No. 610,352. Patented Sept. 6, 1898.

J. GRADY.

BICYCLE HANDLE BAR.

(Application filed Aug. 11, 1897.)

(No Model.)

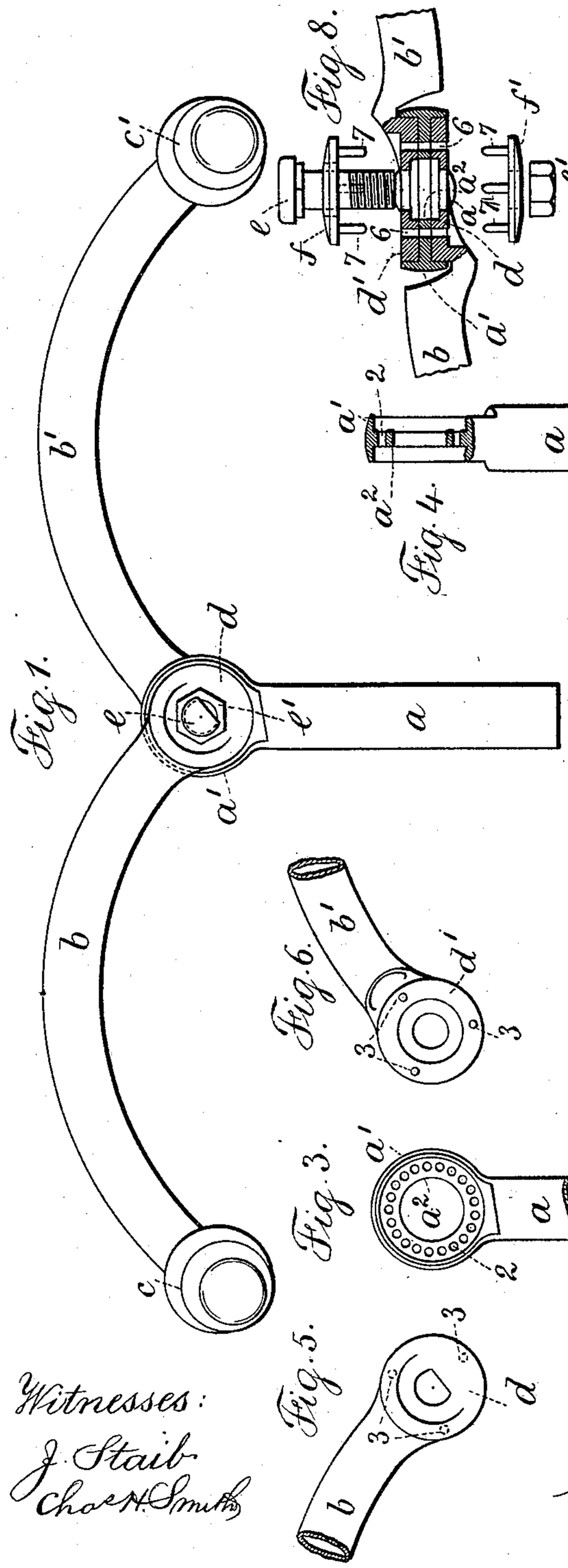

Fig. 1.

Fig. 4.

Fig. 3.

Fig. 6.

Fig. 5.

Fig. 2.

