(No Model.)

G. G. POWELL.

HANDLE BAR FOR BICYCLES.

No. 603,995. Patented May 10, 1898.

Fig. 1.

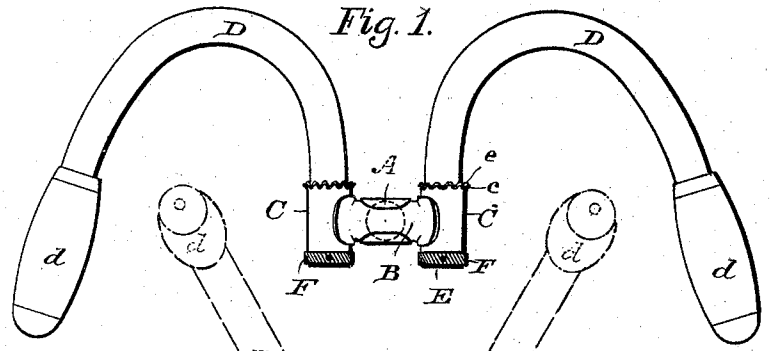


Fig. 2.

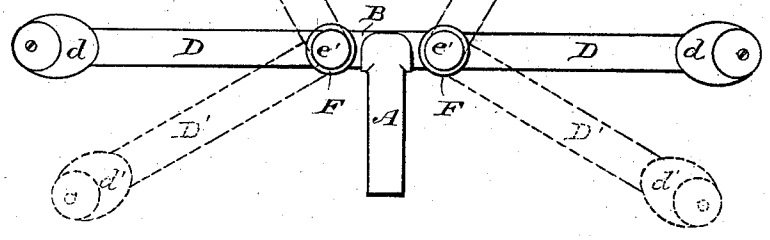


Fig. 5.

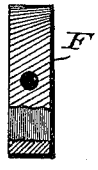


Fig. 3.

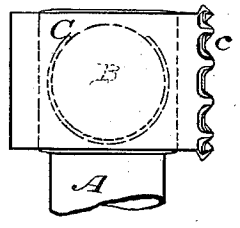


Fig. 4.

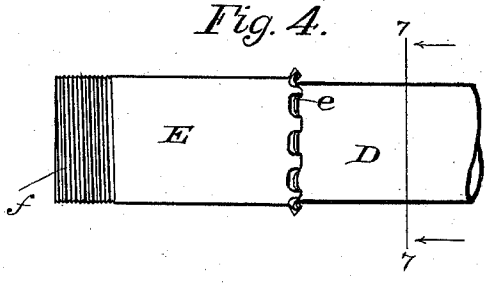


Fig. 6.

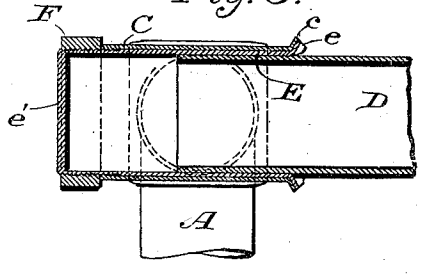
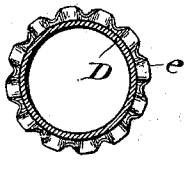


Fig. 7.



WITNESSES:

L. G. Hopper.

Ike Loaacs.

INVENTOR,

George G. Powell.

BY

Wm. A. Skinkle

ATTORNEY.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE G. POWELL, OF CLEVELAND, OHIO.

HANDLE-BAR FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 603,995, dated May 10, 1898.

Application filed June 19, 1896. Renewed February 19, 1898. Serial No. 670,973. (No model.)

To all whom it may concern:

Be it known that I, GEORGE G. POWELL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Improvement in Handle-Bars for Bicycles and Kindred Vehicles, of which the following is a specification, that will enable those skilled in the art to which my invention pertains to make and use the same.

My invention relates to adjustable handle-bars of the class in which the handle is divided into two parts, each part being pivoted at its inner end to the head-post and clamped thereto in any desired position. Its object is to produce an exceedingly light and inexpensive construction; and it consists of such details as will be hereinafter fully set forth.

The accompanying drawings show my invention in the best form now known to me; but certain minor changes obvious to a skilful mechanic might be made in the details thereof, and the shapes or relative positions of the parts might be varied to some extent without departing from the spirit of my invention as set forth in the claim at the end of this specification.

