No. 725,085. PATENTED APR. 14, 1903.

T. H. JACOB.

ADJUSTABLE HANDLE BAR FOR BICYCLES.

APPLICATION FILED APR. 23, 1902.

NO MODEL.

Fig. 1.

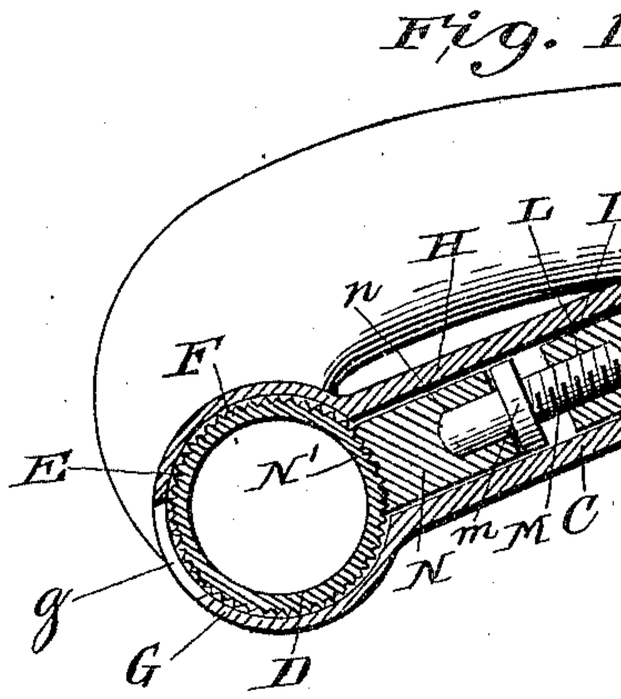


Fig. 5.

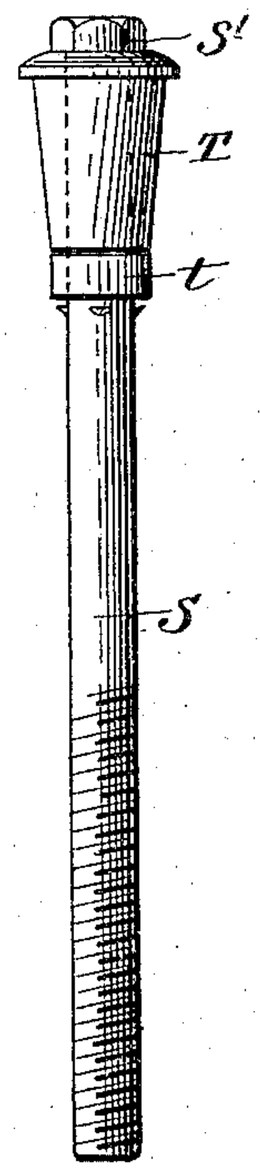
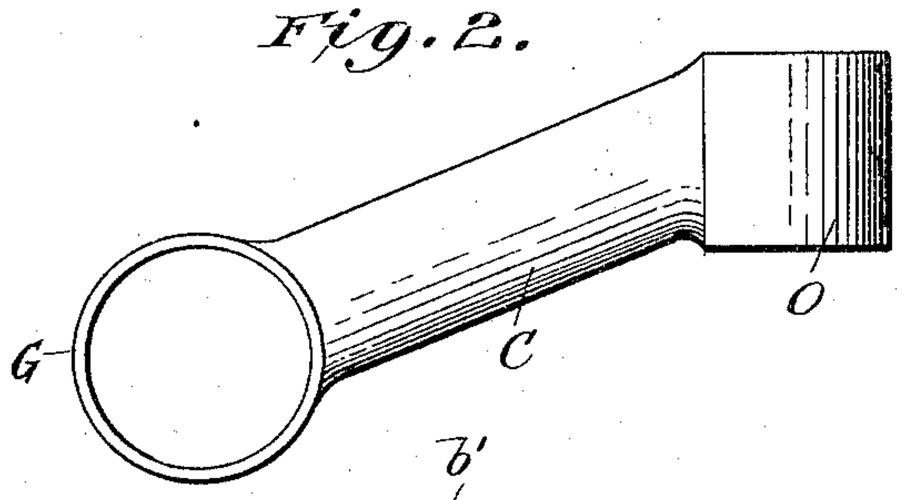
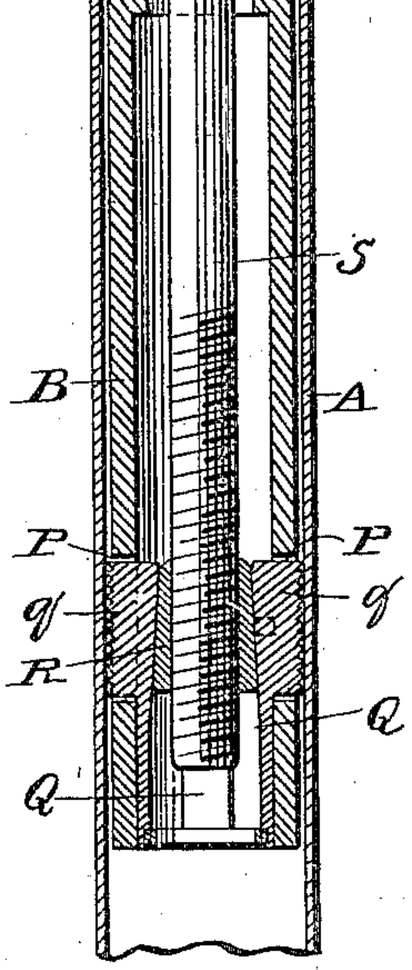


