No. 624,643. Patented May 9, 1899.

L. B. GAYLOR.

HANDLE BAR FOR BICYCLES.

(Application filed Feb. 17, 1899.)

(No Model.)

Fig. 3.

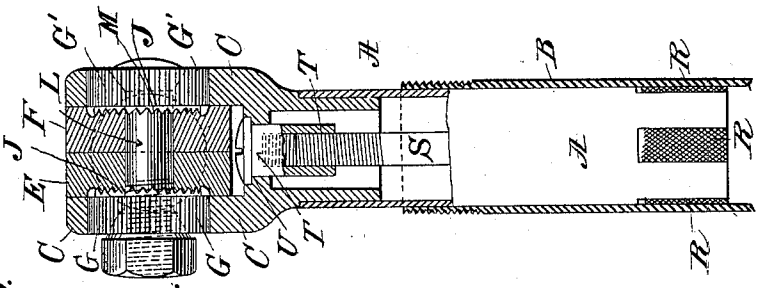


Fig. 4

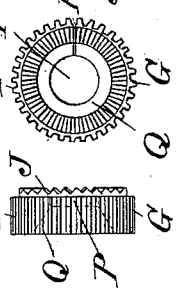


Fig. 5.

Fig. 6.

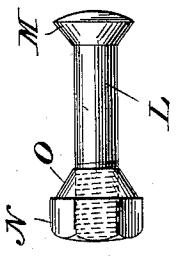


Fig. 2.

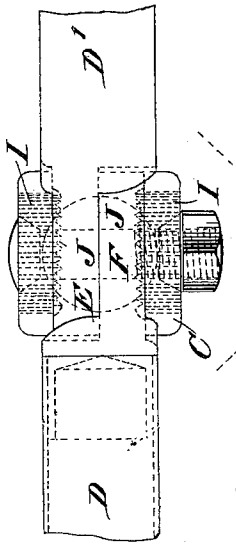
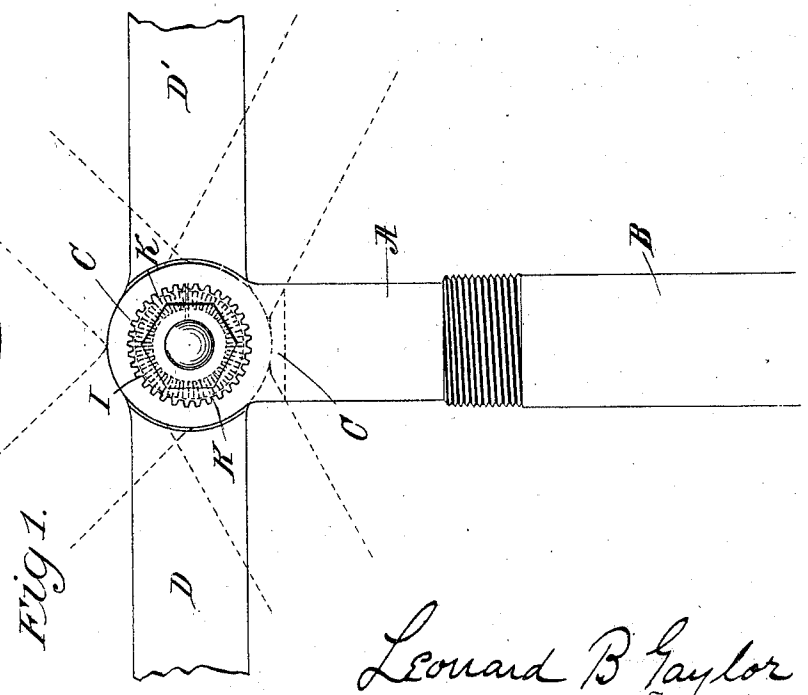


Fig. 1.



Witnesses
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UNITED STATES PATENT OFFICE.

LEONARD B. GAYLOR, OF ERIE, PENNSYLVANIA.

HANDLE-BAR FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 624,643, dated May 9, 1899.

Application filed February 17, 1899. Serial No. 705,746. (No model.)

To all whom it may concern:

Be it known that I, LEONARD B. GAYLOR, a citizen of the United States, and a resident of Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Handle-Bars for Bicycles, of which the following is a specification.

My invention relates to improvements in handle-bars for bicycles of the kind known as "adjustable" or "lifting" handle-bars; and it consists in the construction and arrangement of the parts as hereinafter explained, so that certain advantages not heretofore known are obtained.

Referring to the drawings hereof, Figure 1 illustrates a front elevation of the invention, showing in full and dotted lines some of the different positions in which the handle-bar can be arranged. Fig. 2 is a plan view of that which is shown in Fig. 1. Fig. 3 is a vertical sectional view of that which is shown in Fig. 1. Fig. 4 is an edge view of one of the toothed segments. Fig. 5 is a face view of that which is shown in Fig. 4. Fig. 6 is an elevation of the clamping-bolt.

A is the handle-bar stem, and B the steering-post.

C is a forging which is brazed to the handle-bar stem. It is machined at its upper end into a forked form, as shown.

