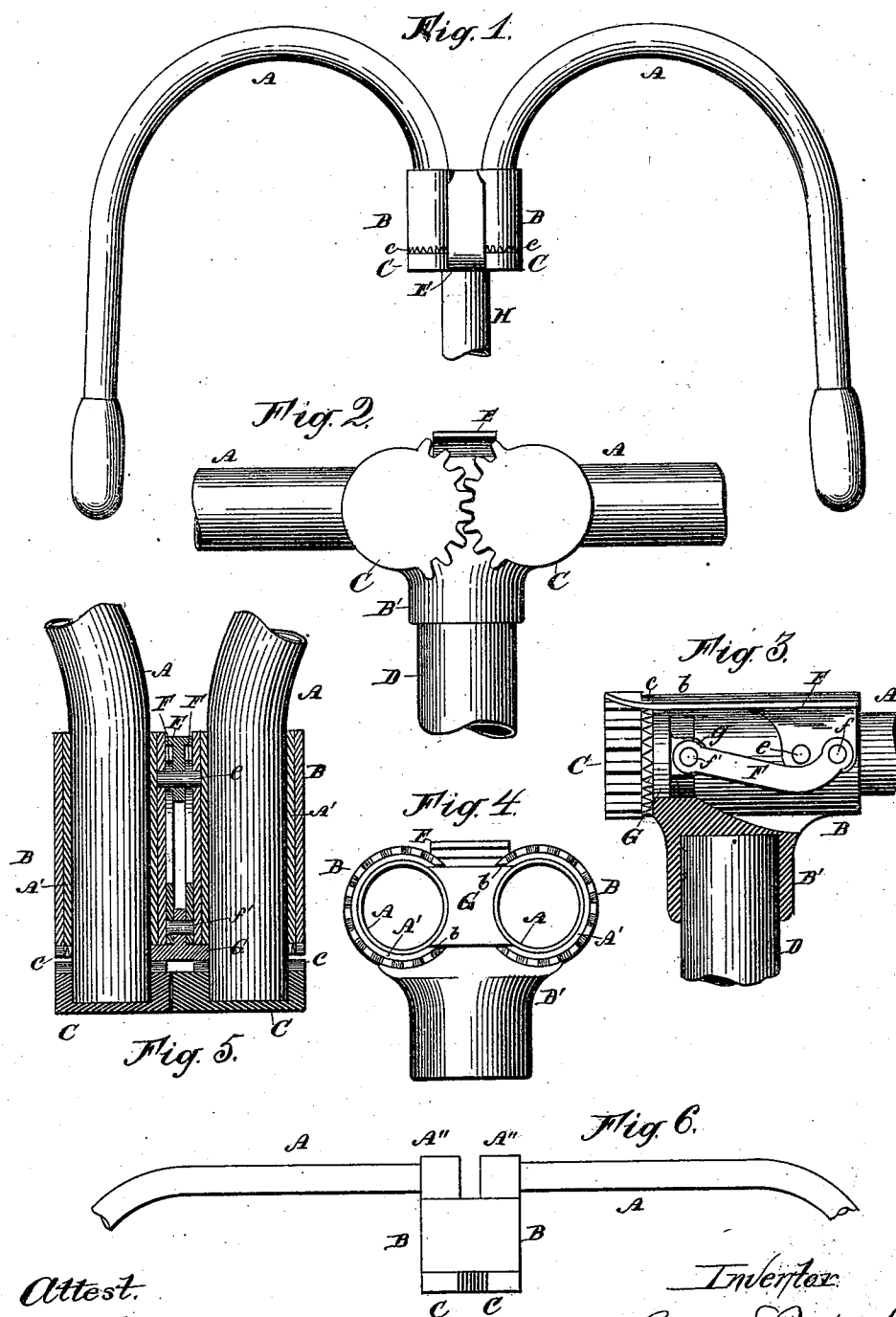


(No Model.)

L. E. RICHARDSON.
HANDLE BAR FOR BICYCLES.

No. 549,211.

Patented Nov. 5, 1895.



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LUCIUS E. RICHARDSON, OF CEDAR RAPIDS, IOWA.

HANDLE-BAR FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 549,211, dated November 5, 1895.

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To all whom it may concern:

Be it known that I, LUCIUS E. RICHARDSON, a citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in 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.

The object of this invention is to provide simple means for adjusting the handles of a bicycle up or down without the use of a wrench or other tool and without necessarily dismantling.

