

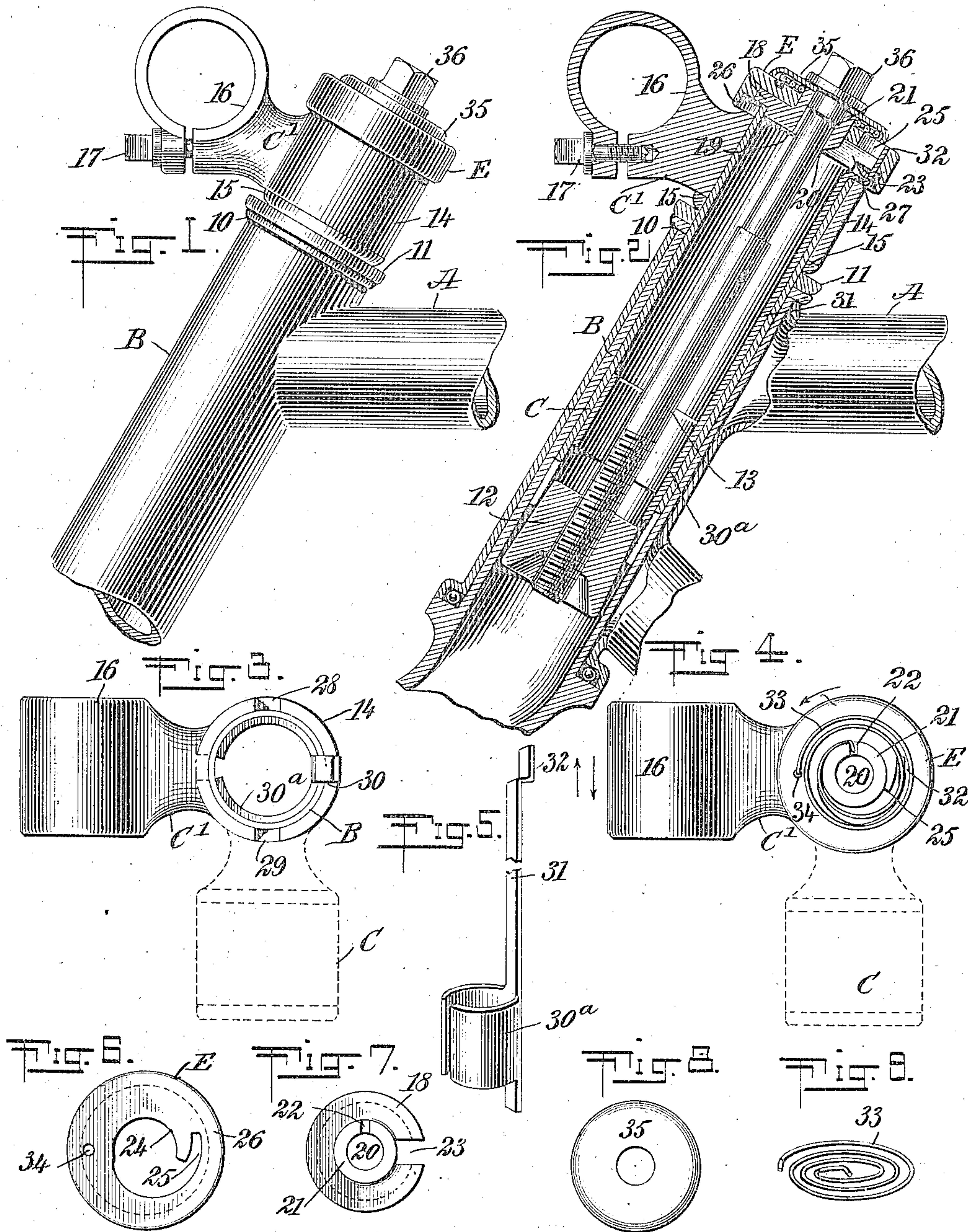
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R. H. TATE.
SUPPORT FOR BICYCLE HANDLE BARS.

