

(No Model.)

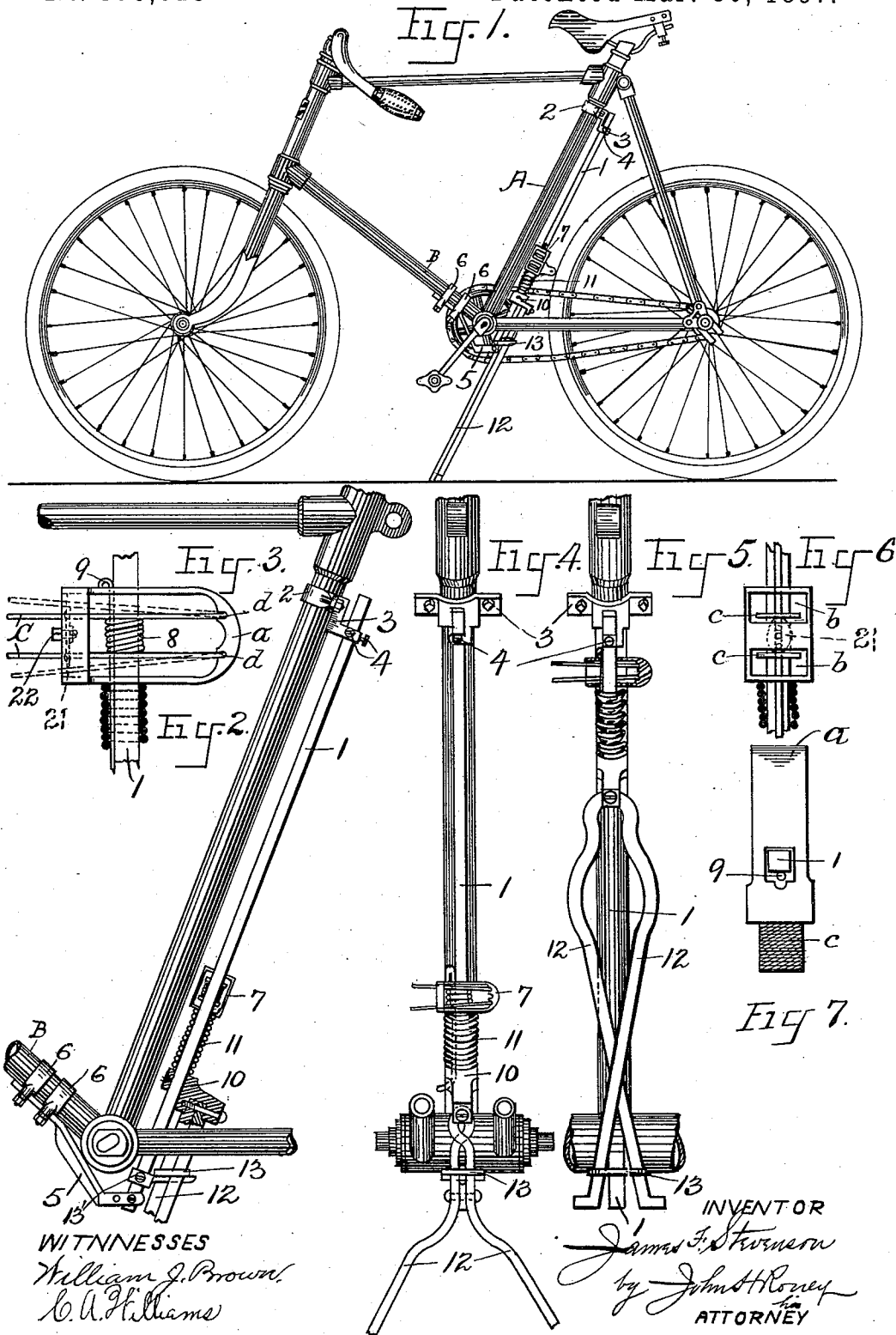
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COMBINED SUPPORTING AND LOCKING ATTACHMENT FOR BICYCLES.

No. 579,613.

Patented Mar. 30, 1897.



