

(No Model.)

H. J. CURTIS.
BICYCLE STAND.

No. 431,740.

Patented July 8, 1890

Fig. 1.

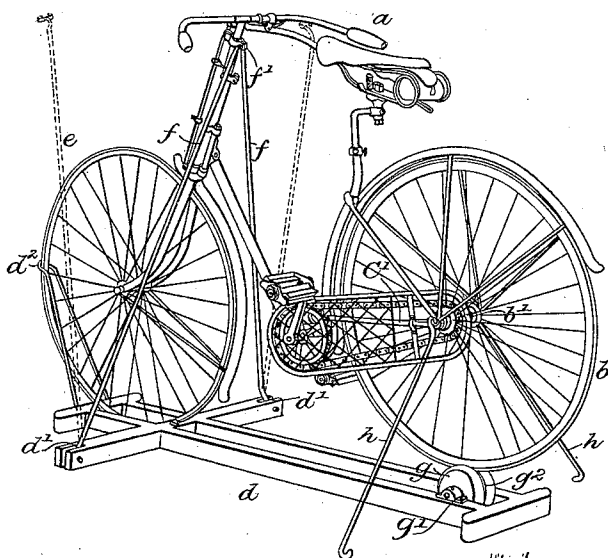


Fig. 2.

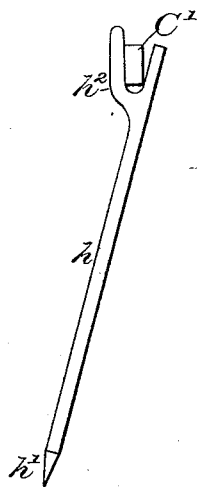
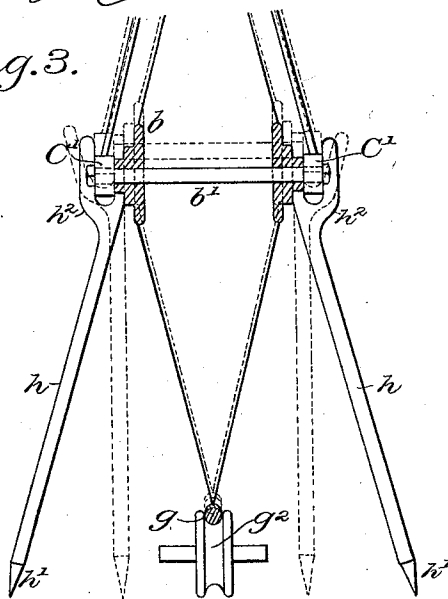


Fig. 3.



WITNESSES

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BICYCLE-STAND.

SPECIFICATION forming part of Letters Patent No. 431,740, dated July 8, 1890.

Application filed April 28, 1890. Serial No. 349,863. (No model.)

To all whom it may concern:

Be it known that I, HENRY J. CURTIS, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Safety Stand and Trainer for Bicycles, of which the following is a full, clear, and exact description, whereby any one skilled in the art can make and use the same.

My invention relates to the class of devices that are used for the purpose of retaining a bicycle in an upright position for storage, and also that are adapted for use as a means for enabling a rider to exercise on the machine under practically the same conditions as in normal use.

My invention consists in the combination of the base, clamps, braces, and supporting parts making up the device as a whole, as more particularly hereinafter described, and pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective view of the device in position for use as a trainer. Fig. 2 is a detail view of one of the braces. Fig. 3 is a detail view illustrating the method of using the braces and showing some of the parts in vertical section.

In the accompanying drawings, the letter *a* denotes a bicycle of the safety type in which the rear wheel is geared up with the crank, usually by a flexible connection, and forms the driving-wheel that more immediately supports the weight of the person using the wheel.

b denotes the driving-wheel; *c'*, a substantially horizontal part of the frame *c* near the axle *b'* of the driving-wheel. The stand *d* is preferably of a cruciform shape, is made, preferably, of wood, with the arms *d'* and the upright bracket *d''*, that is secured to the front end of the frame, and is forked to embrace the felly of the forward wheel *e* at a point about midway of its height. The wheel *e* rests in sockets in the frame, and braces *f*, terminating at the upper end in the clamp *f'*, are pivoted to the outer ends of the arms *d'* and arranged to be clamped securely to the frame of the machine at a point preferably just below the handle-bar.

Directly below the axis of the driving-wheel

a roller *g* is journaled in suitable bearings *g'*, secured to the frame *d*. This friction or brake roller *g* is provided with a peripheral groove *g''*, and is preferably made of metal cast to shape, the shaft being made of a cylindrical piece of steel secured to the body of the wheel in the process of casting.

The braces *h* each consist of a rod of metal, preferably iron or steel, having the point *h'* at the lower end and terminating at the upper end in a fork *h''*. This fork in the head of the brace is adapted to engage the part of the frame *c'* immediately adjacent to the axle *b'* of the driving-wheel in such manner as to prevent the braces from slipping, while the lower pointed ends of each of the braces is adapted to be driven into the floor upon opposite sides of the frame. These braces are simple and cheap in construction and are used to regulate or adjust the vertical position of the driving-wheel with respect to the friction-roller *g* by regulating the distance out from the center of the frame at which the braces enter the floor on which the frame rests. When the pointed ends of the braces are in the positions illustrated in Fig. 1 of the drawings, they serve to hold the driving-wheels against side swaying and permit the larger part of the weight of the rider to rest normally on the roller *g*; but by bringing the pointed ends of the braces nearer together the wheel is lifted and pressure is removed from the friction-roller *g*, so that but little resistance is offered to the rotation of the driving-wheel.

My improved stand and trainer, as described, is of simple and cheap construction, and the simplicity of the braces *h*, that adapt the machine to be used as a trainer, are elements of decided advantage in the use of the device.

I claim as my invention—

1. In combination with a stand having lateral arms with braces secured to the outer ends of the arms and terminating at the upper end in a clamp adapted to be secured to the frame of a wheel, an upright support for the front wheel secured to the front end of the stand, a pressure-roller journaled in bearings near the rear end of the stand, and braces having pointed lower ends and a forked head

adapted to engage the frame of a bicycle adjacent to the axis of the driving-wheel, all substantially as described.

2. In combination with a supporting-frame
5 provided with braces and clamps for securing the front wheel of a bicycle, a grooved friction-wheel mounted in the frame near its rear end, and the removable lateral braces

adapted to be attached to the opposite sides of the frame near the axle of the driving-wheel, all substantially as described.

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Witnesses:

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