APPLICATION FILED AUG. 5, 1903.

NO MODEL.



WITNESSES:

Charles Figaro.

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SUPPORT FOR BICYCLE HANDLE-BARS.

SPECIFICATION forming part of Letters Patent No. 757,154, dated April 12, 1904.

Application filed August 5, 1903. Serial No. 168,305. (No model.)

To all whom it may concern:

Be it known that I, ROBERT HENRY TATE, a citizen of the United States, and a resident of Portland, in the county of Multnomah and State of Oregon, have invented a new and Improved Support for Bicycle Handle-Bars, of which the following is a full, clear, and exact description.

My invention relates to a supporting device for bicycle handle-bars adapted to retain or admit of all the features of adjustment and attachment now common to such devices and which in addition will provide means whereby the handle-bar may be rotated a quarter-turn with such facility as to invite its use upon all occasions where the rider dismounts to leave the wheel or to lead it along a public way and whereby with equal facility the handle-bar may be returned to riding position and automatically and securely locked in either position.

The main purpose of the invention is to provide a simple, practical, and efficient means of throwing the handle-bar to a line position with the front wheel or parallel with the line of travel of said wheel and automatically locking it in such position and returning the handle-bar at right angles to the line of travel of the front wheel or at right angles to its axle-support with equal ease, where the handle-bar is again automatically locked in riding position.

A further purpose of the invention is to accomplish the above adjustments with ease and rapidity and to enable the user of the vehicle whenever it is desired to lean the vehicle against a wall, post, tree, or other support when not in use, as the handle-bar being placed in line with the direction of travel of the front wheel entirely overcomes the tendency of the front wheel to run away from the support against which it may have been placed, as frequently happens when the handle-bar is at right angles to the front wheel at such times.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification,

in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the head-section of a bicycle-frame, illustrating the application of the improvements thereto. Fig. 2 is a vertical section through the head shown in Fig. 1 and parts carried thereby. Fig. 3 is a plan view of the handle-bar post and handle-bar clamp and locking device, the latter being shown as holding a clamp locked to hold the handle-bar in running position and the said clamp being shown in dotted lines in position to carry the handle-bar parallel with the front wheel. Fig. 4 is a plan view of the post for the handle-bar, the adjusting-cap thereon, and the handle-bar clamp in two positions, the cap-washer and retaining-bolt for the handle-bar post having been removed. Fig. 5 is a perspective view of the locking-spring for the handle-bar clamp. Fig. 6 is a plan view of the adjusting-cap. Fig. 7 is a plan view of the washer for the handle-bar post. Fig. 8 is a plan view of the adjusting-cap washer, and Fig. 9 is a perspective view of the spring adapted to automatically restore the adjusting-cap to its normal position after it has been adjusted and released.

The bicycle-head, as illustrated, consists of an upper main tube A of the frame and a part of the front-frame tube B, which latter is provided at its upper end with a flange 10, and a washer 11 is located on the said flange.

A tubular handle-bar post C is made to enter the front-fork tube or stem B a desired distance and to extend a suitable distance beyond the upper end of the front-fork tube or stem. The handle-bar post is preferably held in position in the front-fork tube or stem B by an expanding-nut 12, extending below the lower edge thereof. This nut 12 receives the lower or inner threaded end of a bolt 13, drawing the nut 12 upward into the lower slotted end of the post C, thereby expanding it against the inner surface of the front-fork tube B, thereby holding the post C securely in its position in the fork tube or stem B.

The handle-bar clamp C' consists of a body-sleeve 14, which is mounted to turn loosely around the upper outer end portion of the handle-bar post C, resting at its lower edge

upon a flange 15, formed on the said post, and a clip 16, adapted to hold the handle-bar, is connected in any suitable or approved manner with the body-sleeve 14 or is made integral therewith, and the said clip is provided with a suitable adjusting-screw 17. The normal position of the handle-bar clamp C' is parallel with the front wheel; but when the vehicle is to be leaned against a support after the rider has dismounted or the machine is to be led along a public highway the handle-bar clamp is carried to the right or to the left and is at such times at right angles to the front wheel of the vehicle.

