

(No Model.)

W. C. MOORE.  
ATTACHMENT FOR BICYCLES.

No. 510,924.

Patented Dec. 19, 1893.

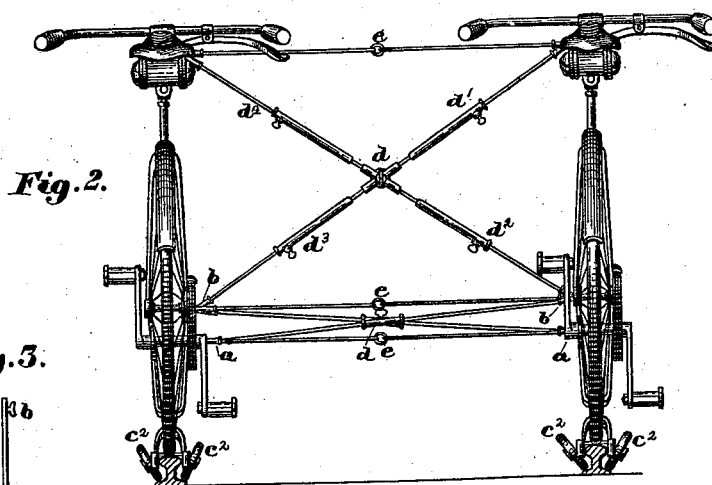
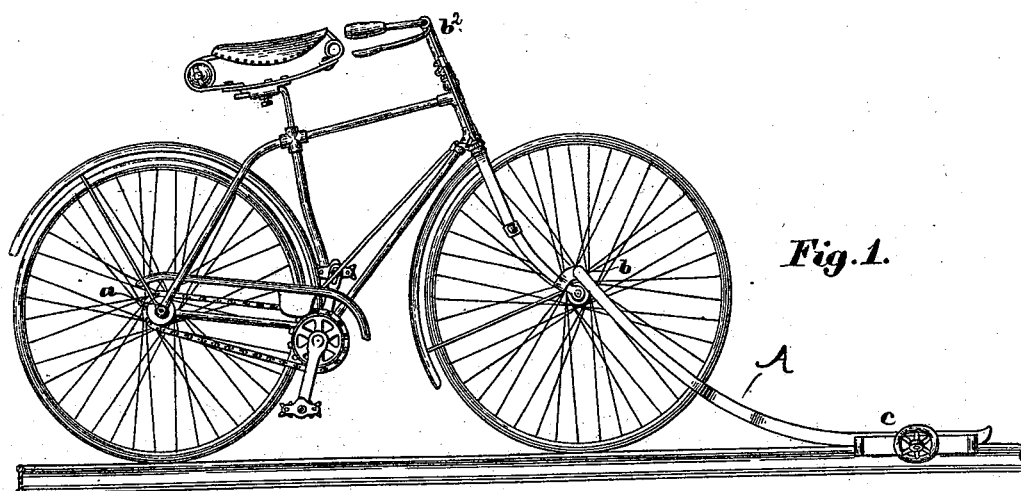


Fig. 3.

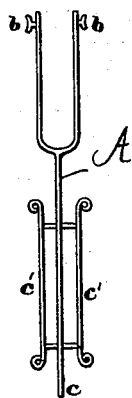


Fig. 4.

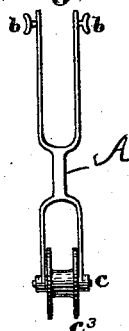
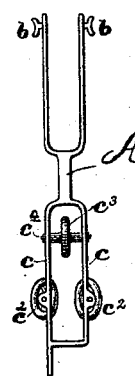


Fig. 5.



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# UNITED STATES PATENT OFFICE.

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## ATTACHMENT FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 510,924, dated December 19, 1893.

Application filed February 11, 1893. Serial No. 461,993. (No model.)

*To all whom it may concern:*

Be it known that I, WAVERLY C. MOORE, of Greer's Depot, in the county of Greenville, in the State of South Carolina, have invented certain new and useful Attachments for Bicycles, by the use of which an ordinary safety-bicycle can be easily and readily converted into a railroad, single, or double bicycle; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and letters of reference marked thereon.

