(No Model.)

F. I. JOHNSON.

FASTENING FOR BICYCLE POSTS.

No. 570,309. Patented Oct. 27, 1896.

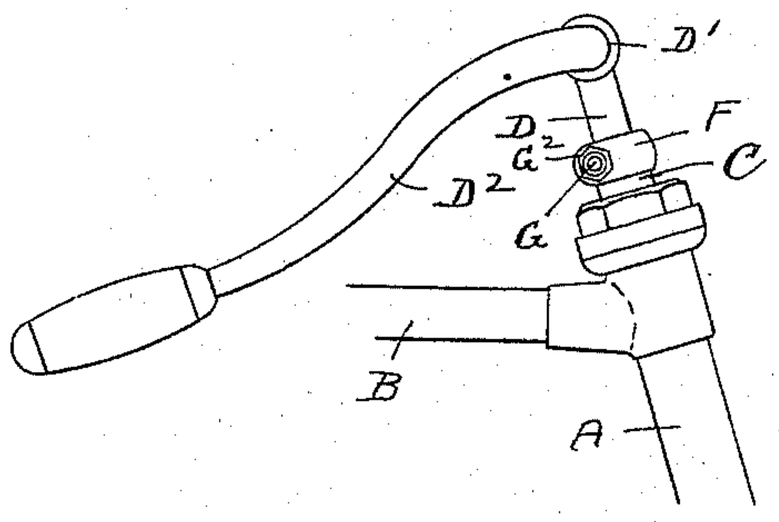

Fig. 1.

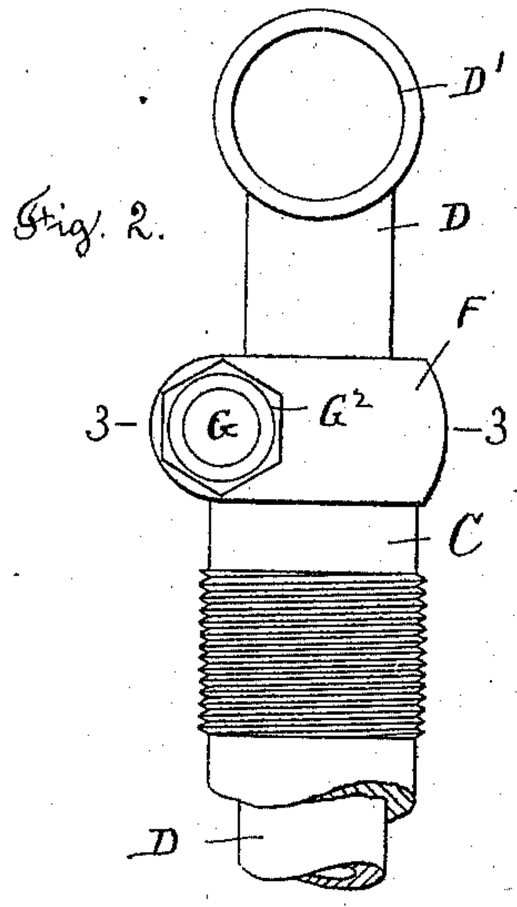

Fig. 2.