A washer 18 is provided for the upper end of the handle-bar post C. This washer extends sufficiently beyond the outer face of the handle-bar post to engage with the upper edge of the sleeve-section 14 of the handle-bar clamp, and thereby prevent the said sleeve-section from rising. The washer 18 is provided with a lower boss 19, which is fitted to the interior of the handle-bar post, as is shown in Fig. 2, and with a collar 21 centrally located on its upper face, which collar surrounds a central opening 20, through which the upper portion of the bolt 13 passes, and in the said collar 21 a transverse slot 22 is produced, while in one side edge of the said washer 18 a diametrical slot 23 is made extending to the periphery of the collar 21, as is shown in Figs. 2 and 7.

An adjusting-cap E is located over and is adapted to turn upon the washer 18, being provided with a central opening 24, receiving the collar 21 of the said washer, and with a cam-slot 25, connecting with the aforesaid central opening 24, as is particularly shown in Fig. 6, and the said adjusting-cap is preferably provided with a milled or roughened outer side surface. The said cap is fitted to the upper and the side edges of the washer 18, as is shown in Fig. 2, and has a downwardly-extending marginal flange 26 in order to protect the upper edge of the sleeve-section 14 of the handle-bar clamp.

A slot 27 (shown best in Fig. 2) is produced in the upper edge of the handle-bar post at the rear, and in the upper edge of the sleeve-section 14 of the handle-bar clamp three slots 28, 29, and 30 are produced, either one of which is capable of registry with the slot 27 in the handle-bar post. When the handle-bar clamp is in its normal position—that is, facing forwardly, as shown by positive lines in Fig. 3—the slot 30 registers with the slot 27 in the handle-bar post; but when the handle-bar is to be turned so as to bring it parallel with the front wheel the handle-bar clamp is carried either to the right or to the left, and either the slot 29 or the slot 28 is then brought into registry with the slot 27 in the said handle-bar post.

In order to bring about a locking engagement with the handle-bar clamp in either of its positions and to render the locking device

automatic in its action, the form of locking device illustrated in detail in Fig. 5 has been preferably adopted, consisting of a lower split sleeve 30^a, which is in frictional engagement with the inner face of the handle-bar post, as is shown in Fig. 2, and a shank 31, extending upward from the sleeve, likewise within the handle-bar post, together with an angular head 32, comprising an outwardly-extending horizontal member and a vertical member carried from the outer end of the horizontal member. The horizontal member of the head 32 passes outward through the slot 27 at the upper end of the handle-bar post C, and the vertical member of the said head 32 enters the cam-slot 25 in the adjusting-cap E, as is also shown in Fig. 2. Thus by turning the adjusting-cap E as indicated by the arrow in Fig. 4 the action of the outer wall of the cam-slot 25 on the vertical member of the head 32 of the locking device will carry the said head inward, permitting the handle-bar clamp to be carried from its forward position to a side position or from a side position to a forward position, and when the desired adjusted position of the handle-bar clamp has been reached and the adjusting-cap E is released and brought to its normal position the head 32 of the said locking device for the handle-bar clamp will in passing through the slot 27 in the handle-bar post enter the slot in the sleeve-section of the handle-bar clamp which may be in registry with the said slot 27.

The adjusting-cap E is returned automatically to its normal position in the following manner: An aperture 34 is produced in the upper surface of the adjusting-cap E, and one end of a coiled spring 33 is made to enter the said aperture 34, the said spring being coiled around the collar 21 of the washer 18, as is shown in Fig. 4, while the other end of the said spring 33 is made to enter the slot 22 in the said collar. The spring is held in position by a cap-plate or washer 35, dished more or less upon its under face, which washer or plate has a central opening therein through which the bolt 13 passes, and the head 36 of the said bolt 13 has sufficient bearing on the said cap-plate or upper washer 35 to hold it firmly in position.

