

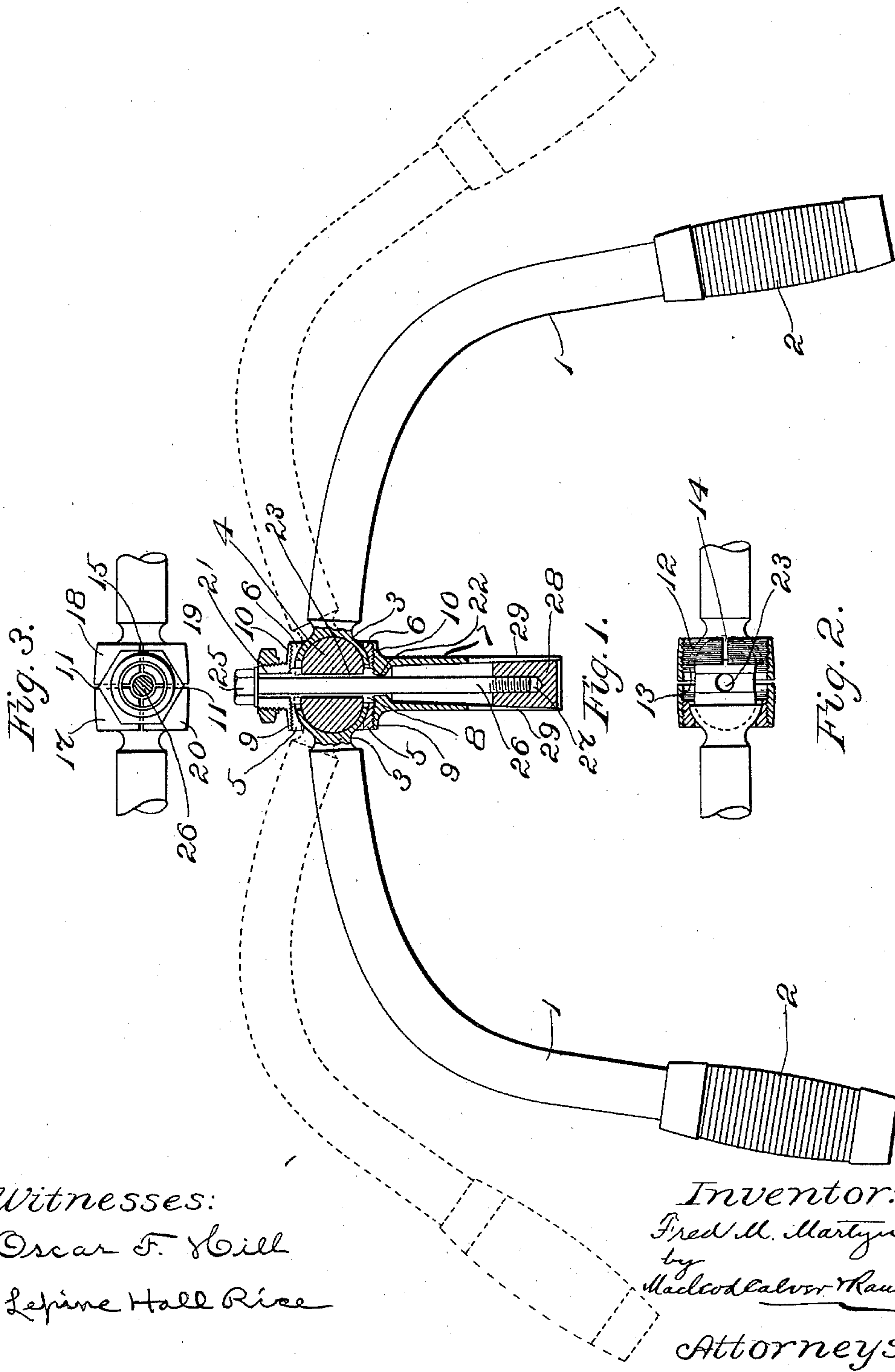
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F. M. MARTYN.
HANDLE BAR FOR BICYCLES.

(Application filed May 13, 1898.)

