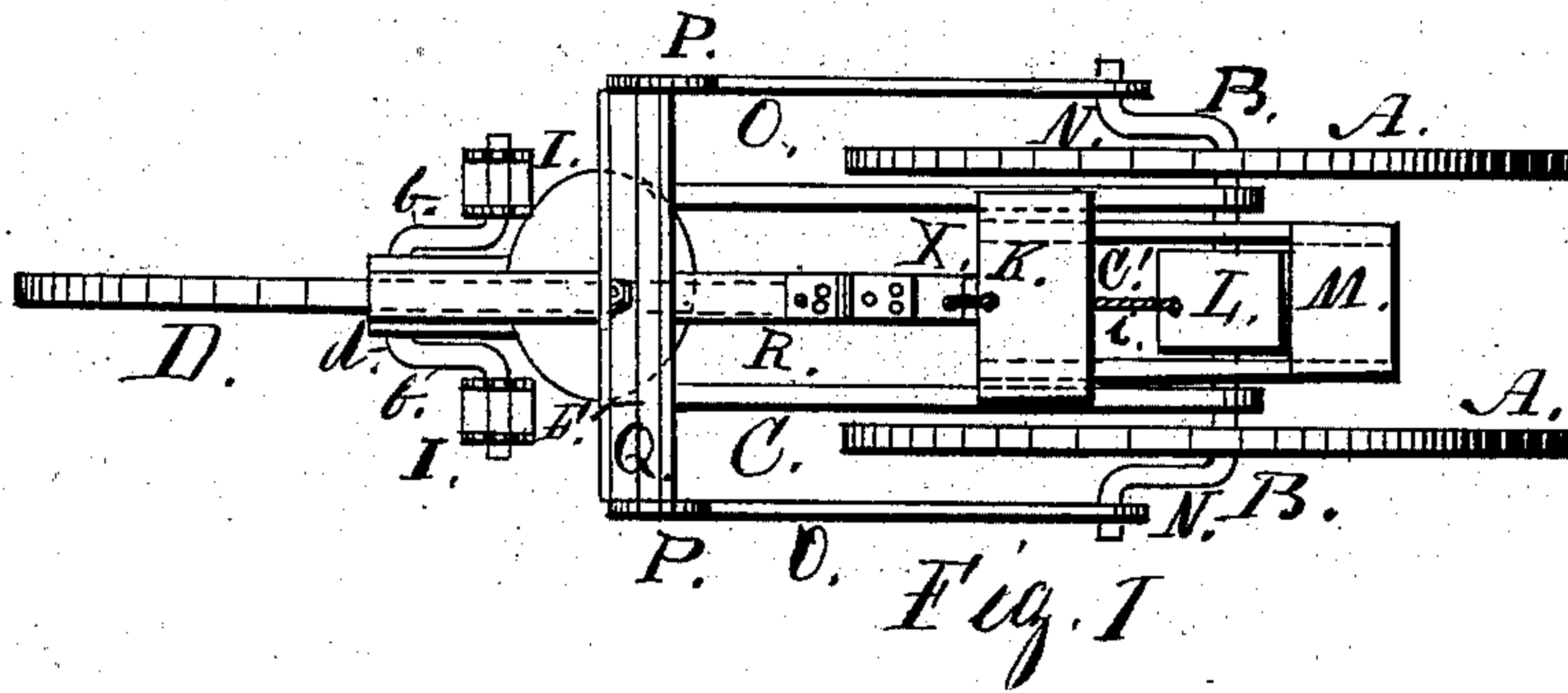


A. VREELAND.
Velocipede.

No. 225,310.

Patented Mar. 9, 1880.



Witness
George B. Adams
John J. Martin

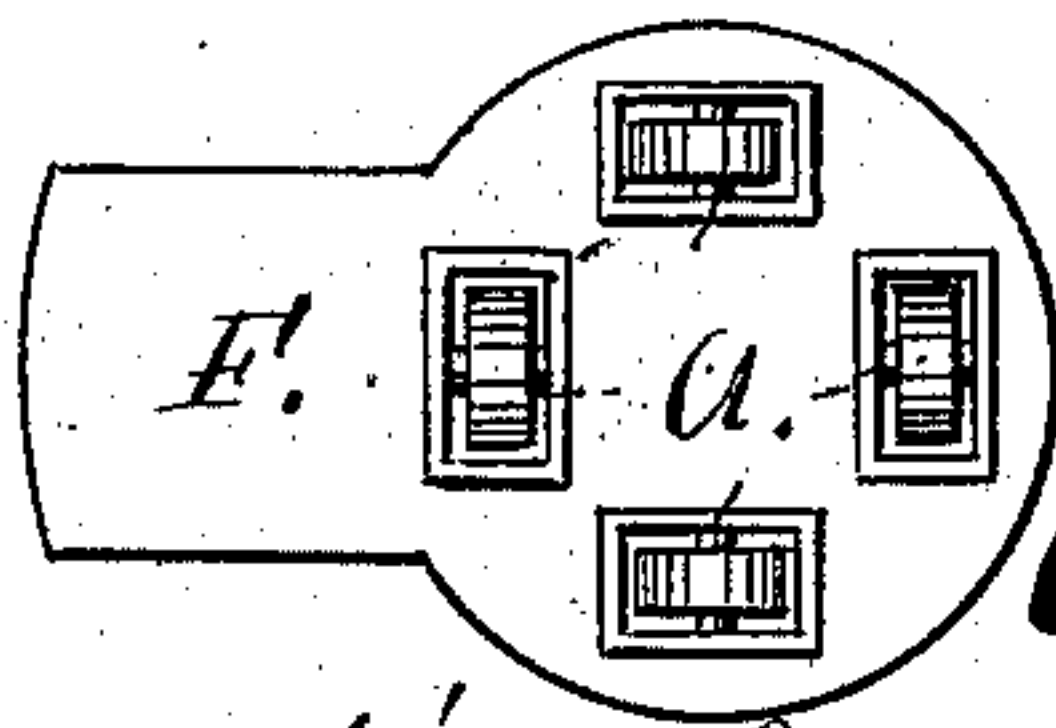


Fig. 3

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UNITED STATES PATENT OFFICE.