D D′ are the two parts of the handle-bar.

E and F are forgings, in the shape of lugs, which are brazed to the inner ends of the handle-bar sections D and D′, respectively, and are halved right and left to fit between the bifurcated ends of the forging C.

G G′ are two segments or split rings (the split is seen at H in Fig. 5) which are provided with teeth I on their peripheries and also with teeth J on their flat circular faces. The forked ends of the forging C on the upper end of the handle-bar stem are bored transversely and are provided with parallel ribs or teeth K, (see Fig. 1,) which register with the teeth or ribs I on the periphery of the split sections G G′, so that when the teeth on the sections register with those in the forked forging the sections may slide into and out of the same. Likewise the ring of teeth J on the face of the respective segments will register with corresponding teeth made upon the outer surfaces of the lugs E and F on the ends of the handle-bar sections.

L is a bolt provided at one end with an inwardly-tapering head M, and at the other end there is a nut N, the head of which is made angular or otherwise adapted to be rotated by a suitable tool and has a tapering inner face O corresponding substantially with the tapering surface of the head M. The segments G G′ are bored centrally, as at P, the boring being countersunk or reamed, as at Q, to coincide with the tapering form of the head M and nut N of the bolt L.

The devices whereby the handle-bar stem is adjustably clamped to the steering-post B are in many respects such as were patented to me November 29, 1898, No. 614,944, to which patent I refer for a more full description—that is to say, R R R are three of the gripping-surfaces of my clamping-jaws, which work through openings made in the handle-bar stem A, as shown in Fig. 3. S is the bolt which operates the expander for those jaws, and T is an internally-threaded nut, headed, as shown, and taking a bearing upon a shoulder U, made in the forging C. The nut T may be manipulated by a screw-driver passed downwardly through the upper forked end of the forging C before the introduction of the handle-bar and other parts above referred to.

In Fig. 1, 1 indicates in dotted lines upward and downward angles at which the handle-bar sections may be adjusted.

The operation is as follows: To adjust the handle-bars, the nut N is loosened several turns, which will allow the segments G G′ to move laterally a sufficient distance to permit the lugs E F of the handle-bar sections to be moved to adjust the bar up or down. The nut N is then screwed up again, whereby the segments G G′ are drawn inwardly in such manner that the teeth J on the face of the segments mesh into the teeth upon the outer surfaces of the two lugs E and F, respectively. The nut N being further screwed up, the inclined surface O upon it and the inclined surface of the head M of the bolt L exert an expanding and likewise an inward pressure upon the segments G G′, so that they are slightly expanded at the same time that they are forced still farther inwardly. In

this manner all slack or lost space between the teeth on the periphery of the segments G G′ and the forks of the forging C and also all lost space or slack between the teeth J on the face of the segments and those upon the outer surfaces of the lugs E and F of the handle-bar sections are taken up, thus making a rigid immovable connection between all these parts.

It will be obvious to those who are familiar with this art that modifications may be made in the details of construction without departing from the essentials of my invention. I therefore do not limit myself to such details.

I claim—

1. The combination of a handle-bar stem having a forked upper end, each fork having an opening therein, segments adapted to enter said openings, means to prevent the segments from turning, teeth upon the inner faces of the segments, handle-bar sections having right and left lugs on their meeting ends toothed to match the teeth on the segments, and a bolt passing through the segments and lugs adapted to clamp them all together, for the purposes set forth.

2. The combination of a handle-bar stem having a forked upper end, each fork having an opening therein, split segments adapted to enter said openings, means to prevent the segments from turning, teeth upon the inner faces of the segments, handle-bar sections having right and left lugs on their meeting ends toothed to match the teeth on the segments, a bolt passing through the segments and lugs having conical surfaces adjacent to the segments, whereby the said parts may be clamped together and the segments expanded, for the purposes set forth.

3. The combination of a handle-bar stem having a forked upper end, each fork having an internally-ribbed opening therein, split segments having ribbed peripheries adapted to enter said openings and intermesh with the ribs therein, teeth upon the inner faces of the segments, handle-bar sections having right and left lugs on their meeting ends toothed to match the teeth on the segments, a bolt passing through the segments and lugs having tapering surfaces opposite the segments, whereby the parts will be clamped together and the segments expanded, for the purposes set forth.

4. In a clamping device for an adjustable handle-bar, toothed segments on opposite sides of the handle-bar sections each supported by the handle-bar stem, teeth upon the segments which mesh into teeth upon the handle-bar sections, and a bolt adapted to clamp the segments and the ends of the handle-bar sections together, for the purposes set forth.

5. In an adjustable handle-bar the combination of a forked handle-bar stem, split segments supported by the forks of the stem, teeth upon the segments which mesh into corresponding teeth upon the meeting ends of the handle-bar sections, and a bolt having conical surfaces to expand said split segments, for the purposes set forth.

Signed at Erie, in the county of Erie and State of Pennsylvania, this 13th day of February, 1899.

LEONARD B. GAYLOR.

Witnesses:
J. M. SHERWIN,
F. A. GAYLOR.