

(No Model.)

2 Sheets—Sheet 1.

W. LEWIS.

SUPPORTING AND LOCKING ATTACHMENT FOR BICYCLES.

No. 485,285.

Patented Nov. 1, 1892.

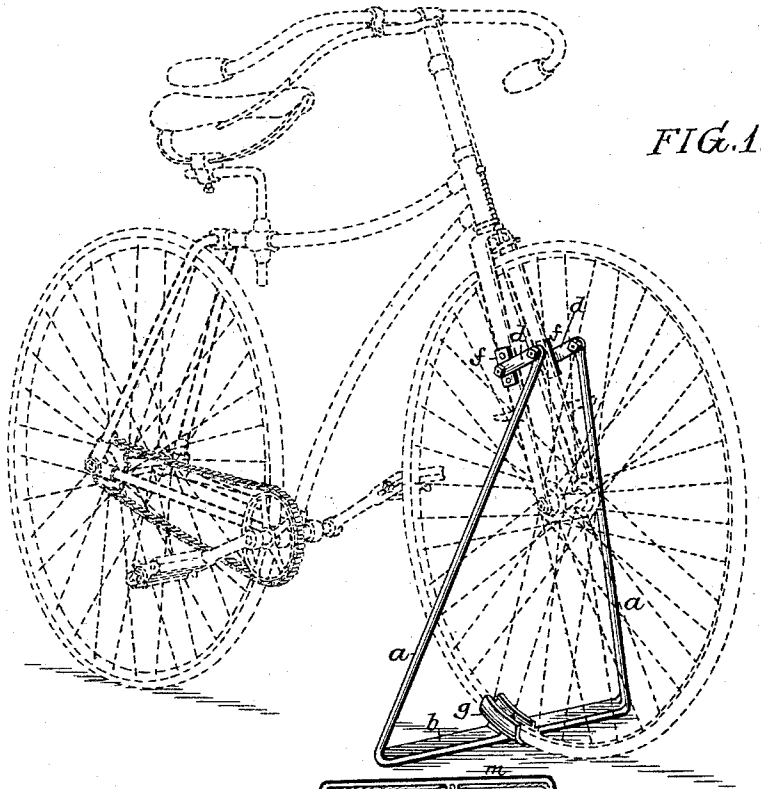


FIG. 1.

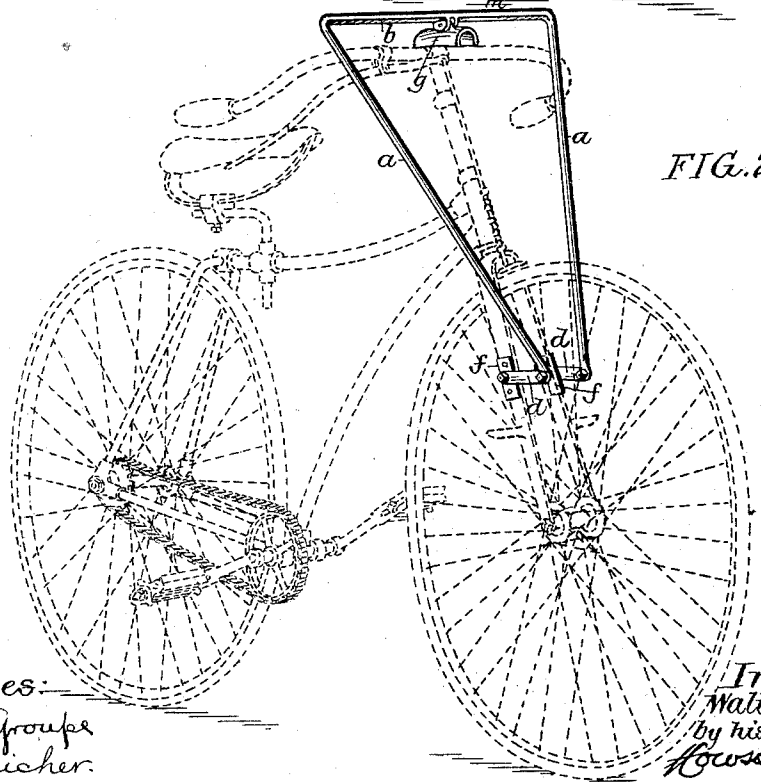


FIG. 2.

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A. V. Groupe
R. Schleicher.

Inventor
Walter Lewis
by his Attorneys
Howson & Howson

(No Model.)