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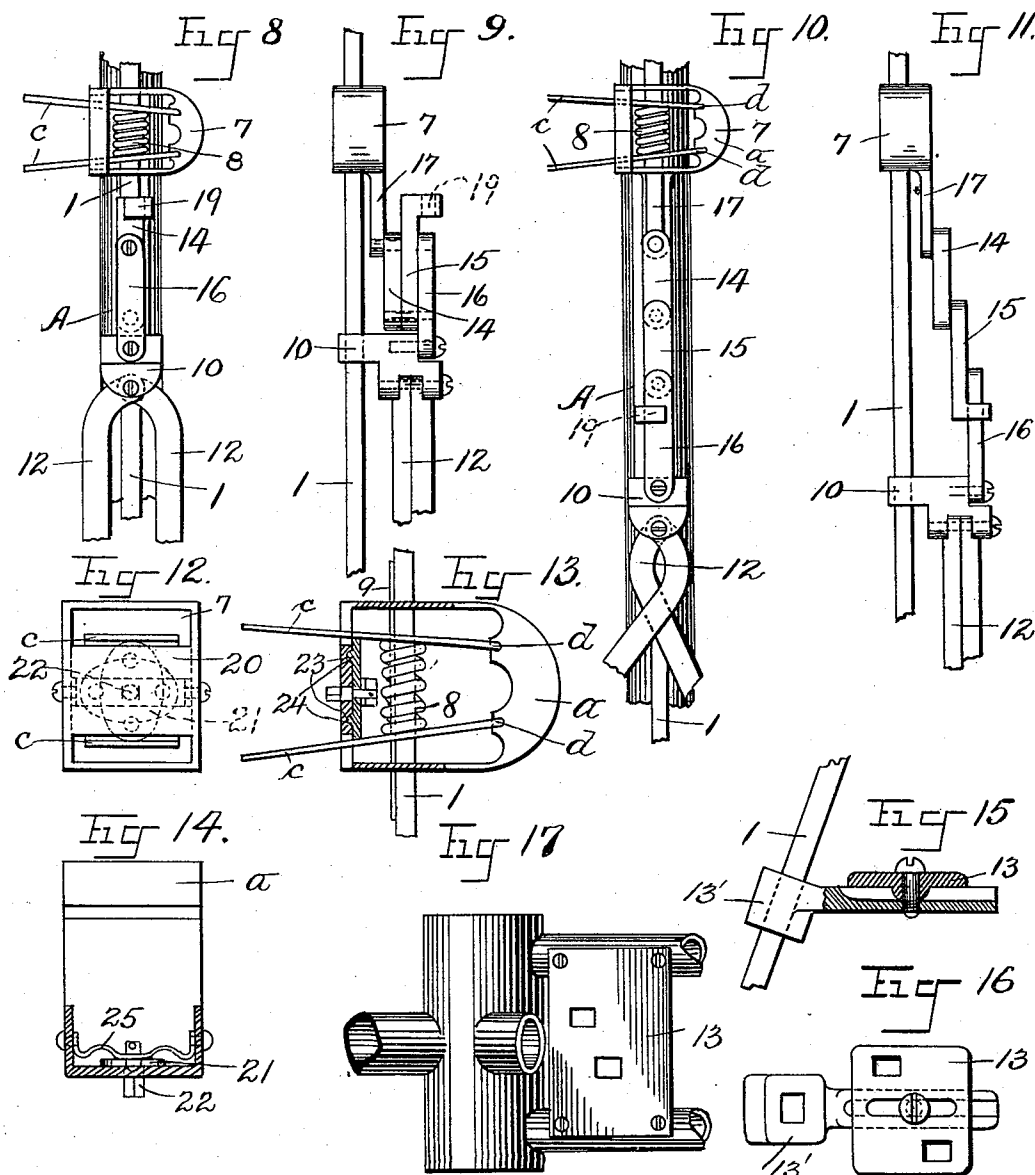
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WITNESSES

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# UNITED STATES PATENT OFFICE.

JAMES F. STEVENSON, OF ALLEGHENY, PENNSYLVANIA.

COMBINED SUPPORTING AND LOCKING ATTACHMENT FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 579,613, dated March 30, 1897.

