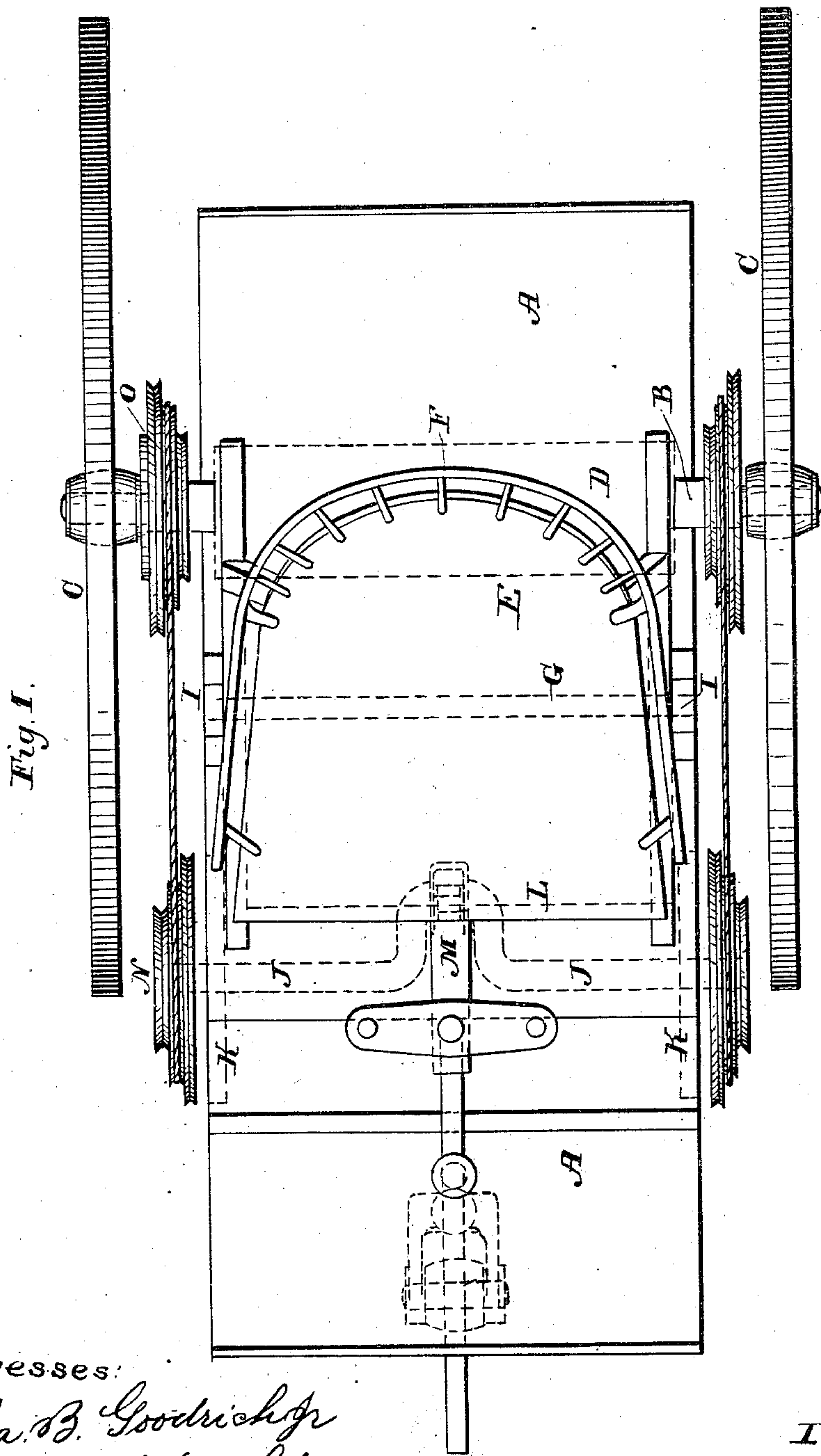


J. A. VAN DER WAAG.

Velocipede.

No. 88,347.

Patented March 30, 1869.