Fig. 2.





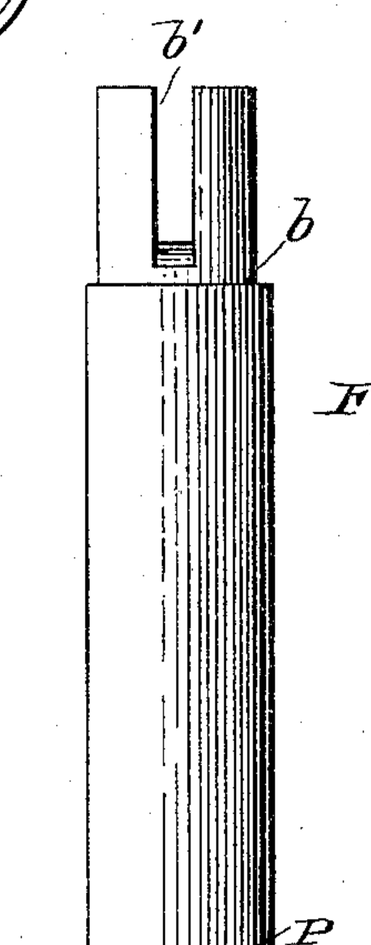
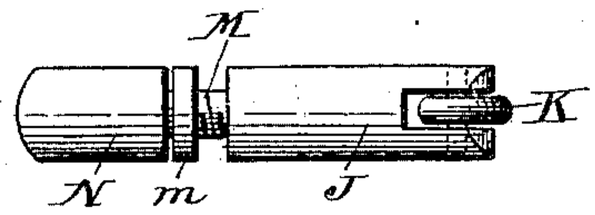


Fig. 3.

Fig. 4.



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ADJUSTABLE HANDLE-BAR FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 725,085, dated April 14, 1903.

Application filed April 23, 1902. Serial No. 104,386. (No model.)

To all whom it may concern:

Be it known that I, THOMAS HUGH JACOB, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Adjustable Handle-Bars for Bicycles, of which the following is a specification.

My invention relates to bicycle handle-bars, and especially to those known as forward-extension bars, and has for its object to provide a device by means of which the handles may be quickly and securely secured in any desired position and also by the same operation securely fasten the stem of the handle-bar in the bicycle steering-head.

Additional advantages of my invention will more fully appear hereinafter and by reference to the accompanying drawings, in which—

Figure 1 is a vertical section of my invention; Fig. 2, a detached view of the forward extension; Fig. 3, a view in elevation of the stem; Fig. 4, a detail view of the locking-bolt, and Fig. 5 a detail of the operating-rod.

Referring to the drawings, in which similar reference characters indicate corresponding parts throughout the several views, A represents the steering-head of a bicycle; B, the handle-bar stem; C, the forward extension, and D the handle-bar. The center of the handle-bar E is formed circular in cross-section and has its periphery serrated, as shown at F. The forward extension C is formed with a sleeve G to fit over the center of the handle-bar E and a tube H at right angles to said sleeve, in which is inserted the locking-bolt I through a hole *g* in the sleeve G. The locking-bolt I consists of block J, in one end of which is journaled the roller K, while the other end is formed with a female screw L, into which fits the screw-threaded end of the rod M, the other end of said rod being smooth and cylindrical to fit into a socket *n* in the dog N, said dog N having a concave serrated surface N′ to fit the serrations in the middle of the handle-bar E. Intermediate of the ends the rod M is formed with an annular projection *m*, which serves to limit the movement of the dog N, as well as form a clamping-surface for a suitable tool to turn the bolt to adjust the length of the locking-bolt I.

O represents a sleeve at the end of the tube H opposite the sleeve G to receive the upper end of the handle-bar stem B, which is reduced, as shown at *b*, to fit into said sleeve and formed with slots *b′* at its top to alternately receive the roller K, the interior of the end *b* being beveled inwardly, as shown at B′.