Application filed May 29, 1896. Serial No. 593,564. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES F. STEVENSON, a citizen of the United States, residing at Allegheny city, in the county of Allegheny, State of Pennsylvania, have invented certain new and useful Improvements in a Combined Supporting and Locking Attachment for Bicycles; and I hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, in which—

Figure 1 indicates a side elevation of a bicycle with my combined supporting and locking attachment applied thereto. Fig. 2 is an enlarged view in elevation of the locking device. Fig. 3 is an enlarged view of the brace-rod to which the supporting apparatus is attached, also showing enlarged view of supporting attachment. Fig. 4 is an end view of the same. Fig. 5 is an end view, the supporting-legs being in elevated position. Fig. 6 is a front elevation of the locking device. Fig. 7 is a plan view of the same. Fig. 8 is an end view of the brace-rod, showing a modified form of the attachment connecting the supporting-legs to the locking device. Fig. 9 is a side elevation of the same. Fig. 10 is an end view showing the connecting attachment extended. Fig. 11 is a side elevation of the same. Fig. 12 is a front elevation of the shell in which the locking-levers are secured, showing the locking attachment to prevent movement of said levers when locked. Fig. 13 is a side elevation of the same, partly in section. Fig. 14 is a vertical sectional view of the same. Fig. 15 is an enlarged view of the spreader-foot. Fig. 16 is a plan view of the same. Fig. 17 is a plan view of a modified form of spreader-foot.

My invention relates to devices adapted to support and lock bicycles in a standing position.

My object is to produce a device of this character simple in construction and efficient in operation and in which the weight will be reduced to a minimum and by the use of which the bicycle is not only held in a vertical position, but is also locked to prevent the use of the same until released or unlocked;

and to this purpose it consists of the novel construction and arrangement of parts hereinafter described, reference being had to the accompanying drawings, in which like reference numerals and letters indicate like parts wherever they occur.

Referring to said drawings, 1 is a rod or bar in any wise suitably secured to a bicycle of ordinary construction, preferably, as shown in the drawings, to the rear of the brace A of the bicycle, by means of the collar 2, carrying the bracket 3, in which the upper end of said rod is secured by means of the set-screw 4 or in any other suitable manner. The lower end of said rod is secured to and supported by a bracket 5, which is connected to the collars or clips 6 6, which are suitably secured upon the brace B of the bicycle.

7 is a gripping device comprising a shell *a* open or provided with sides and having slots or openings *b* in the front thereof in which the forward ends of the locking-levers *c* project, the opposite ends of said levers being recessed in sockets *d*, formed in the rear of said shell. A spiral spring 8, mounted upon the rod 1 between said levers, when distended throws the lever, in the position shown in dotted lines, Fig. 2, and causes the outer edge of the opening in the upper lever to impinge against the side of the rod 1 on either side of the long spline 9, which connects said gripping device with the slidable bracket 10, and the outer edge of the orifice in the lower locking-lever to likewise impinge upon the same side of the rod, thus enabling the gripping device to be locked fast upon the rod at any point along the same desirable.

As heretofore stated, the spline 9 connects said gripping device with the bracket 10, between which and the gripping device is secured the spring 11. Said bracket is slidably mounted upon said rod, the supporting-legs 12 being pivotally connected to said bracket. The upper portions of said legs are formed, preferably, with a compound curve, as shown in the drawings, whereby the lower straight portions, which project through openings in the spreader-foot 13, which is attached to or integral with the collar 13', connected to the lower end of said rod, cause said legs to be distended or spread out, as shown in Fig. 4, for the purpose of supporting the bicycle.

The said legs are formed of rigid inflexible material, preferably, and may be provided with feet, as shown in Fig. 5, if desirable.

In Figs. 8, 9, 10, and 11 are shown, respectively, end and side elevations of modified forms of my improvement, in which the gripping device is connected to the legs by means of links 14, 15, and 16. Link 14 is connected in any suitable way to a lug or downwardly-projecting prong 17, integral with or connected to the lower side of the shell of the locking apparatus. Link 15 is pivotally connected to link 14 and is likewise pivotally connected to link 16 in such manner that they may be folded up, as shown in Figs. 8 and 9, whereby the supporting-legs, pivotally connected with the bracket 18, to which the lower end of link 16 is connected, may be drawn up and lowered in contact with the earth, substantially as heretofore described. The lower hooked end of the link 15 is provided with a notch 19 to engage upon the edge of the link 16, as shown in Figs. 10 and 11, to make the same more rigid and strong when the legs are in contact with the earth.