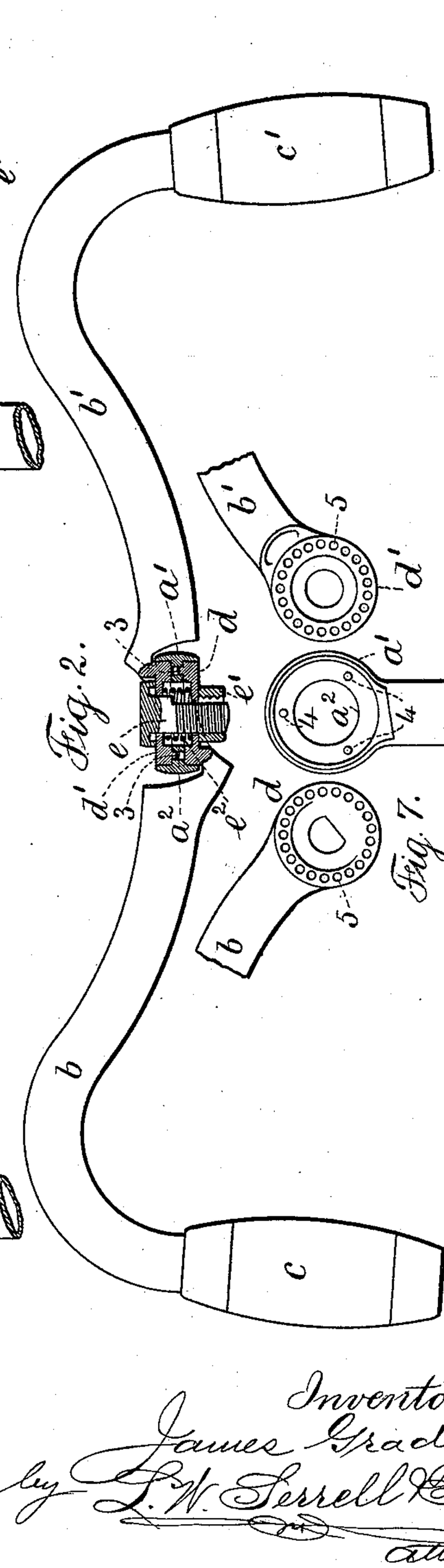

Fig. 7.

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UNITED STATES PATENT OFFICE.

JAMES GRADY, OF NEW YORK, N. Y.

BICYCLE HANDLE-BAR.

SPECIFICATION forming part of Letters Patent No. 610,352, dated September 6, 1898.

Application filed August 11, 1897. Serial No. 647,850. (No model.)

To all whom it may concern:

Be it known that I, JAMES GRADY, a citizen of the United States, residing at New York, (Brooklyn,) in the county of Kings and State of New York, have invented an Improvement in Bicycle Handle-Bars, of which the following is a specification.

My invention relates to an improvement in bicycle handle-bars that are capable of a vertical adjustment at the pleasure of the wheelman and that may be securely and positively fastened in the desired position without the risk of being shifted by the weight put thereon by the rider in use.

In carrying out my invention I provide the handle-bar stem with a head in the form of a band, within which is a perforated ring-center, and I provide the respective handle-bar portions with disks that are received in the opposite sides of the head of the stem and with locking-pins between the respective parts, which form a positive connection, and a bolt passes through the disk ends of the handle-bars and through the head of the stem, securely holding the bars to the head of the stem in the desired position as adjusted.

In the drawings, Figure 1 is an elevation representing my improvement. Fig. 2 is a plan of the handle-bars and section through the head of the stem and disks of the handles and the means for connecting the same. Fig. 3 is an elevation, and Fig. 4 a vertical section, through the head of the handle-bar stem. Figs. 5 and 6 are elevations of the disk ends of the handle-bars. Fig. 7 is an elevation of the head of the handle-bar stem and the disk ends of the handle-bars, showing a modification; and Fig. 8 is a plan and partial section showing a further modification of my improvement.

a represents the handle-bar stem, which, as usual, is adapted to fit into the head-tube of the bicycle. The upper end of this handle-bar stem *a* is made with a head *a'* in the form of a band, within which is a ring-center a^2, made with equidistant perforations 2.

b b' represent the respective parts of the handle-bar, and *c c'* the grips or handles on the outer ends of the same.

