(No Model.)

J. DICKSON.

ADJUSTABLE HANDLE BAR FOR BICYCLES.

No. 586,307. Patented July 13, 1897.

Fig. 1.

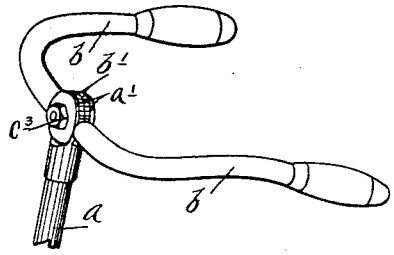


Fig. 2.

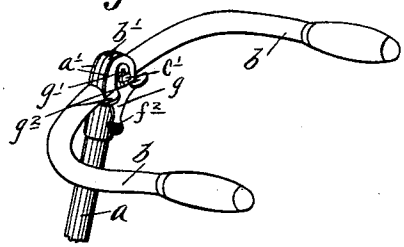


Fig. 3.

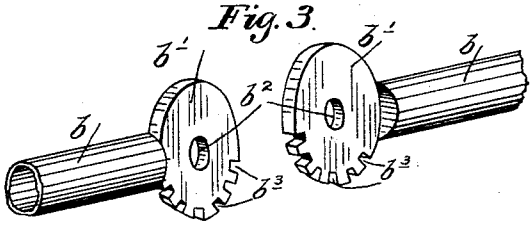


Fig 4.

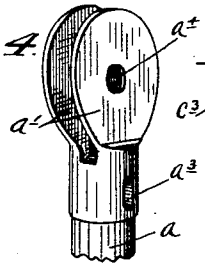


Fig. 5.

Fig. 6.

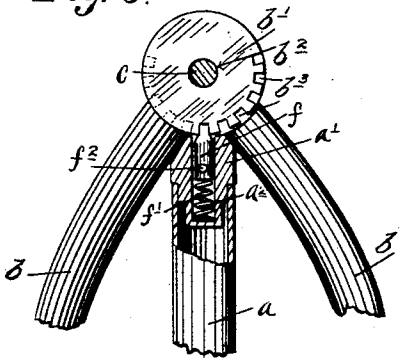


Fig. 8.

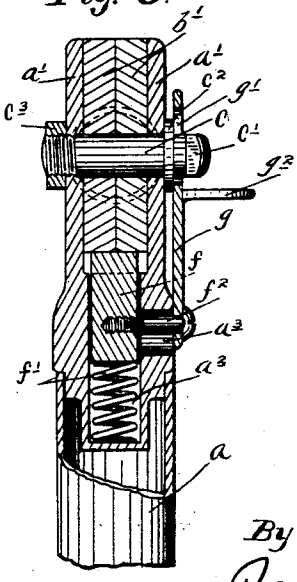
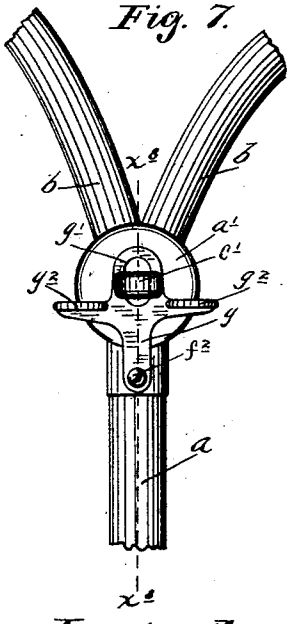


Fig. 7.



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ADJUSTABLE HANDLE-BAR FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 586,307, dated July 13, 1897.

Application filed April 23, 1896. Serial No. 588,695. (No model.)

To all whom it may concern:

Be it known that I, JOHN DICKSON, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Adjustable Handle-Bars for Bicycles; and I do 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 appertains to make and use the same.

My invention has for its object to provide an improvement in handle-bars for bicycles whereby said handle-bars may be adjusted to different heights or may be folded together against the machine-frame, so that they will be out of the way.

To these ends my invention comprises the novel devices and combinations of devices hereinafter described, and defined in the claims.

The preferred form of my invention is illustrated in the accompanying drawings, wherein, like letters referring to like parts throughout the several views—

Figure 1 is a view in perspective, showing the preferred form of my improved handle-bars applied to the handle-bar post of a bicycle, the observer being assumed to stand forward of the machine. Fig. 2 is a perspective view of the parts shown in Fig. 1, the observer looking from the rear of the same. Fig. 3 is a view in perspective, showing the inner end portions of the handle-bar removed from the handle-bar post and drawn apart. Fig. 4 is a perspective view showing the upper end or head of the handle-bar post. Fig. 5 is a perspective view showing the pivot-bolt for securing the inner ends of the handle-bars and the upper end of the handle-bar post together. Fig. 6 is a view, partly in rear elevation and partly in section, showing the handle-bars applied to the handle-bar post, said handle-bars being turned downward into their lowermost positions. Fig. 7 is a view in rear elevation, showing the handle-bars turned into their extreme uppermost position; and Fig. 8 is a view substantially on the section-line x^8 x^8 of Fig. 7.

Referring to the drawings, a indicates the handle-bar post, provided at its upper end with a bifurcated or pronged head a'. The head a' is provided in its body portion with a lock-plunger seat a^2, the rear wall of which is perforated by elongated slots a^3.

b indicates the handle-bars, the inner ends of which are formed with pivot plates or disks b', which are perforated at their centers, as shown at b^2, and are provided on their under peripheral margins with lock-notches b^3.