2 Sheets—Sheet 2.

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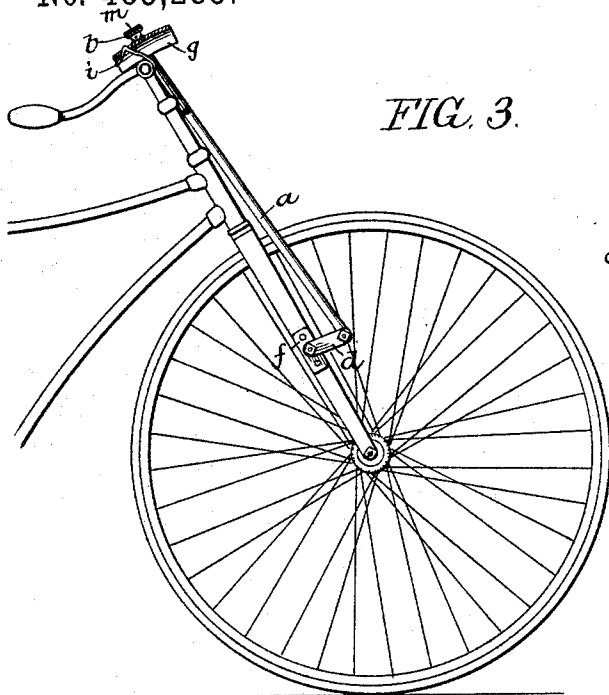


FIG. 3.

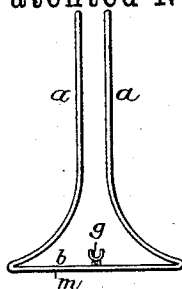


FIG. 8.

FIG. 6.

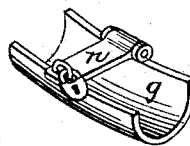


FIG. 5.

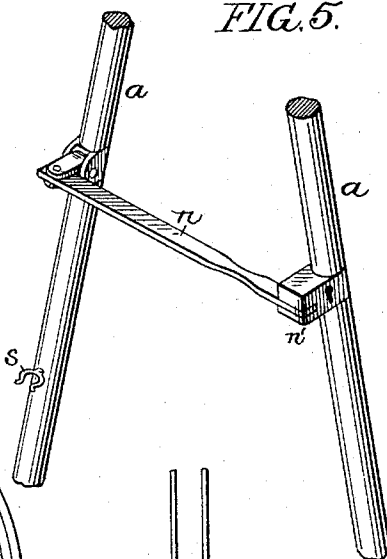


FIG. 7.

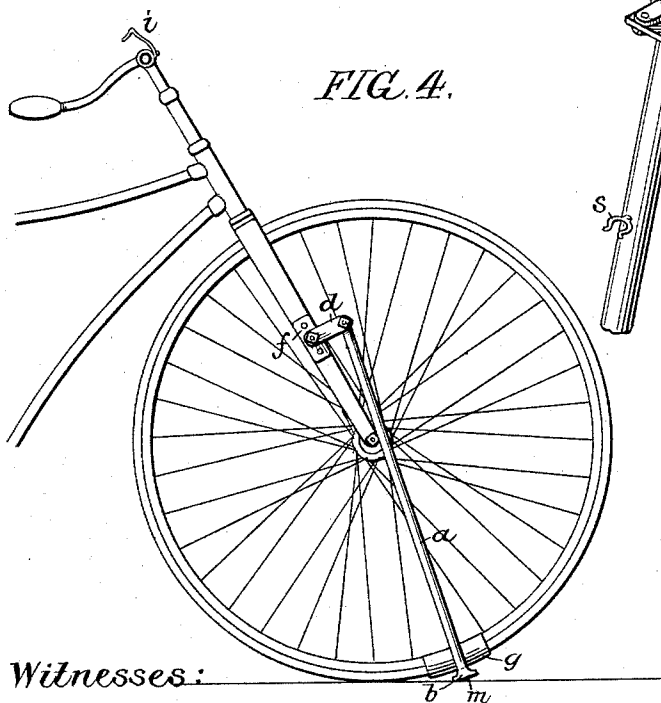
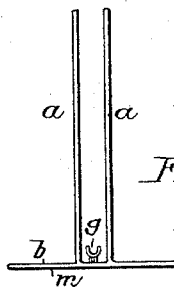


FIG. 4.

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UNITED STATES PATENT OFFICE.

WALTER LEWIS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO GEORGE T. TURNER, OF SAME PLACE.

SUPPORTING AND LOCKING ATTACHMENT FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 485,285, dated November 1, 1892.

Application filed December 18, 1891. Serial No. 415,529. (No model.)

To all whom it may concern:

Be it known that I, WALTER LEWIS, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Supporting and Locking Attachments for Bicycles, of which the following is a specification.

