No. 660,576. Patented Oct. 30, 1900.

J. M. JUSTEN.

BICYCLE HANDLE BAR.

(Application filed Jan. 23, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1

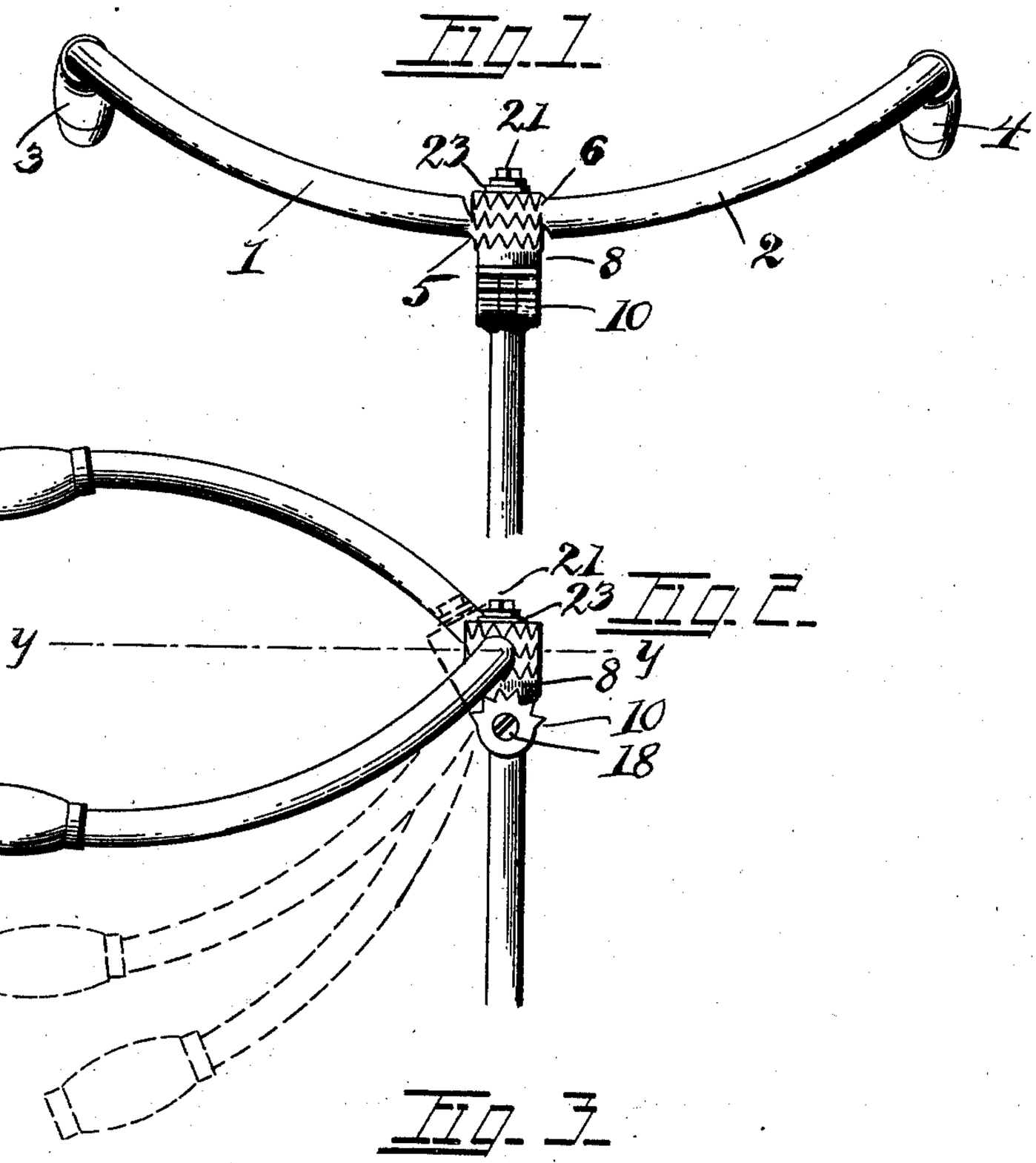
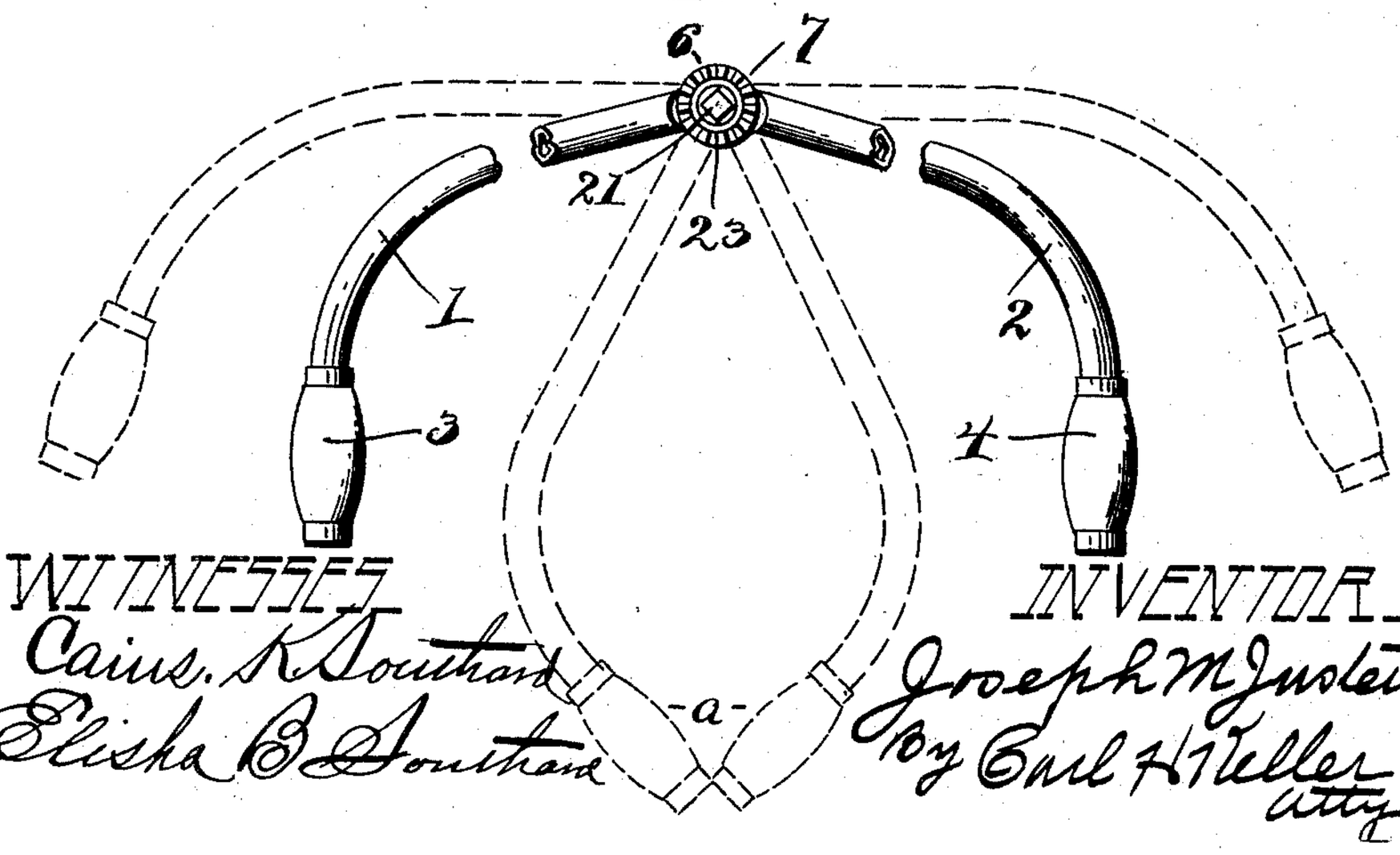