When placed in working position, the pivot-plates b' are overlapped with each other and placed between the flanges or jaws of the bifurcated head a' and in such relative positions that the central perforations b^2 coincide with each other and with a central perforation a^4 in the prongs of said head a'. These parts are thus secured together, with freedom for pivotal motion with respect to each other, by means of a bolt c, which is passed through said perforations a^4 and b^2. As shown, this bolt c is provided with an oblong head c' and with a fixed collar c^2, located a short distance inward from said head. The collar c^2 is clamped against the inner prong of the head a' by means of a nut c^3, working on the end of the bolt c and against the forward face of the front prong of said head a'.

The handle-bars b may be moved or adjusted to any desired position and there held by means of a lock-plunger f, seated in the seat a^2 of the head a' and having its upper end formed of sufficient width to engage the coincident notches b^3 of both of the pivot-plates b'.

The plunger f is held under strain, tending to move upward into engagement with said notches b^3, by means of a small coiled spring f', compressed between the bottom of the seat a^2 and the lower end of said lock-plunger f. The lock-plunger f is also provided with a stud or machine-screw f^2, which works through the vertical slot a^3 in the head a'.

The lock-plunger f may be released from its locked position by means of a sliding finger-piece g, which is secured at its lower end to the projecting end of the stud f^2. The upper end of this sliding finger-piece g is guided by the outer end of the pivot-bolt c. The connection between the bolt c and the finger-piece g is made by a vertical slot g' in the upper end of said slide, which slot g' is of such dimensions that when the head c' of the bolt c is turned lengthwise thereof it may be passed

over said head c', but when the head c' is turned crosswise, as shown in Figs. 2, 7, and 8 of the drawings, the said finger-piece g will be held from lateral displacement. The sliding finger-piece g is shown as provided with a pair of thumb-lugs g^2.

From the foregoing description it must be obvious that the handle-bars b may be moved into any desired vertical adjustment while in use by the rider for better adapting the same to the conditions of the wind, roadway, &c. For example, on a level road, when the wind is not blowing, the handle-bars may be used at a higher level than when climbing hills, riding against a stiff wind, or scorching. It is an advantage to be able to make these changes without dismounting. Furthermore, the handle-bars may be turned downward against the frame of the machine, so that the extreme distance between the handle-bars will be little or no more than the width of the machine-frame. This latter feature of construction is of importance, as it enables the machine to be packed in small compass or stored away or placed in narrow places where a bicycle with ordinary handle-bars could not be placed. With my above-described device these adjustments may be very easily and quickly made. Obviously the positions of the handle-bars may be changed without dismounting by placing the hands, one on each of the handle-bars b, near to their pivoted ends, and at the same time placing one thumb on each of the thumb-pieces g^2 and forcing downward on the slide g, thereby releasing the lock-plunger f and permitting said handle-bars b to be moved to the desired adjustment. When the handle-bars are thus properly adjusted, the slide g may be released and the lock-plunger f will be thrown upward into engagement with the lock-notches b^3 by the action of the spring f', thereby locking said handle-bars.

It will be observed that in virtue of the fact that the handle-bars are mounted on a pivot that runs longitudinally of the machine, and hence are movable in a plane that runs transverse or crosswise of the machine-frame, the hand-pieces or gripping portions of said handle-bars will not under the pivotal movement of said handle-bars change to any material degree the angle at which they are primarily set with reference to a horizontal plane. It must be evident that it is important to maintain the properly-set angle of the hand-pieces or gripping portions with respect to a horizontal plane, for otherwise these hand-pieces would be thrown at a pitch in certain of the adjustments of the handle-bars which would necessitate the bending of the rider's wrists in gripping the same, and this would of course be objectionable for obvious reasons.

It will be understood, of course, that various alterations in the details of construction of the above device may be made without departing from the spirit of my invention.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. In a bicycle, the combination with the handle-bar post, of a pair of handle-bars formed at their inner ends with notched disks or pivot-plates that are united together and to said post by a common pivot and a common sliding lock, on said post, engageable with the notches of both of said notched disks, for locking said handle-bars together and to said post, in any desired adjustment, substantially as described.

2. In a bicycle, the combination with the handle-bar post provided, at its upper end, with a bifurcated head, of the handle-bars formed at their inner ends with pivot plates or disks that are pivoted between the prongs of said bifurcated head and are provided with peripheral lock-notches, and a sliding, spring-held lock mounted on said post and engageable with the notches of both of said pivot-plates, to lock said handle-bars together and to said post, in any desired adjustment, substantially as described.

3. In a bicycle, the combination with the handle-bar post, provided at its upper end with the bifurcated head a', formed in its body portion with the lock-plunger seat a^2 and vertical slots a^3, of the handle-bars b formed at their inner ends with the perforated pivot plates or disks b' having the peripheral notches b^3, the nutted pivot-bolt $c\,c'$ $c^2\,c^3$ passed through the perforations in the prongs of said bifurcated head a' and pivot-disks b', the lock-plunger f spring-mounted in the seat a^2 and provided with the stud f^2 working through said slot a^3, and the sliding-lock-releasing device $g\,g^2$, secured at its lower end to the projecting end of the stud f^2, and provided at its upper end with the vertical slot g' insertible over the head c' of the bolt c, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN DICKSON.

Witnesses:
JAS. F. WILLIAMSON,
E. F. ELMORE.