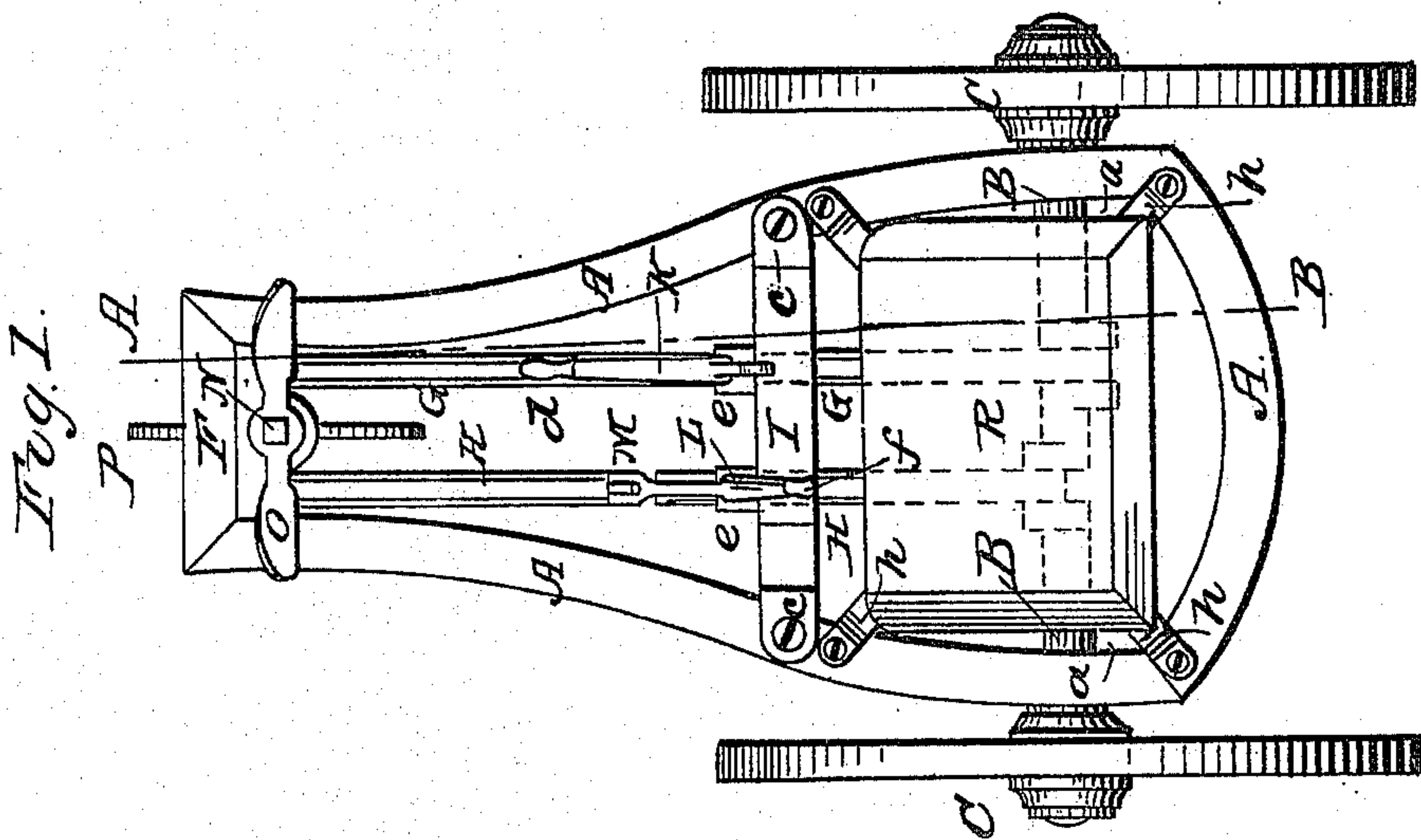
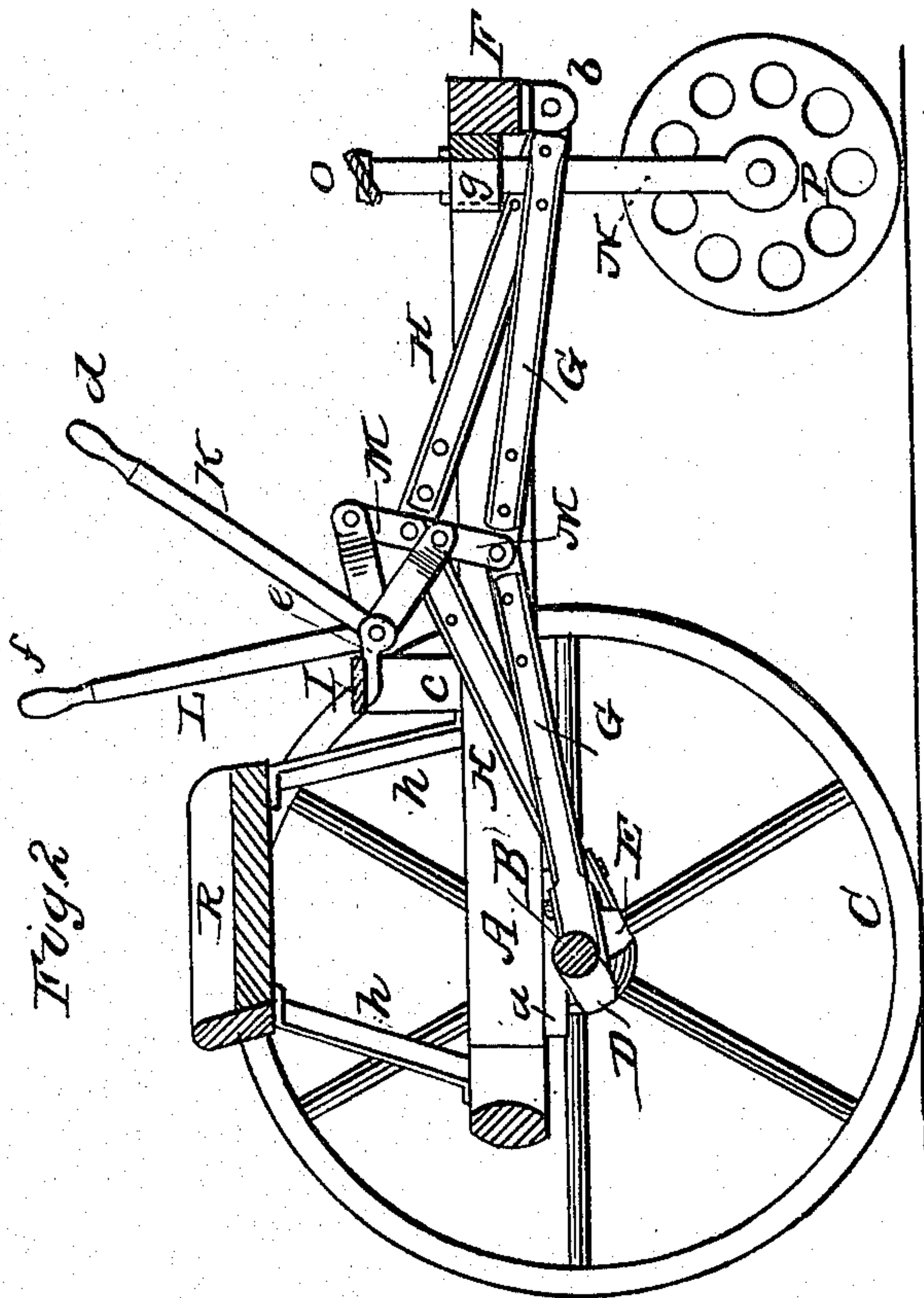