A device embodying the invention will be hereinafter fully set forth and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a pair of handle-bars and the head to which they are attached. Fig. 2 is a fragmentary elevation of the same as seen from the rear. Fig. 3 is a central cross-section of the head in a vertical plane, the connected parts being in full. Fig. 4 is a view similar to Fig. 2, but with the gears removed. Fig. 5 is a central longitudinal section of the handle-bar bearings in a horizontal plane and also the connected parts. Fig. 6 shows a plan view of a modified form of handle-bar.

Similar letters of reference indicate corresponding parts.

The handle-bars A A are mounted revolvably in bearings B B, connected to or forming integral portions of the head B', secured to the upper end of the handle-bar stem D. This stem is supposed to fit in the steering-head of the bicycle in the usual way. The handle-bar is preferably in the curved form shown in Fig. 1, the shorter ends entering the bearings B B. This form may be varied, however, a modification being shown in Fig. 6, where the handle-bars connect at right angles with pivot-studs A'' A''.

The bearings B B are placed parallel with each other a little distance apart, and are preferably made of pieces of tubing brazed to a separate head B', suitably fitted to receive them and also the upper end of the stem

D, as illustrated in Figs. 3 and 4. The head may, however, be formed of a single piece integral with the bearings.

To give concurrent motion to the handle-bars, so that the movement of either one actuates the other, their bearing ends are provided with gears C C, which, considering that the handles have but a limited movement in adjusting to any desired height, need not be toothed all around the periphery. The outer face of the gear should present a full plane surface to give a neat finish on this side. The opposite face of each gear is provided with notches c c to engage with similar notches on the adjoining ends of the bearings B B, and when drawn into engagement the gears and connected handle-bars are locked in position thereby. For this purpose the pivotal ends of the handle-bars are made to slide a short distance endwise, a suitable lever and connections being provided to control this movement.

The mechanism of the shifting apparatus is illustrated best in Figs. 3, 4, and 5. A groove is formed in each journal of the handle-bars, as by the attachment a short distance from the inner face of the gears of collars or sleeves A' A'. In the grooves thus formed is fitted a shifter-plate G, similar to the shell-ejector of a double gun. This has a limited movement back and forth, suitable openings b b being formed in the inner sides of the bearings B B for this purpose. On the inner side of the shifter-plate is a lug g, to which is hinged a pair of links F F by a suitable pin or rivet f'. The other ends of these links are hinged by a pin or rivet f to lever E, pivoted on a pin e, projecting at each end into holes in the inner sides of the bearings B B. In Fig. 3 the parts are shown in the locked position. To unlock or disengage the clutch the operator has simply to throw the lever back to a vertical position, as will be readily understood. This may be done with one hand and the required adjustment of the handles made with the other while the operator is mounted and without at all checking the speed at which he may be going.

It is to be noticed that the locking-lever reaches a "dead-center" when in the locking position, the handles being thus securely

and rigidly fastened at any desired angle and in such a manner that the strain on them does not effect the engagement of the clutch. The parts should be nicely fitted, so that
5 when pressed down to locking position the lever holds the notched portions of the clutch tightly together and prevents any lost motion.

Having thus described my invention, I claim—

10 1. The combination with the steering-head of a bicycle, of a pair of handle-bars journaled in bearings connected with said steering-head, gears connecting said handle bar journals, to give concurrent movement there-
15 to, bearings to receive said journals, a clutch formed by the notched face of said bearings and a notched connection of the handle bar journals, and a lever to shift them in and out of engagement.

20 2. The combination with the steering-head spindle of a bicycle, of a head having adjacent bearings to receive the journaled ends of a pair of handle-bars, said handle-bars having a limited endwise movement in said
25 bearings, a clutch formed at one end of the bearings and the adjacent face of a part connected with one or both of the journals, gearing adapted to impart concurrent movement to the handle-bars, and means substantially

as described for shifting them back and forth 30 in their bearings.

3. The combination of a pair of handle-bars journaled at one end, bearings in the head of the steering spindle to receive said journals, gears connecting them, clutches formed by
35 radial notches on the adjacent faces of the gears and bearings, a shifter engaging a groove formed in each journal, and means substantially as described for actuating the same.

40 4. The combination of a pair of handle-bars journaled at one end, parallel bearings therefor forming the head of the steering-spindle, the journals having a limited endwise movement therein, a clutch formed on adjoining
45 faces of said bearings and parts connected with said journals, a shifter engaging with said journals, and a lever substantially as described connecting with said shifter, and adapted to lock the clutch tightly together
50 when in closed position.

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

LUCIUS E. RICHARDSON.

Witnesses:

J. F. GROAT,

J. M. ST. JOHN.