Near the lower end of the stem B a multiplicity of holes P are cut to receive the bearing-surfaces of the spring clamping-arms *q* of the clamp Q, said arms being adapted to be pushed into engagement with the inside of the steering-head A through the holes P by means of the frustum-shaped expander-block R, which is screw-threaded to receive the screw-thread on a bolt S. The bolt S is provided at its upper end with a nut-shaped head S′ to enable the bolt to be turned and just below the head with a frustum-shaped expander-block T, loosely mounted on the bolt and held in place by the collar *t*, suitably secured to the bolt. It will be readily understood that when the bolt is turned in the proper direction the expander-block R is drawn up, forcing the clamp-arms *q* to impinge the interior of the steering-head A, while at the same time the expander-block T by bearing against the roller K pushes the dog N into engagement with the serrated middle section F, and thus at one operation clamps the handle-bar stem to the steering-head of the machine and the handle-bar in a predetermined position. In order that the handle-bar D may be removed from the sleeve G, I provide either or both ends thereof with any suitable form of removable hand-grips.

From this description of the construction of parts it will be readily seen that the handle-bar D can be locked at any desired angle when inserted in the sleeve G in one direction, and by removing one of the grips the handle-bar may be removed from sleeve G and inserted in a reversed position, thereby doubling the number of positions that may be secured.

Having thus described my invention, what I claim is—

1. In a bicycle handle-bar, a tubular stem, a tubular extension on the head of said stem,

a sleeve on the end of said extension, a handle-bar inserted through said sleeve, a locking-bolt slidably mounted in said tubular extension having a dog mounted on said bolt and having its end formed to clamp the handle-bar, and means to push said dog into engagement with the handle-bar, substantially as shown and described.

2. In a bicycle handle-bar, a tubular stem, a tubular extension thereon, a sleeve on said extension to receive the handle-bar, a locking-bolt slidably mounted in said forward extension having at one end means for clamping the handle-bar, a roller at the other end, and a screw-bolt inserted in said tubular stem having a frustum-shaped expander-block near its head to press against said roller and hold said locking-bolt in contact with the handle-bar, substantially as shown and described.

3. A bicycle handle-bar comprising a tubular stem, a tubular extension to fit on the top of said stem, a sleeve at the end of said extension, a handle-bar having a serrated central portion to fit in said sleeve, a locking-bolt slidably mounted in said tubular extension, said locking-bolt comprising a block and a dog having a serrated concave bearing-surface to impinge the serrated portion of the handle-bar mounted on said block, and means to actuate said locking-bolt, substantially as shown and described.

4. In a bicycle handle-bar, a device for locking the handle-bar at any desired angle comprising a block, a roller journaled in one end thereof, a screw-threaded bore in the other end, a screw-threaded rod inserted in said bore, and a dog mounted on the other end of said rod having a surface formed to impinge the handle-bar, and means to push said dog into engagement with the handle-bar, substantially as shown and described.

5. In a bicycle handle-bar, a tubular stem, a tubular extension at the head of said stem, a sleeve on the end of said extension at a right angle thereto, a locking-bolt mounted in said tubular extension consisting of a block having a screw-threaded recess, a threaded rod to fit therein, a dog on the end of said rod having its face formed to fit the handle-bar, and means to simultaneously clamp the steering-head and the handle-bar, substantially as shown and described.

6. In combination with a bicycle steering-head, a tubular stem, a clamp at the base thereof to impinge the interior of said steering-head, a tubular extension having a sleeve to fit over the upper end of said stem and a sleeve to receive the central portion of the handle-bar, a locking-bolt inserted in the extension, and means to simultaneously clamp said steering-head and lock the handle-bar at any desired angle, substantially as shown and described.

7. In combination with the steering-head of a bicycle, a tubular stem, means to clamp said stem to the steering-head tube, a forward extension inserted on the top of said stem, a sleeve at the front of said forward extension, the handle-bar formed with a serrated central portion, a locking-bolt slidably mounted in said forward extension, and means to simultaneously clamp the stem in the steering-head and push said locking-bolt into engagement with said serrated portion, substantially as shown and described.

8. In combination with the steering-head of a bicycle, a tubular stem having a reduced upper portion, a tubular extension having a sleeve to fit over said reduced portion, a sleeve at the end of said tubular extension, the handle-bar inserted in said sleeve, a locking-bolt slidably mounted in said tubular extension having one end formed to clamp said handle-bar and a roller inserted in the other end, and a screw-rod inserted in said stem having a frustum-shaped expander-block journaled thereon to bear against said roller and push said bolt into engagement with the handle-bar, substantially as shown and described.

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

THOMAS HUGH JACOB.

Witnesses:
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J. R. ROBERTSON.