In Figs. 12, 13, and 14 and in other figures showing the locking attachment where the same can be applied or shown without confusion I show a supplemental locking device, which is secured upon the front plate 20 of the shell *a* of the locking attachment, and it consists of an elliptical plate 21, mounted upon a spindle 22, adapted to be operated by a key. The inner side of said elliptical plate is provided with a number of projections 23, adapted to engage in correspondingly-shaped notches 24 on the inner face of the front plate of the shell. Said elliptical plate is mounted upon a spring 25, secured between the sides of said shell, adapted normally to keep the elliptical plate in close contact with the inner face of the front plate or shell, whereby the projections on the elliptical plate are kept in engagement with the notches on the inner face of the front plate of the shell.

It is obvious that my locking and supporting device may be attached directly to the brace-bar *A* of the bicycle and that the supporting-legs may be connected directly with the locking device without the interposition of the spring 11 or the link connections without departing from the spirit of my invention; but I preferably use the auxiliary rod 1, as I thereby avoid the danger of abrading the brace-rod *A*, which would be occasioned by the sliding of the attachment thereon and the use of the spring or similar device to connect the locking device with the legs. It is also obvious that the rod 1 may be secured to the top brace of the bicycle and the lower brace-bar of the same located at the front instead of the rear of the sprocket-wheel, and that the legs instead of being flared or curved may be formed straight.

The operation of my device is as follows, viz: The legs and the locking device being in position, as shown in Fig. 5, the locking-legs

being distended, as shown in Fig. 2, locks the apparatus upon the supporting-rod. The operator by compressing the outer ends of the levers enables the same to be moved upon the rod until the lower points of the legs are in contact with the earth, when the rider, by additional pressure upon the locking device, compresses the spring between the locking device and slidable bracket to which the legs are secured, the slight recoil of which, that occurs upon the withdrawal or discontinuance of the pressure upon the spring, the gripping device being held immovable upon the rod, and the legs in contact with the ground, moves the rod upwardly and elevates the frame of the bicycle and throws the weight or support thereof onto the distended legs. It is observable that the slidable gripping device is adapted to hold the legs immovable at any point on the rod and that the said gripping device may be readily released by compressing the locking-levers thereof. When it is desirable to prevent this, (as, for instance, when the rider lowers the legs to support the wheel and intends to leave the same in that position for some time,) the rider by inserting the key upon the spindle which actuates the elliptical lock may throw the plate into the position shown in Figs. 12 and 13—viz., lengthwise between the levers—preventing the compression of the same, thus holding the wheel not only in an upright position, but also preventing the use of the wheel until the locking-levers are released, which may be done by reversing the elliptical lock-plate.

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

1. In a combined supporting and locking attachment for bicycles, the combination of a bar or rod attached to the frame of the bicycle; a gripping device slidably mounted on said bar or rod; a pair of supporting-legs connected to said gripping device, whereby the same is held suspended on said rod; a spreader-foot, and a spiral spring mounted on said rod between the gripping device and the upper end of the supporting-legs, substantially as herein described.

2. In a combined supporting and locking attachment for bicycles, the combination of a bar or rod secured to the center post of the bicycle and parallel therewith; a gripping device slidably mounted on said bar; a pair of supporting-legs connected to said gripping device; a spiral spring mounted on said bar or rod between the gripping device and the upper end of the supporting-legs, and a locking attachment adapted to prevent the release of said gripping attachment, substantially as herein described.

3. In a combined supporting and locking attachment for bicycles, the combination of a bar or rod secured to the center post of the bicycle and parallel therewith; a gripping device slidably mounted on said bar; a pair of supporting-legs connected to said gripping

device; a spiral spring mounted on said bar or rod between the gripping device and the upper end of the supporting-legs; a locking attachment adapted to prevent the release of  
5 said gripping device, and a spreader-foot, substantially as and for the purpose herein set forth.

4. In a bicycle supporting and locking device, the combination of a rod mounted on the  
10 frame of a bicycle; a shell slidably mounted on said rod having gripping-levers mounted therein, and a spiral spring mounted on said rod between said levers; a pair of distensible

legs connected to said shell; a spiral spring mounted on said rod between the lower end 15 of said shell and the upper end of said legs, and means to prevent said levers being compressed when distended, substantially as herein described.

In testimony that I claim the foregoing I 20 hereunto affix my signature in the presence of two witnesses.

JAMES F. STEVENSON.

In presence of—

R. A. GEORGE,

C. A. WILLIAMS.