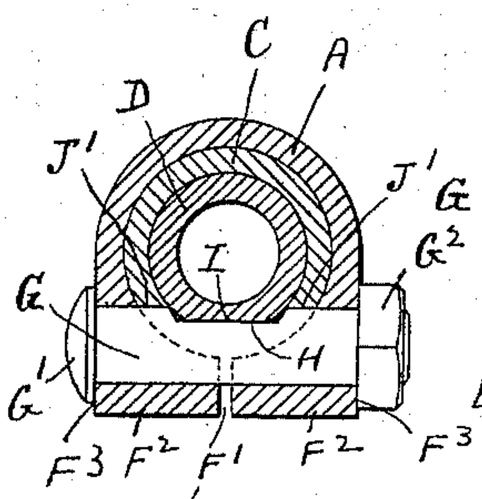

Fig. 3

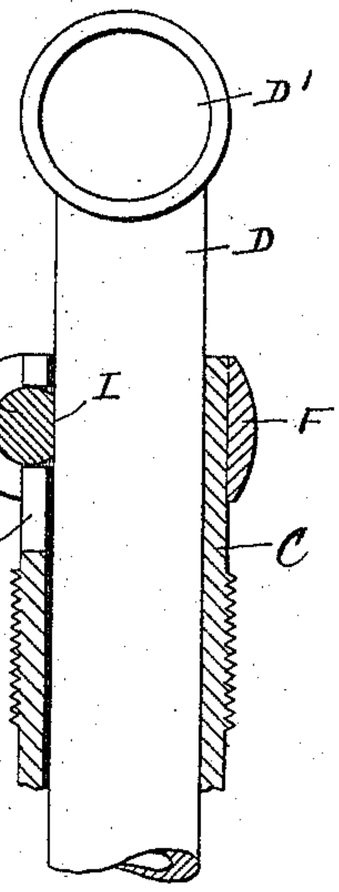

Fig. 4.

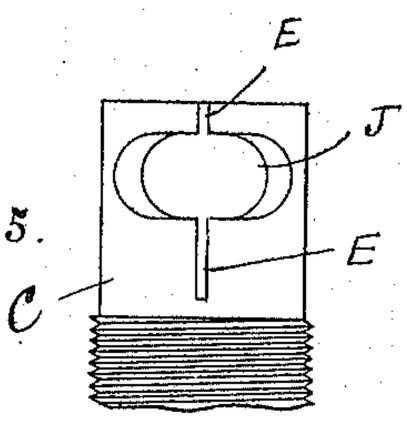

Fig. 5.

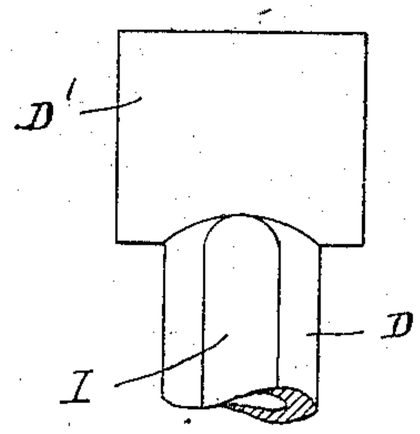

Fig. 6.

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UNITED STATES PATENT OFFICE.

FREDERICK I. JOHNSON, OF FITCHBURG, MASSACHUSETTS, ASSIGNOR TO THE IVER JOHNSON'S ARMS AND CYCLE WORKS, OF SAME PLACE.

FASTENING FOR BICYCLE-POSTS.

SPECIFICATION forming part of Letters Patent No. 570,309, dated October 27, 1896.

Application filed July 26, 1895. Serial No. 557,286. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK I. JOHNSON, a citizen of the United States, residing at Fitchburg, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Fastenings for Bicycle-Posts, of which the following is a specification, reference being had to the accompanying drawings, forming a part of the same, and in which—

Figure 1 represents a portion of a bicycle-frame, showing the handle-bar and handle-bar post with a fastening device for holding the handle-bar post in position embodying my invention. Fig. 2 represents a portion of the steering-post and handle-bar post with my improved fastening device shown upon a larger scale. Fig. 3 is a transverse sectional view on line 3 3, Fig. 2. Fig. 4 represents portions of the handle-bar post and steering-post, the latter being shown in central sectional view. Fig. 5 represents the upper end of the steering-post, and Fig. 6 the upper end of the handle-bar post.

Similar letters refer to similar parts in the different figures.

My invention relates to an improved fastening for holding the handle-bar post and the saddle-post of a bicycle in the desired position, and my invention is illustrated in the accompanying drawings as applied to the handle-bar post, but its application to the saddle-post will be readily understood without requiring special description and illustration.

Referring to the accompanying drawings, A denotes the tube of the steering-head, and B the backbone of the bicycle-frame, and inclosed within the tube A and capable of rotating therein is the steering-post C.

D denotes the handle-bar post, held in the steering-post C and capable of longitudinal adjustment. The handle-bar post D is provided with an eye D′ at its upper end, in which is held the handle-bar D^2.

All the above-named parts are in common use and may be of any known form of construction.