It will thus be observed that the handle-bar clamp can be quickly and readily brought to a forward position, bringing the handle-bar at right angles to the forward wheel or in working position, or that the said handle-bar clamp may be carried to either side of the machine, bringing the handle-bar parallel with the front wheel, and that the handle-bar clamp will be automatically locked in either of the said positions and can be quickly released from its adjusted position by turning the adjusting-cap E, which when released is restored to its normal position by the action of the spring 33.

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

1. In a bicycle or like machine, a handle-bar post, a clamp mounted to revolve around the post, adapted to take a position at either side of the post or in front thereof, a spring-bar having a free end adapted to engage and lock the clamp when brought to any one of the aforesaid positions, a rotatable cam carried by the post and provided with an eccentric opening for engaging and releasing said spring-bar from engagement with the clamp, and a helical spring for normally holding said cam out of engagement with the spring-bar and for returning said cam to its normal position after it has been used to disengage said locking-bar.

2. A handle-bar post, a handle-bar clamp mounted to revolve around the said post, a locking device for the said clamp carried by the said post, and a tension-controlled adjusting-cap adapted to carry the locking device temporarily out of locking relation to the said handle-bar clamp, which adjusting device automatically returns to its normal position when released, as described.

3. In a bicycle or like machine, a handle-bar post, a handle-bar clamp mounted to turn upon the said post, a locking-shank located in the said post and having an angular head the horizontal member whereof extends out through a slot at the upper portion of the post, that portion of the handle-bar clamp which revolves around the post being provided with slots adapted to register with the slot in the post as the handle-bar is turned, and a tension-controlled adjusting-cap mounted to turn on the said post, which cap is provided with a cam-slot receiving the vertical member of the head of the said locking-shank, as and for the purpose set forth.

4. In a bicycle or like machine, the combination with a bicycle-handle-bar post having an annular flange thereon, a handle-bar clamp mounted to revolve around the post in engagement with the flange, the upper edge of that portion of the clamp surrounding the post being provided with a series of slots and the post at its upper end with a slot capable of registry with any one of the slots in the handle-bar clamp, and a spring-shank located within the said handle-bar post, having an angular outwardly-extending head, the horizontal member of which head extends through the slot in the handle-bar post and the vertical member upwardly from the horizontal member, of a washer fitted over the upper end of

the handle-bar post and extending over that portion of the handle-bar clamp turning on the post, the washer being provided with a diametrical slot in which the vertical member of the locking-head has play, a tension-controlled adjusting-cap mounted to turn upon the said washer, and provided with a cam-slot which receives the vertical member of the said locking-head, and means substantially as shown and described for retaining the said adjusting-head and washer in their relative positions to each other and to the handle-bar post, as specified.

5. In a bicycle, a handle-bar post, a clamp mounted to revolve around the post and adapted to take a position at either side of the post or in front thereof, said post having a recess at its rear side, said clamp having a rear recess and side recesses adapted to be brought into registration with said recess in the post, a locking-bar carried by said post and having a free end extending into said recess at the rear of the post and adapted to engage any one of said recesses in the clamp when the same is brought into registration with said rear recess, whereby to lock the clamp and post into engagement with each other, operating means carried upon said post for engaging said free end of the locking-bar to move the same out of engagement with said clamp, and means for automatically moving and holding said operating means out of engagement with said bar.

6. In a bicycle or like machine, a handle-bar post, a clamp mounted to revolve around the post, adapted to take a position at either side of the post or in front thereof, a locking device to automatically engage and lock the clamp when brought to any one of the aforesaid positions, an operating device carried by the post, for releasing the locking device from locking engagement with the clamp, and means for normally holding said operating device out of engagement with the locking device, and for automatically returning the operating device to its normal position after it has been used to disengage said locking device.

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

ROBERT HENRY TATE.

Witnesses:

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M. MATSON.