Witnesses:

Elisha B. Goodrich Jr
Correspondent Van Skelline

Inventor:

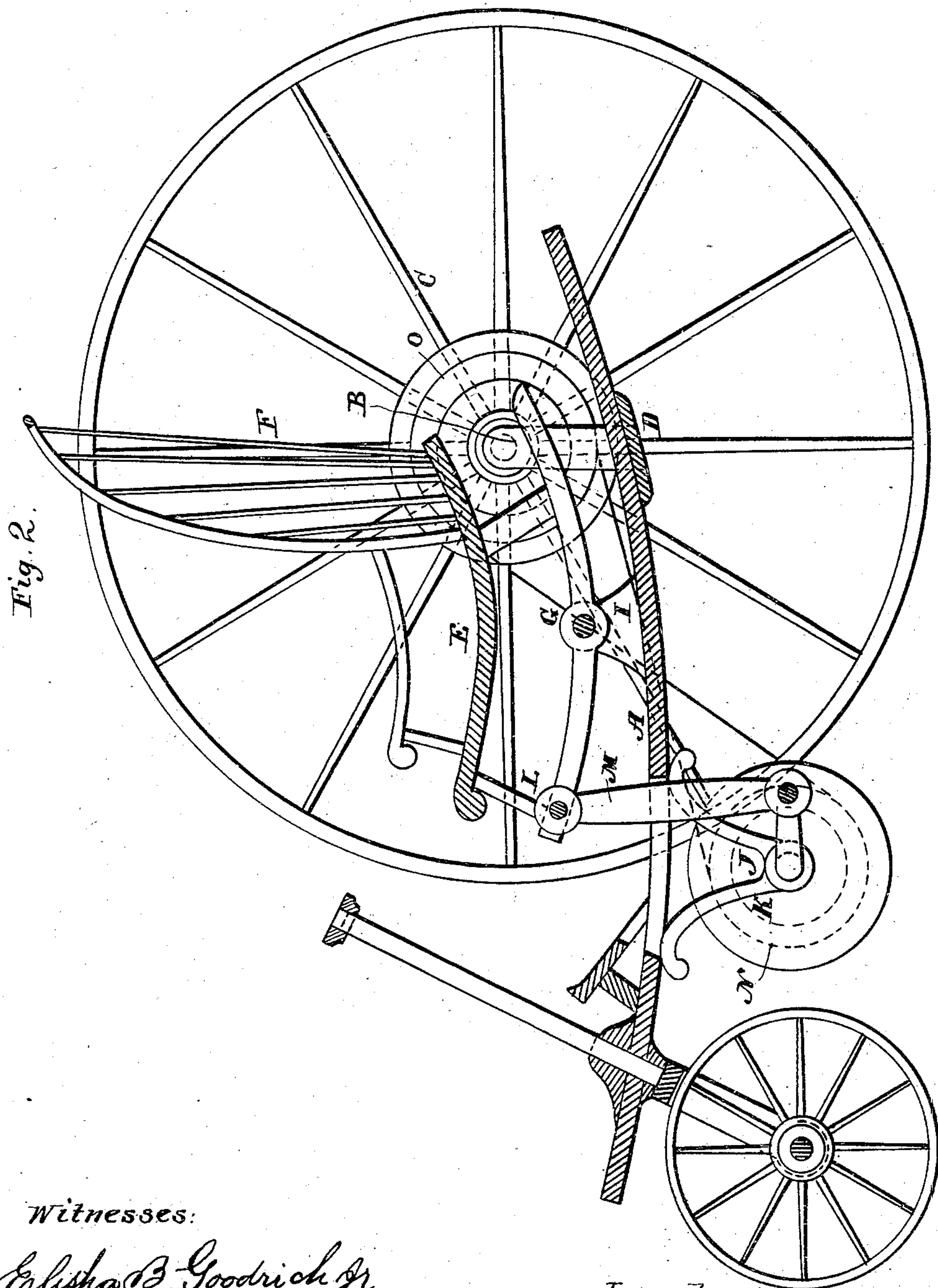
Johannes A. Van der Waag

J. A. VAN DER WAAG.

Velocipede.

No. 88,347.

Patented March 30, 1869.



Witnesses:

Elisha B. Goodrich Jr.

Corneilus Van Skelline

Inventor:

Johannes A van der Waag

United States Patent Office.

JOHANNES A. VAN DER WAAG, OF BROOKLYN, NEW YORK, ASSIGNOR TO THEODORE VAN SKELLINE, FOR ONE-HALF OF SAID INVENTION.

Letters Patent No. 88,347, dated March 30, 1869.