The nature of my invention consists in providing a guide arm, or fork; the rear end of which is attached to the front fork of a bicycle the forward end of which is provided with a suitable shoe, or guide to engage the rail in such manner as to take its direction while the machine is in motion, thereby guiding the front wheel over the center of rail; the rear wheel following the line of the first. By means of an X shaped frame of suitable rods and connections, by the aid of which two machines with like attachments may be braced to each other, thereby lending mutual support, the machines are maintained in a vertical position over the rail.

To enable others skilled in the art to make and use my invention, I will proceed to give a detailed description of its construction.

Figure 1. represents a side view of machine with shoe "c" and fork, or arm A attached at "b" by means of a cuff and hinge joint b' to the prongs of the front fork of bicycle. Fig. 2. represents a rear view of two machines fastened together by means of adjustable rods "d'" "d<sup>2</sup>" "d<sup>3</sup>" "d<sup>4</sup>" uniting in an adjustable cross "d" held stiff by their connections to the machines, and the tension rods "e" "e'" "e" which are connected to the points of the X. frame near where they in turn are fastened to the machine; the points of the perpendicular X. fastened by means of a cuff or clamp and set screws to the front fork of machine at "b" "b<sup>2</sup>" Fig. 1, and their opposite points in like manner to the opposite machine; and a like X. frame connected to the rear fork at "a" and to the front fork at "b," Fig. 1 and in like manner to the opposite machine thereby bracing them laterally so that one may not advance faster than the other and can not skew or twist off the track.

In order to use my invention with a single machine it is necessary to discard the points of the X. frame other than those that unite at the point "b" Fig. 1 where can be substituted a single pulley to rest on the opposite rail taking the place of a bicycle as a support to the machine on the opposite rail.

Fig. 3 represents a fork with bar end "c" resting on the rail and cuff or bar "c'" "c'" engaging the side. Fig. 4 is a like fork with a double flange pulley "c" running on the rail the flanges "c<sup>3</sup>" extending down on each side of the rail.

Fig. 5 represents a fork with a suitable frame "c" and a roller bearing "c<sup>3</sup>" to support the weight with roller side bearings "c<sup>2</sup>" "c<sup>2</sup>" to engage the rail.

By means of these attachments an ordinary bicycle or bicycles can be converted into a railroad bicycle single or double and by the use of an enlarging sprocket ring the speed can be greatly increased.

I claim—

1. In combination with a bicycle, the guide arm A, having its rear end attached to the front fork of the bicycle, its front end extending forward and provided with frame c, c, bearing the center wheel c<sup>3</sup>, adapted to ride on top of the rail and angled side wheels c<sup>2</sup>, c<sup>2</sup>, adapted to impinge either side of the rail, substantially as shown and described and for the purposes set forth.

2. In combination with a bicycle, the guide arm A, having its rear end bifurcated and attached to the front fork of the bicycle by hinge, joint, and cuff b', its front end extending forward and provided with frame c, c, bearing the center wheel c<sup>3</sup>, adapted to ride on top of the rail, and angled side wheels c<sup>2</sup>, c<sup>2</sup>, adapted to impinge either side of the rail, substantially as shown and described and for the purposes set forth.

3. In combination with a bicycle the adjustable rods d', d<sup>2</sup>, d<sup>3</sup>, and d<sup>4</sup>, uniting in the upper adjustable cross d; the lower cross rods meeting in the lower cross d, and tension rods e, e, and e, one end of said rods secured to the bicycle and the other ends to a similar bicycle, or frame, adapted to ride on the opposite track of a rail way, substantially as shown and described and for the purposes set forth.

4. A railway bicycle consisting of the front

and rear wheels and means of operating the same, the front arm A, having its rear end secured to the front fork of the bicycle and its front end extending forward and adapted  
5 to ride on top of and impinge either side of the rail, said bicycle provided with side braces adapted to hold a frame, or a bicycle, carrying a wheel or wheels to ride upon the top of

and impinge either side of the opposite rail, substantially as shown and described and for the purposes set forth.

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Witnesses:

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