The inner ends of the handle-bars *b b'* are provided with perforated disks *d d'*. These disks are presumably drop-forgings with head portions having reduced ends that fit into the ends of the tubular handle-bars and which in the course of manufacture are brazed to said tubular portions. These disks *d d'* are of a diameter to fit within the band-head *a'*, so that the faces of the disks come up against the opposite faces of the ring-center a^2, the band-head acting as a socket to hold said disks and within which the same turn as the handle-bars are adjusted. The opposing faces of said disks *d d'* are provided with equidistant pins 3, and it is preferable to employ three equidistant pins. These may be integral with the disks or inserted therein. These pins enter the perforations 2 in the ring-center, and it is preferable that the pins on the disk *d* occupy an intermediate or staggered position to the pins on the disk *d'*, so that the six pins will be received in six different perforations, and as there are a large number of perforations a great latitude of adjustability is provided for the bars from a very low-down position to quite an elevated position at the option of the wheelman.

The bolt *e* passes through one disk, through the opening in the perforated ring-center a^2, through the other disk, and is provided with a nut *e'* for holding and clamping the parts in place. When it is desired to move the handle-bars to a different position, it is only necessary to loosen the nut of the bolt sufficient to withdraw the pins of the disks from the perforations of the ring-center, so that the disks may turn in the band-head *a'*, and when the desired position is determined upon the nut is readily tightened again to secure the parts.

The opposing faces of the disks *d d'* are preferably recessed, and within said recessed portions and the ring-center a^2 I prefer to employ a helical spring e^2 around the bolt *e*, so that when the nut is loosened on the bolt for the purpose of adjusting the handles the spring presses the disks outward, so that the adjustment of the handle-bars is more easily effected.

In the modification shown in Fig. 7 the ring-center a^2 is provided with pins 4, that pass through the same and project from both faces, and the disk ends *d d'* are provided with perforations 5 to engage said pins in the various positions in which the bars may be placed.

In the modification shown in Fig. 8 the ring-center a^2 is perforated correspondingly with that shown in Fig. 3, and the disk ends $d\ d'$ of the handle-bars are provided with several perforations 6, that aline with the perforations in the ring-center, and I provide face-plates $f\ f'$ with long pins 7, which pins preferably agree in number with the perforations of the disk ends $d\ d'$ and pass through said perforations and enter the perforations in the ring-center, and the bolt e passes through the face-plates, the disk ends, and the ring-center, and is provided with a nut e' for securely fastening the parts as they may be adjusted. I prefer the form of bolt with the square shoulder next the head and shown in Fig. 8 to the form shown in Fig. 2, although this is not material. The simpler form of construction and that which I prefer is shown in Figs. 1 to 6, inclusive.

My improved handle-bar is readily and quickly adjusted to the position desired by the wheelman, and when in that position is so securely fastened that there is little or no possibility of the weight laid upon the bars by the rider in use or the vibration of the machine changing or shifting the position of said bars.

I claim as my invention—

1. The combination with the handle-bar stem having a band-head with a ring-center and similar recesses at opposite sides, of the handle-bar portions each having a disk end and the ends passing from opposite directions into the recesses within the band-head and setting against the ring-center, a central bolt passing through the parts for clamping them together, and pins passing into holes for preventing the handles turning on the bolt, substantially as set forth.

2. The combination with the handle-bar stem, the band-head therefor and the integral ring-center, of the handle-bar portions and their disk ends smaller than the band-head and fitting within the same and against the ring-center, a spring within the ring-center between the disk ends and a bolt passing through said parts, and a nut for clamping the parts, there being perforations and pins between and for locking the parts in the desired position, substantially as set forth.

3. The combination with the handle-bar stem, the band-head therefor and the integral perforated ring-center, of the handle-bar portions and the disk ends $d\ d'$ thereto smaller than and fitting within the band-head a', the opposing faces of said disk ends being recessed, a helical spring within the ring-center and recessed faces of the disk ends, a bolt passing through said parts and through the spring and having a nut for clamping the parts, there being pins within and between the respective parts and passing through the perforations for locking the parts in the desired position of adjustment, substantially as set forth.

Signed by me this 5th day of August, 1897.

JAMES GRADY.

Witnesses:
GEO. T. PINCKNEY,
HAROLD SERRELL.