Fig. 2

Fig. 3



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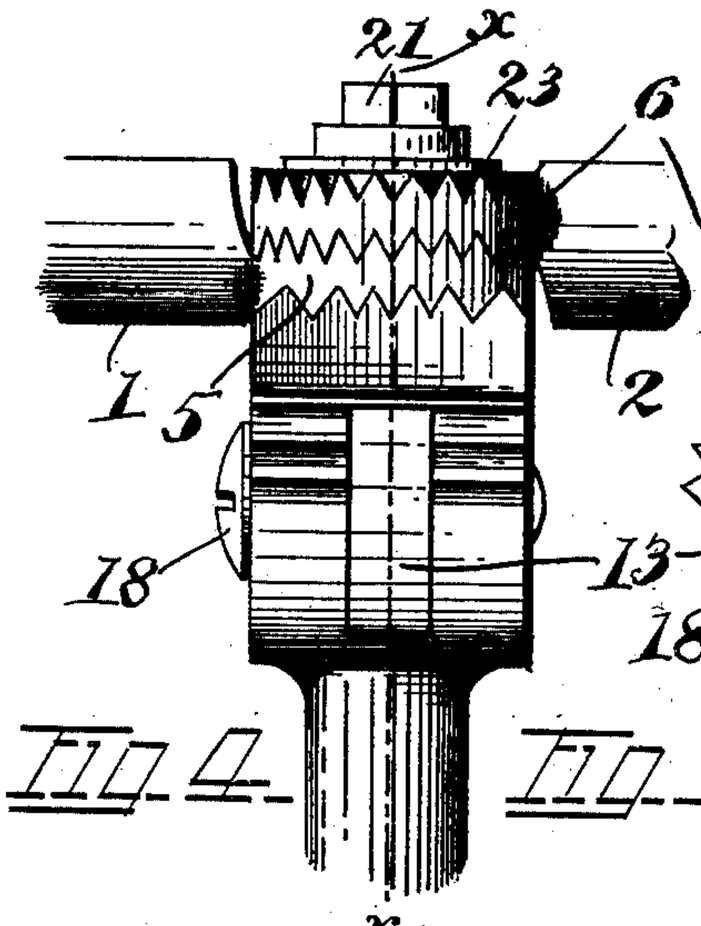

Fig. 4.

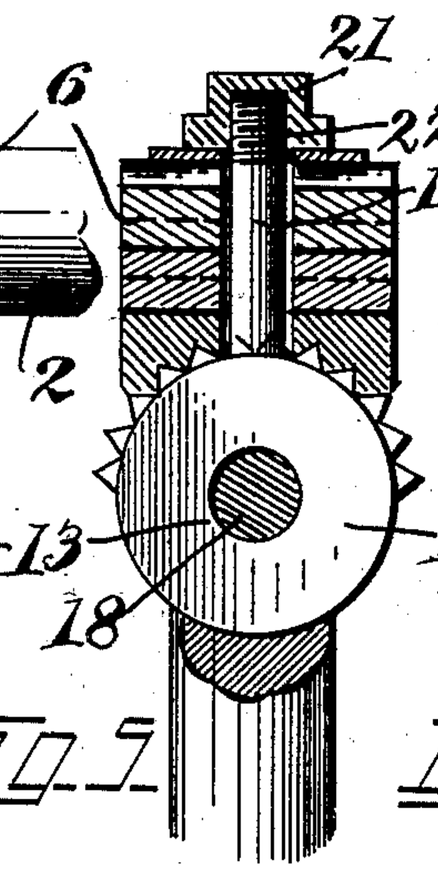

Fig. 5.