IMPROVED VELOCIPEDE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, JOHANNES A. VAN DER WAAG, of the city of Brooklyn, in the county of Kings, and State of New York, have invented certain new and useful Improvements in the Construction of Velocipedes, of which one-half of all the right, title, and interest has been assigned to Theodore Van Skelline, of the same city, county, and State; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and letters of reference, making part of the same, in which—

Figure 1 represents a top view of a velocipede, constructed with my improvements.

Figure 2 is a longitudinal vertical section of the same.

Similar letters of reference indicate corresponding parts in the several figures.

The nature of my invention consists, first, in providing the velocipede with mechanism to propel and operate it by a rocking motion of the body of the operator, so that the operator, by moving his body and limbs in a comfortable and pleasant manner, can make use of the power of his body and limbs to propel on a road.

It consists, secondly, in the arranging of the devices for transferring motion from the operator to the driving-wheel, in a manner that the speed of the driving-wheel may be changed with facility, whereby the operator can pass rough portions or elevated parts of a road with greater facility and less labor than with those now used, in which no provision is made for change of speed.

And it consists, finally, in the combination and arrangements of parts of which the velocipede is constructed, whereby a simple and conveniently-propelled velocipede is obtained that can be manufactured with durability and little expense, and can be operated by many delicate and sickly persons not properly capable of walking.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A, in the drawing, represents the platform, or body of the velocipede, which is supported upon the stationary axle B of the driving-wheel O C.

I construct this body of a flat sheet, but longitudinally curved as shown; and in order to have the seat sufficiently low, I set the central part of the axle B considerably below the centre of the driving-wheels, as shown, and make it with a flat part, D, under the platform, to provide for the proper securing of the platform with it.

E represents the seat of the operator, which is made similar to a rocking-chair. It has a proper back, F, to it, and the legs of the same are provided with the usual runners, or a similar cross-piece, uniting the rear legs with the front legs of the same.

Now, nearly centrally, or somewhat to rear of the chair, or seat, I provide a rock-shaft, G, which passes through the runners, or is otherwise secured to them permanently, and upon the platform A, I arrange two

standards, I I, which are firmly secured upon the said platform, and serve as bearings for the rock-shaft to vibrate therein, so that the operator's seat is properly supported upon the said rock-shaft, and may be vibrated by the operator with facility.

In order to transfer the motion of the rocking-chair, or seat to the driving-wheels, I employ a crank-shaft, J, revolving in bearings K K, secured on the under side of the platform, and have, on the front part of the seat, a cross-bar, L, connecting both front parts of the runners, which bar is connected with the cranks of the said crank-shaft by means of the rod M.

Upon the one end of the said shaft J, outside of the bearings K, I provide the same with a pulley, N; and have a corresponding pulley, O, secured on the inside of the respective driving-wheels, so that the reciprocating motion of the seat is transmitted and converted, in a rotary motion, to the shaft J, and from it transmitted, by employment of a proper belt, to the driving-wheel.

Instead of using one crank upon the shaft J, it may be preferred, in the practical construction, to use two or more, and have them so connected, combined, and arranged with the rocking-chair, that the same will operate simultaneously, whereby the operator may apply his power to more advantage, and pass the dead-centre of the crank or cranks with facility.

Both pulleys N and O are provided with several peripheral faces, of different diameters, so that the belt may be changed and placed upon a larger or smaller pulley, or face thereof, upon the shaft J, and may be changed on the corresponding smaller or larger face, or pulley on the driving-wheel, and thereby the speed varied accordingly between the shaft and driving-wheels.

The front part of the platform rests upon the ordinary guide, or steer-wheel, which is provided with the usual means for turning its course, and steering the velocipede.

From the foregoing, it will be perceived that by the means herein shown, the operator can, with pleasant motion of his body, produce the required propelling-power to the velocipede, so that the operation is less fatiguing to the operator than with the modes heretofore used; and by means of the devices for changing the speed of the velocipede, he is enabled to pass rough or elevated portions of the road with less labor and less fatigue than with the devices heretofore used, which are not capable of changing the speed.

Having fully described my invention,

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

In a velocipede, the arrangement of the body A, seat E, axle B, driving-wheels O C, standards I I, crank-shaft J, revolving in the bearings K K, cross-bar L, and connecting-rod M, the pulleys N and O and belt, with respect to the shaft J, all constructed as herein shown and described, and for the purpose set forth.

JOHANNES A. VAN DER WAAG.

Witnesses:

OSCAR MOORE,

CORNELIOUS VAN SKELLINE.