(No Model.)



Witnesses:
Oscar F. Hill
Levine Hall Rice

Inventor:
Fred M. Martyn
by
Macdonald, Calver, & Randall
Attorneys.

UNITED STATES PATENT OFFICE.

FRED M. MARTYN, OF WOBURN, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
TO JAMES T. FREEMAN AND HENRY F. DAVIS, OF SAME PLACE.

HANDLE-BAR FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 613,014, dated October 25, 1898.

Application filed May 13, 1898. Serial No. 680,543. (No model.)

To all whom it may concern:

Be it known that I, FRED M. MARTYN, a citizen of the United States, residing at Woburn, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Handle-Bars for Bicycles, of which the following is a specification, reference being had therein to the accompanying drawings.

Various recent attempts have been made to construct the handle-bars of velocipedes, and particularly of bicycles of the present "safety" type, so that they shall be capable of adjustment not only vertically or telescoping with the head of the bicycle, but also angularly with respect to the head.

My invention pertains to the latter mode of adjustment; and it consists in certain novel combinations of parts whereby each handle-bar may be angularly adjusted independently of the other, whereby the angular adjustment of either or both handle-bars may be effected upon any axis or pivot-line desired, and whereby the tilt of the handles themselves may be changed without changing their location. The operating parts are at the same time of large size and ample strength to resist the strain brought upon them, while, on the other hand, they are very compact and present a neat and finished appearance.

After describing my invention, with reference to the accompanying drawings, wherein is illustrated the best embodiment of the conception that I have yet contrived, I shall particularly point out and distinctly define the distinguishing characteristics of the invention in the claims at the close of this specification.

Figure 1 is a view, mostly in lateral axial section through the head and the handle-bar post, of a bicycle provided with my invention. Fig. 2 is a plan view of certain parts shown in Fig. 1, some of them being broken away for the purposes of clearness. Fig. 3 is a plan view similar to Fig. 2, but showing the broken-away parts as replaced.

1 1 are the handle-bars of the bicycle, provided with the handles 2 2 and terminating at their inner extremities in the cups 3 3. These cups fit upon hemispherical surfaces,

which are here shown as both belonging to a single core 4.

5 6 are rings fitting over the cups 3 3 and confining the same upon the hemispherical surfaces of the core. These rings have preferably concave spherical inner surfaces corresponding with convex spherical outer surfaces of the cups 3 3, so that the area of contact of the rings with the cups may be as large as possible and the holding power of the rings therefore as great as possible. The remaining mechanism to be described has the purpose of contracting the rings toward the hemispherical surfaces of the core, thereby gripping the cups 3 3 solidly between the rings and core at any desired adjustment of the handle-bars and handles.

7 is the handle-bar post, formed with a transverse cylindrical opening 8, in which are contained the core 4, the cups 3 3, and the rings 5 6. The latter are located, respectively, within the ends of the opening 8 in the post 7 and are rendered relatively movable by splitting the post axially with relation to itself, but at the same time transversely with relation to the opening 8, as at 11, Fig. 3. By contracting the split portions 9 10 of the post together the rings 5 6 are caused to approach each other, and thereby the cups 3 3 are gripped solidly upon the core 4 at any desired adjustment of the handles.

The preferred mode of adjusting the rings 5 6 on the portions 9 10 of the post 7 is to form the rings with a screw-threaded exterior surface 12, Fig. 2, which engages with an internal screw-thread 13 upon the cylindrical surface of the post.

The parts as thus far described will be assembled by first introducing the core into the aperture 8, then placing the cups 3 in contact with it, and then slipping the rings 5 6 over the handle-bars and screwing them into the opening 8 until they make a rather loose contact with the outer surfaces of the cups 3 3, thereby confining the cups upon the core, but at the same time allowing them to be shifted thereon as may be desired. In order to provide for a more perfect gripping of the cups 3 3, I form each ring with a split, as at 14, Fig. 2, and I also split the head 7, as at 15,