The object of my invention is to provide a bicycle with an attachment of such character that when in position for use it will afford an effective means whereby the bicycle is supported in an upright position and when not in use can be readily supported upon the steering-head of the machine, where it is out of the way of the steering-wheel and offers no obstacle whatever to the proper running of the machine. The attachment, moreover, can be readily moved from one position to the other and cannot be accidentally displaced when in either position, and when combined with a transverse rod or bar for passing between adjoining spokes of the bicycle-wheel it serves to lock said wheel, and thus provides a safeguard against the unauthorized use or theft of the machine.

In the accompanying drawings, Figure 1 is a perspective view illustrating the application of my improved attachment to an ordinary form of bicycle, the latter being shown in dot-lines, while the attachment is shown in full lines and in position for serving as a support for the machine. Fig. 2 is a similar view, but illustrating the attachment in the position to which it is adjusted when the machine is running. Fig. 3 is a side view of part of the machine with the attachment in the position illustrated in Fig. 2, the attachment being shown partly in section and combined with the device for retaining it in position. Fig. 4 is a side view of part of the machine, illustrating the attachment in the position to which it is adjusted before it assumes its final or supporting position, as shown in Fig. 1. Figs. 5 and 6 are perspective views illustrating different forms of locking-bar to be used in connection with the attachment, and Figs. 7 and 8 are views illustrating supporting-frames differing in form from that shown in Figs. 1 and 2.

My invention is applicable to any ordinary

form of bicycle, and in the drawings I have illustrated the same as used in connection with a bicycle of the "safety" type.

The attachment consists of a frame, preferably of the triangular form shown and comprising opposite side bars *a* and a base-bar *b*, the side-bars being hung at the upper ends to links *d*, which in turn are hung to blocks *f*, riveted or otherwise secured upon the opposite legs of the forked head, which carries the front or steering wheel of the machine, the base-bar *b* being of such length that the side bars *a* of the frame flare outwardly from the links to the bar.

Centrally mounted upon the bar *b* is a socket *g*, U-shaped in cross-section and by preference curved longitudinally, so as to coincide with the curve of the rim and tire of the steering-wheel of the machine, the socket being pivoted to lugs on the bar *b*, so that it is free to swing in passing beneath the wheel, as described hereinafter. When the attachment is not in use, it occupies the position shown in Fig. 2 of the drawings, the triangular frame in this case extending upward from the links *d* and the side bars *a* resting against the steering-handle of the machine, a suitable catch being employed in order to retain the attachment in this position. In Fig. 3, for instance, I have shown a spring-finger *i*, mounted upon the steering-head and engaging with an opening in the socket *g*, this finger being such that while it will serve to retain the attachment in position as against accidental displacement due to the jarring or shaking of the machine it will yield readily to permit the socket to be passed over it when the attachment is raised by hand to the position shown in Figs. 2 and 3 or when pressure is exerted upon the attachment to throw it down in front of the steering-wheel, the attachment then falling until the bar *b* strikes the ground in front of the wheel and the socket *g* receives the rim and tire of the wheel, as shown in Fig. 4. A slight forward movement of the machine will then cause the cross-bar and its socket to slip under the wheel and assume the position shown in Fig. 1, and when in this position the bar *b* provides such an extended lateral bearing that the machine

will stand perfectly steady, any toppling of the machine to either side being effectually prevented. Forward movement of the machine when the attachment is in supporting position will not so disarrange said attachment as to interfere with the proper performance of its duty, the transverse bar and socket closely following the movement of the forward wheel, so that when the machine stops the supporting-frame is always in proper position for holding it upright. In this respect my improved attachment is essentially different from that form of supporting device which consists of a leg pivoted at its upper end to the fixed frame of the machine and extending outward and downward when in use, so as to provide a third point of support for the machine. Even when such pivoted legs are used upon both sides of the machine forward movement of the latter has the effect of swinging the legs rearward, and they are thereby moved out of supporting position.