The handle-bar post D is vertically adjustable in the steering-post C in order to vary the height of the handle-bar D^2; but the handle-bar post must be held from turning within the steering-post, so the angular motion of the handle-bar will rotate the steering-post; and my present invention relates to the device for fastening the handle-post D within the steering-post C, so as to hold it from rotation within the steering-post and allow it to be vertically adjusted; and the device herein shown and described as applied to the handle-bar post is equally applicable to the saddle-post of the machine.

The handle-bar post has been commonly held either by a set-screw carried in the steering-post and bearing against the post or by splitting the upper end of the steering-post and inclosing it by an elastic band or clamp having its ends drawn together by means of a bolt and nut. The employment of a set-screw is liable to crush or indent the handle-bar post when the same is made of a hollow tube and is certain to mar its surface. The employment of a clamp holds the handle-bar post entirely by the frictional resistance between the surface of the handle-bar post and the inner surface of the steering-post and the compression of the steering-post requisite to hold the handle-bar post against longitudinal movement is insufficient to resist the torsional strain produced by the angular movement of the handle-bar in guiding the machine, requiring the clamp to be unduly tightened in order to hold the handle-bar post from rotating.

The object of my invention is to provide a fastening device which shall clamp the handle-bar post with sufficient frictional resistance to hold it against longitudinal movement and at the same time shall positively lock the post against rotation, and also to provide means to attach the fastening device to the steering-post. The upper end of the steering-post C is split upon one side for a short distance, as at E, Figs. 4 and 5, to allow it to be compressed against the handle-bar post.

F denotes an elastic clamping-ring which incloses the end of the steering-post.

The clamping-ring F is cut apart at F′, and it is also enlarged at F^2 F^2 to form the parallel bearing-surfaces F^3 F^3 for the head and nut of the tightening-bolt. The elastic clamping-ring F is provided with a hole F^4 to receive

the tightening-bolt G, which is provided with a head G′ and a nut G^2. The rear side of the handle-bar post D is cut away to form a flat surface H, extending throughout the length of the handle-bar post, and the tightening-bolt G is also cut away at its central section upon one side, forming the flat bearing-surface I, adapted to bear against the flat surface H upon the handle-bar post. The steering-post C is cut away upon either side of the slot E, forming a recess J, Fig. 5, to allow the tightening-bolt G to be carried toward the center of the steering-post far enough to bring the flat surface I of the bolt in contact with the flat surface H of the handle-bar post, the recess J serving to hold the bolt G from longitudinal movement on the steering-post C, thereby holding the elastic clamping-ring F in position.

The contact of the tightening-bolt G against the walls of the recess in the steering-post, as represented at J′ J′, Fig. 3, also holds the clamping-ring and bolt from turning about the steering-post, thereby holding the flattened surfaces H and I in their proper position relatively to the steering-post, so that when the front and rear wheels are in alinement the eye D′ will stand at right angles with the line of the wheels.

My improved fastening device is applied to the machine by placing the clamping-ring F upon the cylindrical end of the steering-post, inserting the tightening-bolt G through the hole F^4 in the clamping-ring, and applying the nut G^2. The tightening-bolt G is turned to bring the flat surface I parallel with the axis of the steering-post, and the handle-bar post D is inserted within the steering-post with the flat surface H in contact with the flat surface I upon the tightening-bolt, thereby locking the handle-bar post against rotation, holding the clamping-ring upon the end of the steering-post, and also holding the clamping-ring from turning. Sufficient frictional resistance can then be produced by a slight tightening of the nut G^2 to hold the handle-bar post from longitudinal movement, the surfaces H and I in contact securely holding the tightening-bolt G from rotating while the nut G^2 is being tightened.

What I claim as my invention, and desire to secure by Letters Patent, is—

In a bicycle, the combination of a tube split at its end and provided with a recess, a post held in said tube and having one side flattened, an elastic clamping-ring inclosing the end of said split tube, a bolt having a flattened surface, held in said ring and entering the recess in said tube, with its flattened surface in contact with said post, said bolt being held from turning about said tube by the walls of said recess and a tightening-nut carried by said bolt, substantially as described.

Dated this 23d day of July, 1895.

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Witnesses:

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