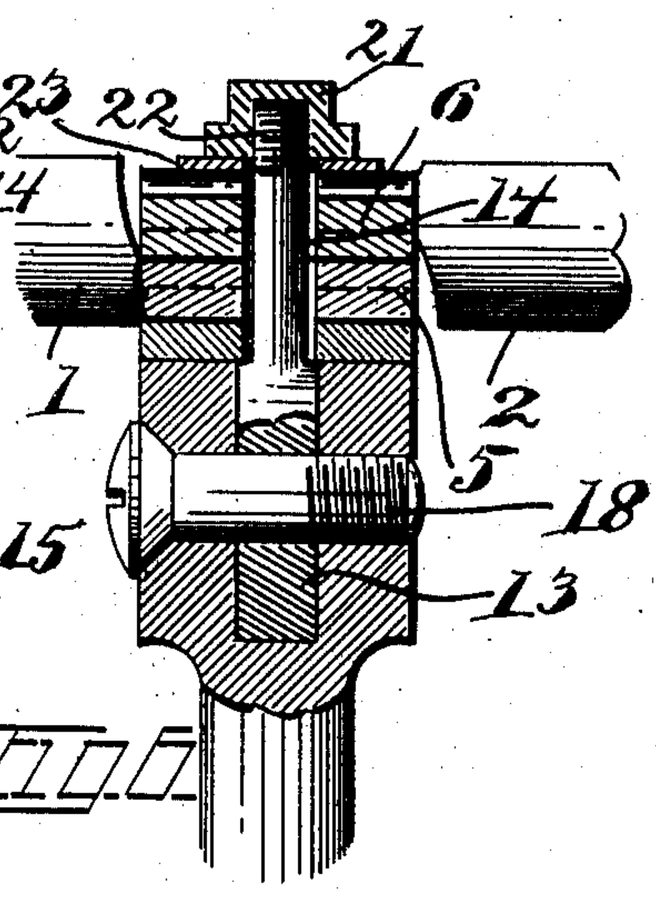

Fig. 6.

