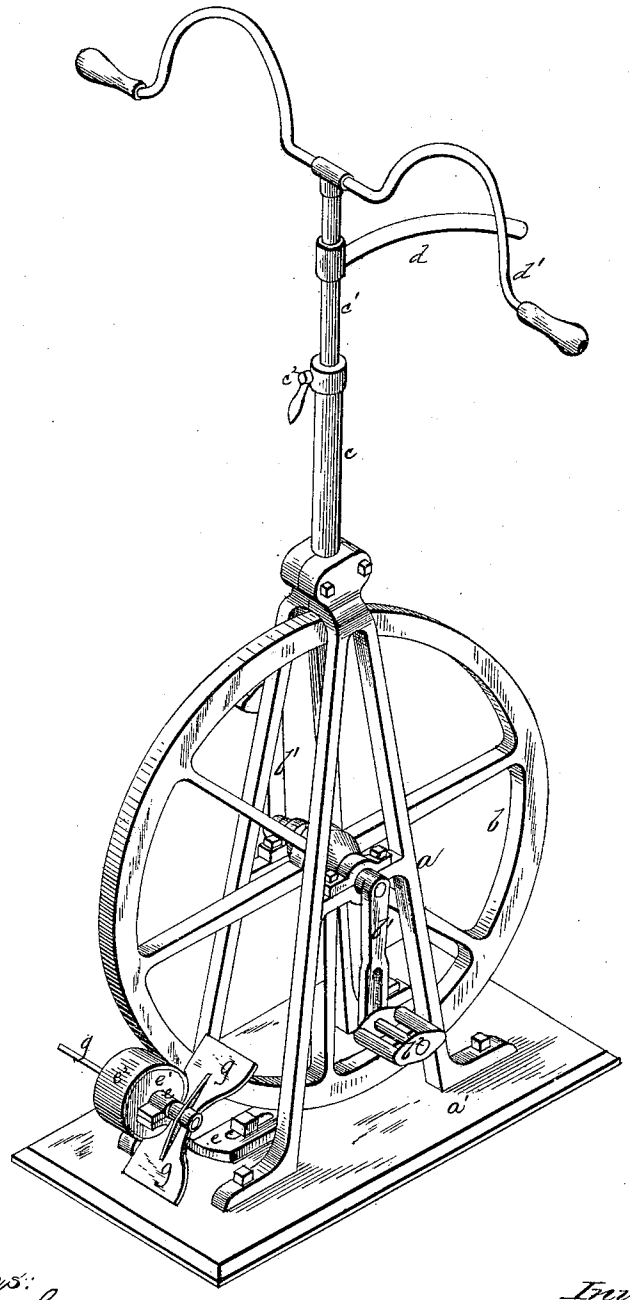
(No Model.)

L. W. CONKLING.

EXERCISING MACHINE.

No. 351,311. Patented Oct. 19, 1886.



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LLEWELLYN W. CONKLING, OF CHICAGO, ILLINOIS.

EXERCISING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 351,311, dated October 19, 1886.

Application filed June 5, 1886. Serial No. 204,289. (No model.)

To all whom it may concern:

Be it known that I, LLEWELLYN W. CONKLING, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Exercising-Machines, of which the following is a full, clear, and accurate description, to wit:

This invention relates to an improvement in training-machines; and it consists in the peculiar construction and arrangement of the same, whereby the power and resistance are increased in direct proportion to the speed, substantially as will be hereinafter more fully described, and pointed out in the claims.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe its construction and operation, referring to the accompanying drawing, in which the figure represents a perspective view of my device.

a represents a main frame, of suitable form and size, mounted for convenience upon a base, *a'*. In this frame is journaled a wheel, *b*, the shaft of which is provided with cranks *b'* and pedals b^2 of any suitable form, such as are commonly used upon bicycles.

In the upper end of the main frame is secured a standard, *c*, which I have preferred to make hollow, and provided with an extension, *c'*, which may be drawn out or pushed in at will and secured at the desired point by a set-screw, c^2, to regulate the machine to the height of the rider. On this standard or its extension is secured the arm *d*, which corresponds to the backbone of a bicycle, and is of sufficient length to receive and support the saddle, which it was not thought necessary to illustrate herewith. To the upper end of the standard is secured the handle-bar *d'*.

On the base of the machine is secured a forked bearing, *e*, in which is journaled a small wheel or roller, *e'*, which is driven by friction from the face of the larger wheel, and is therefore preferably covered with rubber or a similar material, to produce the proper frictional contact of the two surfaces, as seen at e^2. The bearing *e* is slotted and secured by a set-bolt, e^3, in order that the friction-roller may be adjusted to and from the driving-wheel to compensate for wear, &c.

On the roller-shaft is secured one or more wings or fan-blades, *g*, of proper size, which serve to regulate the speed and resistance.

The rider of this machine mounts it in the manner common to bicycles, and drives the large wheel with his feet, thereby revolving the fan-blades, which serve as a governor.

This machine is especially intended for use by bicycle-riders, and particularly such as desire to keep themselves in proper training while not enabled to use the bicycle by stress of weather or other causes. In the use of the bicycle the resistance and consequent power increase directly with the speed, and this is a feature hitherto not obtained automatically in training-machines. In the present device the increased speed of the fans creates an increased resistance to the air in direct and exact ratio to the speed, and the effect upon the rider is therefore precisely what would result from a similar use of the bicycle under the same conditions, and is perfectly automatic and needs no attention on the part of the rider.

I do not confine myself to the exact construction herein shown and described, but will alter it as occasion may require without departing from the spirit of the invention. I prefer to operate the fans by friction, as shown, but may use a geared or belted connection, if desired, which is a mechanical change at once comprehended and not necessary to more particularly describe. I will also sometimes substitute a clutch-and-lever action for the driving-cranks, to accommodate that class of riders who use a similarly-driven bicycle, and thus give the motion to which they may be accustomed.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a bicycle training-machine, the combination, with the driving devices, of a revolving fan connected to and driven thereby, substantially as and for the purpose set forth.

2. In a bicycle training-machine, the combination, with a main driving-wheel, of a revolving fan-shaft journaled in an adjustable bearing and having frictional contact with the drive-wheel, whereby the fan is adjustable for wear, substantially as and for the purpose set forth.

3. In a bicycle training-machine, the com-

bination, with a main frame provided with an adjustable seat-support, and a main driving-wheel provided with suitable operating pedals, of a fan-shaft provided with one or more fan-blades, and a friction pinion or roll for contact with the drive-wheel, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand and affixed my seal this 23d day of January, 1886.

LLEWELLYN W. CONKLING. [L. S.]

In presence of—

GEO. H. BENEDICT,

W. C. MCARTHUR.