Excessive rearward swinging of my improved supporting-frame is prevented by contact of the side bars *a* of the same with the usual projecting foot-supports on the sides of the steering-frame of the machine, and the link connections at the upper ends of said side bars *a* prevent any binding of the cross-bar or socket against the steering-wheel when said bar and socket are swinging from the front to the rear of the wheel, as before set forth. If, however, it is desired to permit the supporting-frame to remain in front of the steering-wheel when in supporting position, these links may be dispensed with, or when the links are used they may, if desired, be hung directly to the legs of the forked steering-frame, the use of the blocks *f* being in all cases preferred, however, because said blocks not only provide a better bearing for the links than would the curved legs of the steering-frame, but the formation of the openings in the legs of the steering-frame for the reception of the rivets, whereby the blocks *f* are secured thereto, weakens said steering-frame to a less extent than would the formation therein of openings large enough for the reception of the pivot-bolts for the links. The cross-bar *b* is preferably thin and is shod on the under side with a strip *m* of leather, rubber, cork, or like material which will prevent the bar from slipping when the bicycle is left standing upon smooth or slippery pavements. While the triangular form of supporting-frame is, as before stated, the preferable one, other forms of frame may, if desired, be used without departing from my invention. For instance, in Fig. 7 I have shown a frame in which the side bars *a* are vertical throughout the greater part of their length and flare abruptly at and near the bottom, so as to join the outer ends of the transverse bar *b*, and in Fig. 8 I have shown a frame in which the side bars *a* are vertical throughout.

As before remarked, my improved attachment provides, in addition to its supporting

function, a ready means of locking the front wheel of the bicycle, so as to prevent unauthorized use or theft of the machine during the absence of the owner. The preferable method of accomplishing this result is to hang a locking-bar *n*—such, for instance, as shown in Fig. 5—to one of the side bars *a* of the attachment, the joint being a universal one, so that the locking-bar can either be disposed along the side bar of the attachment when not in use or can be thrown across from one bar to the other between adjoining spokes of the wheel when it is desired to lock the latter, the outer end of the bar in this case engaging with any suitable form of lock *n'* on the other side bar of the attachment. When the bar *n* is adjusted into line with the side bar *a*, it may be retained by any appropriate form of catch—for instance, by a spring-clip, as shown at *s* in Fig. 5. When the socket *g* is used, the locking-bar may, if desired, be applied to said socket, as shown in Fig. 6, and instead of engaging with a locking device it may engage with a staple, to which it is secured by an ordinary padlock, as also shown in said Fig. 6. One end of the locking-bar may also be adapted to a socket on one of the side bars of the supporting-frame instead of being pivoted thereto, the locking of the bar to the other side of the frame preventing its removal from said socket.

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

1. A bicycle-supporting frame having a base-bar extending on each side of the machine, said frame being hung at its upper end to the steering-frame and having below said upper end a bearing on said steering-frame, whereby the rearward swinging of the supporting-frame is limited, substantially as described.

2. A bicycle-supporting frame having a base-bar extending on each side of the machine, said frame being hung to the steering-frame at a point above the projecting foot-rests thereon, whereby when the supporting-frame swings rearward said foot-rests will serve as stops to limit such rearward movement, substantially as specified.

3. The combination of the supporting-frame with the links to which the upper ends of said frame are hung and blocks to which the links are pivoted, said blocks being adapted for application to the steering-frame of the bicycle, substantially as specified.

4. The within-described supporting device for bicycles, the same consisting of a frame pivoted at its upper end to the frame of the bicycle and having at the lower end a transverse supporting-bar with socket extending along the rim of the wheel, substantially as specified.

5. The within-described supporting device for bicycles, the same consisting of a frame pivoted at its upper end to the frame of the machine and having at the lower end a transverse supporting-bar with socket pivoted

thereto and adapted to receive the rim of the wheel, substantially as specified.

6. The within-described supporting device for bicycles, the same consisting of a frame hung at its upper end to the frame of the machine and having at the lower end a transverse supporting-bar shod upon the under side with rubber or like material to prevent slipping, substantially as specified.

10 7. The within-described supporting and locking device for bicycles, the same consisting of a frame having opposite bars hung at their upper ends to the frame of the machine and connected at their lower ends by a transverse supporting-bar, said frame having a cross-bar adapted to pass between the spokes of the wheel, and also having a locking device for said cross-bar, substantially as specified.

15 8. The within-described supporting and locking device for bicycles, the same consisting of a frame comprising opposite side bars pivoted at their upper ends to the frame of the machine and having at their lower ends a transverse supporting-bar, in combination with a locking-bar adapted to pass trans-

versely between the spokes of the wheel, said locking-bar being pivoted to the supporting-frame on one side of the wheel and engaging with a locking device on said frame on the opposite side of the wheel, substantially as specified.

9. The within-described supporting and locking device for bicycles, the same consisting of a frame comprising opposite side bars hung to the frame of the machine at their upper ends and having a transverse supporting-bar at their lower ends, in combination with a locking-bar hung to one of said side bars by a universal joint and a locking device on the other side bar for engaging with and retaining said locking-bar after the same has been passed transversely between the spokes of the wheel, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALTER LEWIS.

Witnesses:

EUGENE ELTERICH,
HARRY SMITH.