AARON VREELAND, OF NEWARK, NEW JERSEY.

VELOCIPED.

SPECIFICATION forming part of Letters Patent No. 225,310, dated March 9, 1880.

Application filed September 15, 1879.

To all whom it may concern:

Be it known that I, AARON VREELAND, of Newark, in the county of Essex and State of New Jersey, have invented a new and useful
5 Improvement in Velocipedes, of which the following is a specification.

My invention relates to velocipedes having three wheels, and is designed to be operated by foot or hand power, or by the two com-
10 bined, having suitable appliances for these purposes, provided with an improved turn or "fifth" wheel, as it is known in carriages; also, with two adjustable seats, allowing more than one person to ride at the same time, and an
15 adjustable brake and steering apparatus.

In the drawings, Figure 1 is a plan. Fig. 2 is a side elevation. Fig. 3 is a detailed view of a portion of the turn-wheel.

In my construction, A represents the hind
20 wheels, hung to the axle B so that one is secured to the axle and the other is loose on it. Connected also with this axle by a loose joint is a frame, C, extending forward and the end carried up above the front wheel, D, and is
25 connected with a turn-wheel, F, supported by the skeleton-frame E, to the lower end of which, on the axle *d*, the wheel D turns.

The turn-wheel is constructed with two disks, F and F', the latter being secured to
30 the front end of the frame C, and the lower one to the frame E, and between these disks are rollers or balls *a*, to prevent friction from the contact of the inner surfaces.

The axle *d* has a crank, *b*, each side of the
35 wheel D, to which are hung adjustable stirrups or foot-rests I, provided with the bearings *c* and *e*, to accommodate persons of different length of legs. The stirrups hang loose on the cranks, and may therefore be used with
40 the rests or bearings below the cranks or above.

O are pitmen, united at the lower end to the cranks N, one on each end of the axle B. The upper ends of the pitmen are jointed to the
45 arms P, which arms also are jointed to the frame C. Between the upper ends of the pitmen, at the junction with the arms, is a cross-bar, Q, within reach of the hand of the operator, who may press upon this bar in combi-
50 nation with motion created by the foot-power, and this, acting on the cranks N through the

pitmen, will give an auxiliary force for propelling the velocipede.

K is an adjustable seat, which, with the foot-rest M, is secured to a swinging frame, 55
C', hung upon the rear axle. The seat K usually rests on the frame C.

L is an extra seat hung to the axle B, on which a second person may ride with his face backward and his feet bearing on the rest M. 60
In some instances the seat K may swing over and back of the seat L, leaving the operator to sit on the seat L facing front, having the seat K to his back.

Connected with the disk F' is a bar, R, ex- 65
tending back inside of the frame C, and to the end of this bar is jointed the arm X, and to the arm is attached a cord extending through the seat K and seat L, and to it, below the latter, a weight, T, is hung. On the lower side 70
of the arm X is a stud to be used as a brake, by one hand of the operator, to be pressed down against the wheel D, the weight T raising the brake when not in use. The weight and cord serve also to keep the seat L in po- 75
sition. The bar R and arm X, extending back between the knees of the operator, are used by the pressure of his knees on either side to turn the wheel D and steer the vehicle. The bar R passes over the disk F', where it is piv- 80
oted, and extends forward of it, and is secured to the disk F, which turns the front wheel in steering.

I claim—

1. A velocipede operated by hand-power 85
applied to the hind wheels by means of the pitmen O, hung to the cranks N, and having at the upper end the cross-bar Q, and the arms P, jointed to the frame C, substantially as specified. 90

2. In combination with the hand-power devices, as described, applied to the hind wheels, the cranks *b* of the axle *d* and the swing foot-rests I, applied to the front wheels for the operation of foot-power, substantially as speci- 95
fied.

3. The combination of the frame C, hung to the axle B, and carrying on the upper end the disk F' of the fifth-wheel, with the disk F, supported by the frame E, which carries the 100
wheel D, substantially as named.

4. The skeleton-frame E, carrying the wheel

D, and supporting the disks F and F', forming a turn-wheel, substantially as specified.

5 5. The adjustable swing-stirrups I, having the bearings *c* and *e*, in combination with the cranks *b*, substantially as and for the purpose set forth.

10 6. The turn-wheel having the disk F, supported by the skeleton-frame E, and the disk F', connected with the frame C, and having between the disks the balls or rollers A, substantially as named.

7. The adjustable seat K, with the rest M, secured to the frame C, which frame is hung to the axle B.

8. In combination with the seat K and rest 15 M, the adjustable seat L, hung to the axle B.

9. The bar R, pivoted to the disk F' and secured to the disk F, and having the rear end extending back in the frame C, in combination with the arm X, to be used as a steering ap- 20 paratus, substantially as specified.

10. In combination with the bar R, the arm X, having attached to it the cord *i*, weight T, and brake S.

AARON VREELAND.

Witnesses:

HORACE HARRIS,
C. B. MATTHEWS.