Fig. 3, axially and at right angles to the split 11, the split 15 extending from the upper extremity of the head only down into the opening 8. If the split portions formed by the split 15 be contracted together, the rings 5 6 will also be contracted circumferentially upon the cups 3. To produce the simultaneous contraction of the portions of the head 7 formed by the split 11 and of the portions formed by the split 15, I make the head with an upper conical projection, composed of the extremities of the split portions thereof, and I cut a screw-thread upon the conical projection and fit thereon a conical nut 16. When this nut is turned down, all four portions 17 18 19 20, Fig. 3, are contracted together, and the effect is to simultaneously contract each of the rings 5 6 circumferentially upon itself and both of them laterally toward each other. The resulting gripping action produced upon the cups 3 3 is extremely powerful and serves to clamp the cups very solidly upon the core 4. It might be possible to dispense with one or the other of the splits 11 and 15 and to depend upon a single mode of contraction to effect the gripping of the cups 3 3; but the combined effect of the two modes of contraction is to produce an adjustment that will resist any strain to which the handle-bars may be subjected.

I have indicated in the drawings the manner in which my invention may be arranged in connection with a well-known mode of effecting the telescopic adjustment of the post within the head of the bicycle; but such arrangement is not of the essence of the invention, and other and quite dissimilar modes of telescopic adjustment might be substituted for the one which is here shown and which I shall now proceed to describe in outline.

21 is an axial passage through the conical extension of the post. 22 is an axial passage connecting the opening 8 with the lower tubular part of the post, and 23 is a passage in line with the passages 21 and 22 and extending through the core 4. 26 is a bolt which passes loosely through these passages and which has an enlarged polygonal head 25, that takes against the upper surface of the conical projection on the post. The bolt 26 passes downward into the tubular portion of the post and has a threaded extremity 27, which enters a conical block 28. The inner walls of the tubular portion of the post are also conical, converging upward, and the terminal part of the post is split, as at 29 27, Fig. 1. The resulting effect of turning up the bolt 24 by means of a wrench applied to its polygonal head is to wedge the block 28 into the tubular portion of the post and crowd the split portions of the post outward against the head of the bicycle, thereby securing the post within the head at any desired adjustment.

With my device no matter if either handle may have suffered a very considerable dis-

placement by a fall or otherwise it may at once be brought back into exact correspondence with the other handle by merely loosening the nut 16, setting the two handles in corresponding positions, and again tightening the nut. Such a readjustment would enable a rider who had met with such an accident in the course of a long ride and at a distance from a repair-shop to continue his ride comfortably and to defer the permanent repair of the handle-bar to any convenient time.

What I claim is—

1. The combination of handle-bars having terminal cups, a core with hemispherical surfaces upon which the cups fit, inclosing rings confining the cups on the core, a post having relatively-movable parts each part supporting one of the rings, and means for contracting the parts of the post together and gripping the cups upon the core at any desired adjustment of the handles, substantially as described.

2. The combination of handle-bars having terminal cups, a core with hemispherical surfaces upon which the cups fit, inclosing rings confining the cups on the core and each split to allow of contraction, a post supporting the rings and split to contract upon them, and means for contracting the parts of the post together and gripping the cups upon the core at any desired adjustment of the handles, substantially as described.

3. The combination of handle-bars having terminal cups, a core with hemispherical surfaces upon which the cups fit, inclosing rings confining the cups on the core and each split to allow of contraction, a post supporting the rings and split between them and split also to contract upon them, and means for contracting the split portions of the post together, thereby contracting the rings simultaneously upon themselves and toward each other, thus gripping the cups upon the core at any desired adjustment of the handles, substantially as described.

4. The combination of handle-bars having terminal cups, a core with hemispherical surfaces upon which the cups fit, split screw-threaded inclosing rings confining the cups on the core, a post having a transverse screw-threaded opening to receive the rings and split vertically both with and across the opening, a conical projection on the post composed of the extremities of the split portions thereof, and a conical nut turning on the projection and when tightened contracting the split portions together and gripping the cups upon the core at any desired adjustment of the handles, substantially as described.

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

FRED M. MARTYN.

Witnesses:

WM. A. MACLEOD,
LEPINE HALL RICE.