Velocipede.

Patented Nov. 3, 1868.



Chas H Burleigh
D L Miller.

L. V. Lutter.

United States Patent Office.

C. N. CUTTER, OF WORCESTER, MASSACHUSETTS.

Letters Patent No. 83,696, dated November 3, 1868.

VELOCIPÈDE.

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

Know all men by these presents:

That I, C. N. CUTTER, of the city and county of Worcester, and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Velocipedes; 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, forming a part of this specification, in which—

Figure 1 represents a plan view of my improved velocipède, and

Figure 2 represents a section on line A B, fig. 1.

To enable those skilled in the art to which my invention belongs, to make and use the same, I will proceed to describe it more in detail.

My invention consists in combining with the frame and crank-shaft of a velocipède, or otherwise ordinary or suitable construction, one or more hinged elbow-connections, and angle-levers for operating the same, in the manner hereinafter described.

In the drawings, the part marked A is the frame of the velocipède, which may be made in any convenient or desired form. This frame A is mounted upon a shaft, B, to which the driving-wheels C C are fastened. The said shaft is supported and turns in the bearings *a a*, fastened to the under side of the frame A. Near the centre of the shaft, between the bearings *a a*, are two cranks, D and E, set at right angles to each other, to prevent the possibility of resting on a "dead-centre." From these cranks D and E, extending to the front transom, F, and hinged thereto at *b*, are elbow-joint connections, G and H. Across the central part of the frame A is a cross-piece, I, the ends being bent downward, forming standards, *c*, which are secured to the frame A. To this cross-piece are hinged, at *e*, the heels of right-angled levers, K and L, the long arms of which extend upward, and are furnished at the ends with handles, *d* and *f*, while the short arms extend outward, and are joined at the ends with the joints of the elbow-connections G and H, by means of swing-pieces M. At the forward part of the frame A, and supported

by the bearing *g*, secured to the front transom F, is a standard, N, furnished at the top with a cross-bar, O, upon which to place the feet, while its lower end is slotted, to receive the guide-wheel P, as indicated in the drawings.

Above the frame A, back of the cross-piece I, is placed a seat, R, supported by appropriate standards *h*.

I propose, in some cases, to make the body or frame of the velocipède similar to the bodies of light carriages.

The operation is as follows: The operator, sitting in the seat R, places his feet on the cross-bar O, and taking hold of the handles *f* and *d*, moves forward the handle *f*, which presses down the joint of connection, H, carrying back the crank E, and passing crank D by the centre. Then, by moving back the handle *d*, the joint of connection, G, is brought up, and crank D drawn forward, turning the wheels, and by continuing the motions of the handles back and forth, the velocipedes can be propelled forward with great speed. To guide the velocipède, it is only necessary to turn the cross-bar O, with the feet, either to the right or left, as desired, thereby turning the standard N and guide-wheel P.

Having described my improved velocipède,

What I claim therein as new, and of my invention, and desire to secure by Letters Patent, is—

1. The combination, with the frame A, cross-piece I, and crank-shaft B, of the elbow-connections G H, or either, and right-angle levers K L, or either, substantially as and for the purposes set forth.

2. The combination, with the crank-shaft of a velocipède, and main frame thereof, of one or more sets of elbow-connections G, connected to a right-angle lever, K, by means of a swing-piece, M, substantially as and for the purposes set forth.

C. N. CUTTER.

Witnesses:

CHAS. H. BURLEIGH,
D. L. MILLER.