Figure 1 is a plan view of a handle-bar embodying my improvements. Fig. 2 is a rear elevation of the same, showing the bars in their straight position by full lines and in several of the positions to which they may be adjusted by dotted lines. Fig. 3 is a side elevation of the upper end of the head-post, showing one of the sockets for the reception of the inner end of the section of the handle-bar. Fig. 4 is a side elevation of the inner end of one of the handle-bars adapted to fit into the socket shown in Fig. 3. Fig. 5 shows a view, partly in section and partly in elevation, of the clamping-nut which secures the inner end of the handle-bar in the socket. Fig. 6 is a central section through one of the sockets, handle-bar ends, and clamping-nuts assembled together in their operative relations. Fig. 7 is a transverse section across the handle-bar on the line 7 7 of Fig. 4.

All the parts of my handle-bar are made of tubular metal of the lightest possible cross-section consistent with the required strength of the parts. In such tubular structures as this it has been found difficult to form an adjustable connection between the several parts that will be rigid and strong and at the same time preserve the lightness desirable in handle-bars. The usual plan has been to form the connecting portions of the several members of solid material, which is worked down to the desired shapes and brazed into or onto the ends of the tubular parts. In most instances these solid portions of the bars, though composing but a small portion of their extent, form nearly fifty per cent. of the weight of the entire structure.

In my construction I seek to secure the same degree of rigidity between the several adjustable members of the handle-bar as is secured in bars using solid parts at the points of connection and at the same time to preserve the lightness characteristic of entirely tubular structures. In handle-bars employing solid material at the connecting-points the labor necessary to reduce these solids to their ultimate forms and to finish them into marketable shape usually constitutes the greatest part of the cost of such bars. In my bar I have endeavored to avoid the weight of solid parts and the expensive labor of finishing such parts, and I therefore employ only metal tubes at the connecting-points, and these tubes are reduced to their final finished form by stamping.

The tubular head-post A is brazed at its top to a short cross-tube B, at each end of which is securely brazed a tubular socket C. The front end of each of these sockets C is stamped or pressed outwardly to form a series of flutings or corrugations *c*, while the rear end of the socket is left perfectly plain. The axes of these sockets are parallel to the general fore-and-aft line of the bicycle upon which the handle-bar is used, and the two sections D D of the bar project from the front ends of the sockets, being bent outwardly and rearwardly, as shown in Figs. 1 and 2.

These bars are composed of plain tubes bent to the required shape and provided at their outer ends with handles or grips *d*, as shown. At their inner ends they are thrust within and securely brazed to short tubular thimbles E, which fit within the sockets C and have flutes or corrugations *e* at their front ends corresponding with and engaging the flutes or corrugations *c* on the front ends of the sockets.

These thimbles E are longer than the sockets and project from the rear end thereof, where they are screw-threaded, as at *f*, for the reception of clamping-nuts F, which fit upon their ends and bear against the rear ends of the socket C. When these clamping-nuts are screwed up tightly, the thimbles E on the inner ends of the handle-bars are drawn firmly into the socket until the two sets of flutings or corrugations are securely engaged, and in this condition the bars are rigidly locked in any desired position at which they may be set.

The clamp-nuts F may be polygonal on their exterior surfaces, so that they may be screwed up with an ordinary wrench; but I prefer to make them, as shown in the drawings, with cylindrical exteriors milled or roughened to secure better grasp for the fingers. This I have found to give sufficient pressure to hold the parts of the bar in secure engagement.

I prefer to inclose the outer end of the thimble E with a head *e*, which may be stamped, brazed, or otherwise secured therein in any suitable manner.

From the above description it will be seen that the connecting parts of my handle-bar consist of the tubular sockets and the tubular thimbles adapted to fit therein, both of which have interlocking flutings or corrugations on their front ends which are held against endwise movement and in secure engagement by the clamping-nuts F on the rear end of the thimbles, that this affords perfect security against accidental movement of the bars in the socket, that the entire structure is tubular and of the very lightest possible description, and that as handwork in forming the parts is almost entirely eliminated the construction is of the most economical character.

Having thus described my invention, what I claim as new and useful, and desire to secure by Letters Patent, is—

In a handle-bar, the head-post with parallel tubular sockets attached to its upper end and stamped or pressed outwardly to form flutings or corrugations at their front ends as shown, with tubular handle-bars having tubular thimbles attached to their inner ends which thimbles fit within the sockets of the head-post and are also stamped or pressed outwardly to form flutings or corrugations at their front ends to correspond and interlock with the flutings or corrugations of the socket, the rear ends of the thimbles projecting from the sockets and being provided with clamping-nuts which hold the corrugations into engagement, substantially as hereinbefore set forth.

In testimony whereof I affix my signature, in the presence of two witnesses, at Cleveland, Ohio, June 10, 1896.

GEORGE G. POWELL.

Witnesses:
WM. A. SKINKLE,
JOSEPH KENDRICK.