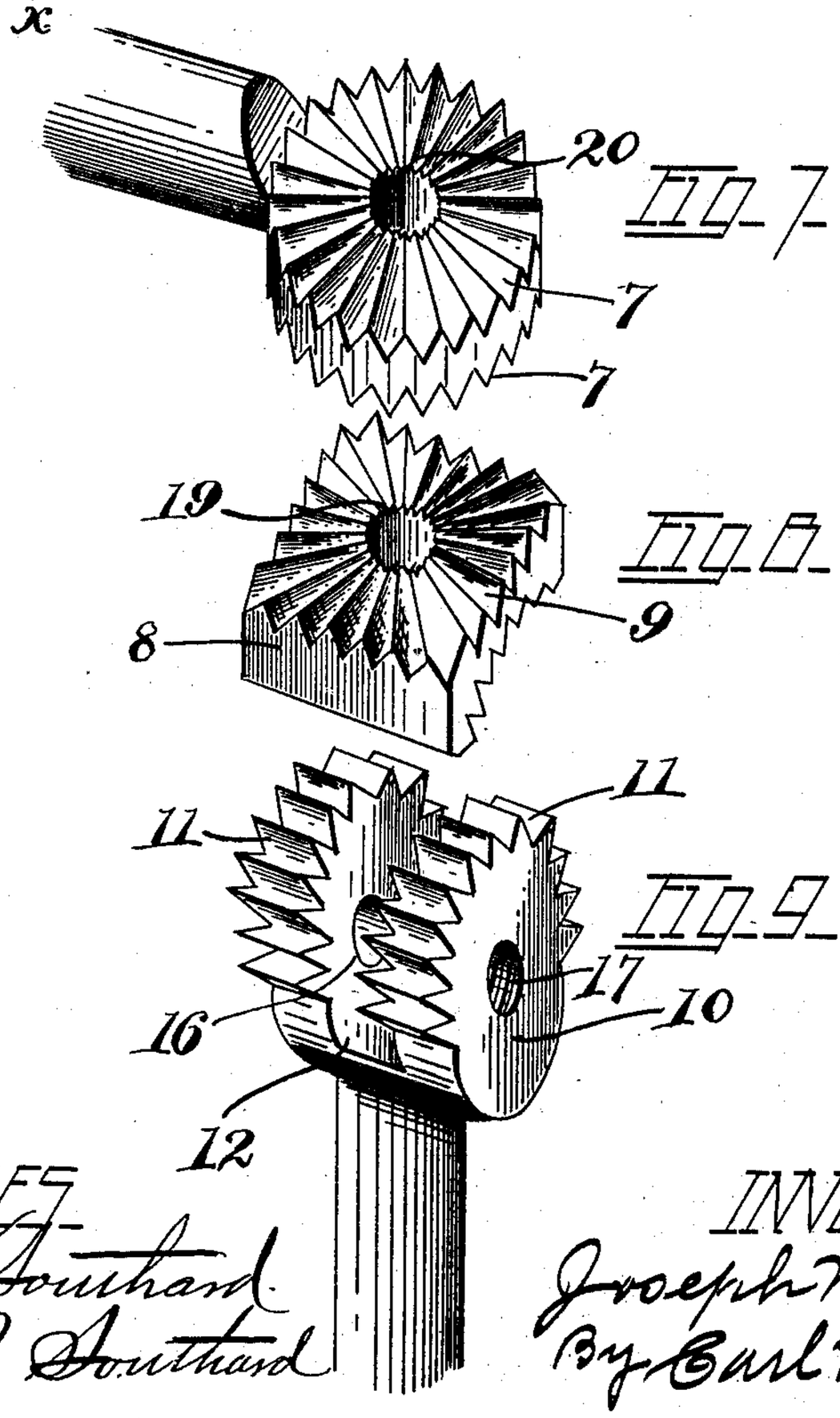

Fig. 7. Fig. 8. Fig. 9.

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UNITED STATES PATENT OFFICE.

JOSEPH M. JUSTEN, OF TOLEDO, OHIO.

BICYCLE HANDLE-BAR.

SPECIFICATION forming part of Letters Patent No. 660,576, dated October 30, 1900.

Application filed January 23, 1899. Serial No. 703,019. (No model.)

To all whom it may concern:

Be It known that I, JOSEPH M. JUSTEN, of Toledo, county of Lucas, and State of Ohio, have invented certain new and useful Improvements in Bicycle Handle-Bars; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

My invention relates to an adjustable handle-bar for bicycles, and has for one object to provide a handle-bar which is easily and positively adjustable to any position desired by the rider. I further provide a handle-bar which can be either raised or lowered and which permits of adjustment laterally in the same plane, so that the grips on the bar can be made to assume a variable position the one from the other.

A further object of my invention is to provide a handle-bar capable of such extensive adjustment that the handle-bar sections can be made to occupy positions in proximity to the head of the wheel, thereby overcoming the usual necessity of removing the bar when the wheel is packed for shipment.

My invention further consists in certain novel features of construction hereinafter shown, described, and claimed

In the drawings, Figure 1 is a front elevation of my handle-bar, the same being shown in a raised position. Fig. 2 is a side elevation showing in full lines one handle-bar section raised, the other lowered, and in the dotted lines two of the numerous positions which the bar can be made to assume vertically. Fig. 3 is a plan view showing in dotted lines the wide angle of adjustment horizontally. Fig. 4 is a front elevation in detail of my handle-bar, the handle-bar sections being cut off to more fully illustrate the same. Fig. 5 is a sectional detail view on line *x x*, Fig. 4, the eyebolt which holds the parts together alone being shown in full lines. Fig. 6 is a section transverse to Fig. 5, the screw-threaded pin being shown in full lines. Fig. 7 is a view of the serrated lug I employ to hold the handle-bar sections from rotation. Fig. 8 is a serrated plate upon which the lug shown in Fig. 7 rests. Fig. 9 is a view of the standard I employ in my handle-bar, showing the serrations on the periphery of the rounded upper portion thereof.

1 and 2 are handle-bar sections, respectively having on the ends thereof ordinary grips 3 and 4. Secured to sections 1 and 2 are lugs 5 and 6, having serrations 7 on the top and bottom sides thereof.

8 is a plate serrated on the top thereof at 9 to correspond to serrations 7 on lugs 5 and 6. Plate 8 is rounded in contour on the lower side thereof and constructed with serrations to fit the rounded end of the forked standard 10, also constructed with serrations 11. Standard 10 is divided at 12 to receive an eyebolt 13, consisting of a shank 14 and a ring 15.

16 and 17 are central openings in the standard 10 to receive the screw-threaded pin 18, which also passes through the ring 15 of eyebolt 13, thereby forming a hinged joint, permitting the shank 14 to occupy any position in a plane inclined to the axis of standard 10.

19 and 20 are central openings in plate 8 and lugs 5 and 6, respectively, through which shank 14 of eyebolt 13 passes and holds the same when assembled in a rigid state, there being a nut 21 on the screw-threaded end 22 of eyebolt 13. Nut 21 seats upon a washer 23, preferably of soft metal, to protect the serrations on lugs 5 and 6.

If it is desired to use the handle-bar in a raised position, the handle-bar sections 5 and 6 will occupy the position shown in full lines, Figs. 1 and 3. Fig. 3 also shows in dotted lines two of the numerous positions which the bar will occupy laterally, it being possible to even adjust the grips forward of the head of the wheel. If the rider finds the grips are elevated too greatly, he loosens the nut 21, which unlocks all of the serrations and depresses the grips the desired extent, causing the eyebolt 13 to be inclined to the rear of the axis of standard 10. Nut 21 is then screwed up tightly, which will lock all of the serrations and hold the different parts of the handle-bar rigidly in place. Now if it is desired to use the handle-bar as a "drop-bar," nut 21 and washer 23 are removed from eyebolt 13. Sections 1 and 2 can then be taken off and turned over to form a drop-bar, the nut

and washer having been replaced. All of the adjustable features are possible that were found in the raised bar.

In Fig. 2 I have shown a bar having one section raised above and the other section dropped below the horizontal plane *y y*. This bar is useful to a rider having one arm paralyzed by permitting one hand to simply rest upon the dropped section and using the raised section to steer by.

When it is desired to store or ship the wheel, the eyebolt 13 is made to assume a position at a right angle to the axis of standard 10 and the sections are brought together to a position *a*, Fig. 3, when the bar will occupy a minimum space and in proximity to the head of the wheel.

It will be seen from the foregoing description that I have provided a handle-bar of the greatest possible adjustment and one which requires but one operation, the setting of a single nut to adjust the same. I wish also to lay stress upon the practical construction of my bar. The entire strain upon the bar is imposed upon the eyebolt 13 and is always a positive strain in a straight line between the pin 18 and nut 21. If by accident, due to strain upon the eyebolt, the shank upon the same is broken off, it becomes simply necessary to unscrew the pin 18 and to remove the broken portions of the eyebolt and to insert a new eyebolt. I wish it also understood that I may depart slightly from the construction shown without departing from the spirit of the invention. For instance, I may form the parts without serrations, depending upon frictional contact to hold the same from movement.

What I claim is—

1. In a bicycle handle-bar, a divided standard, an eyebolt, secured in hinged relation thereto, a plate surmounting said standard, handle-bar sections upon said plate, said handle-bar sections and said plate having centrally thereof an opening through which said eyebolt passes, and a nut screwed upon the end of said eyebolt, substantially as shown and described and for the purpose set forth.

2. In a bicycle handle-bar, handle-bar sections, having lugs on the ends thereof, radial serrations upon the faces of said lugs, a plate having radial serrations on one side thereof to interlock with serrations on the lugs and parallel serrations on the other side thereof to interlock with like parallel serrations on the rounded part of a divided standard, an eyebolt in hinged relation with said standard, a centrally-disposed opening in said lugs and said plate to receive the shank of the eyebolt, and a nut screwed upon the end of said eyebolt, substantially as shown and for the purpose set forth.

3. In a handle-bar, the combination of the stem having an arc-shaped bearing-surface, whose axis is transverse to the vehicle with which it is to be used, a block movable upon said axis and having a complementary arc-shaped bearing-surface which engages with that on the stem, two handle-bar sections having disk-shaped ends which are pivotally connected with said block, and means for clamping said parts together in any of the positions relative to each other which they may assume, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOSEPH M. JUSTEN.

Witnesses:

CARL H. KELLER,

ELISHA B. SOUTHARD.