

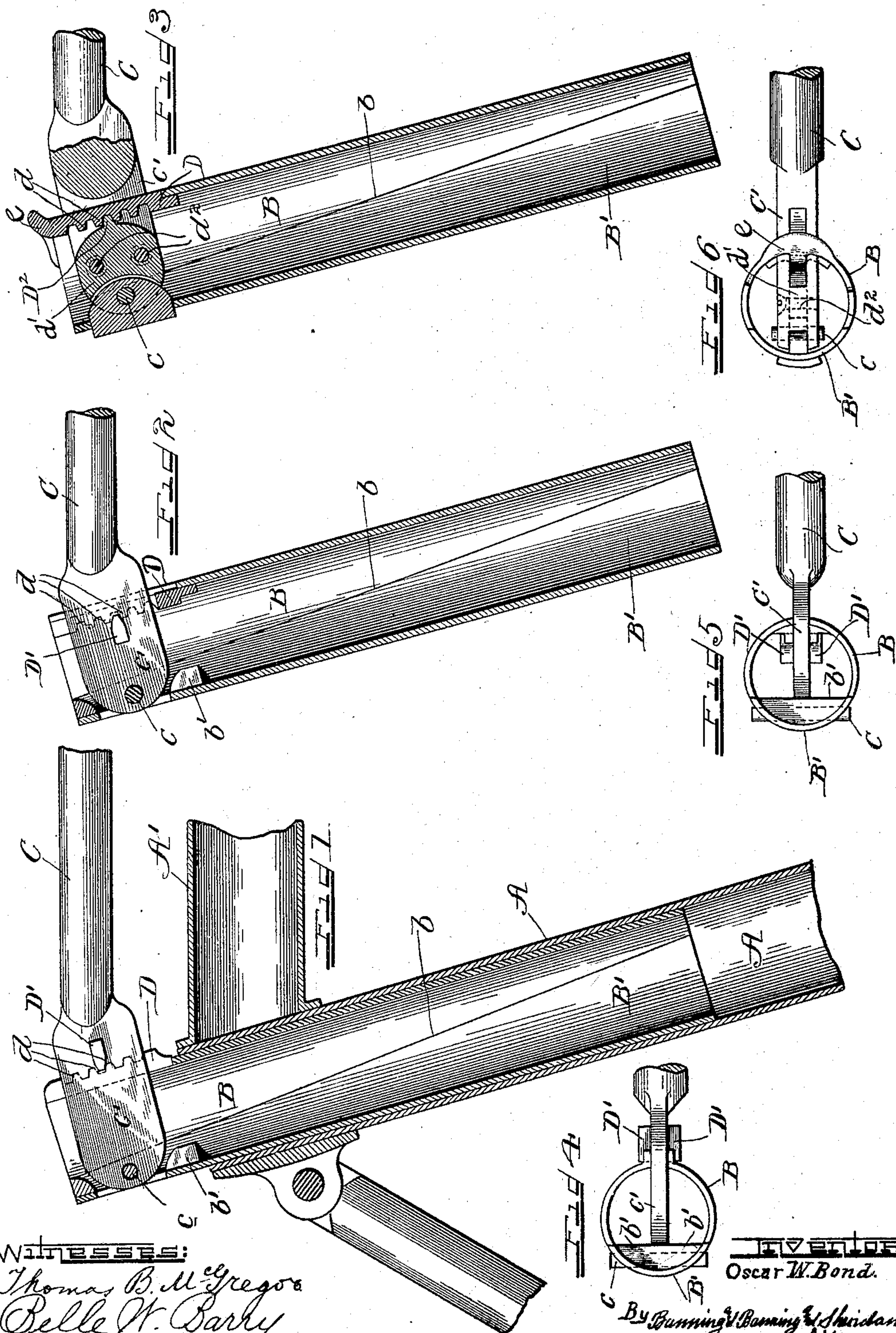
No. 654,561.

Patented July 24, 1900.

O. W. BOND.  
SEAT POST FOR BICYCLES.

(Application filed Oct. 18, 1899.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

OSCAR W. BOND, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THOMAS A. BANNING, OF SAME PLACE.

## SEAT-POST FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 654,561, dated July 24, 1900.

Application filed October 16, 1899. Serial No. 733,766. (No model.)

*To all whom it may concern:*

Be it known that I, OSCAR W. BOND, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Seat-Posts for Bicycles, of which the following is a specification.

My invention relates more particularly to that class of seat-posts which is used in connection with bicycles of the safety or rear driven type—a type of bicycle in which there is a diamond or other frame having what is known as a “pillar-tube” in which the seat-post is insertible—and particularly to the means by which the seat-post is automatically held in position and adjusted or removed from its position, as will more fully hereinafter appear.

The object of my invention is to provide a simple, economical, and efficient seat-post for bicycles formed of two wedges, to one of which is pivoted the seat-post lever by which the post is held in position or removed therefrom; and the invention consists in the features, combinations, and details of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a sectional elevation of a portion of a bicycle-frame fitted with a seat-post constructed in accordance with my improvements. Figs. 2 and 3 are sectional elevations of modified forms of seat-posts made in accordance with my improvements; and Figs. 4, 5, and 6 are plan views of the seat-posts illustrated in Figs. 1, 2, and 3, respectively.

In the art to which this invention relates it is well known that the seat-post formed of two plano-convex wedges is the best type in the art; and the object of my invention is to improve this type by simplifying its construction, reducing the cost of its manufacture, and providing means for making desired adjustments to compensate for wear, so that the seat-supporting lever can occupy at all times a substantially-horizontal plane.

In constructing my improvements and using them in connection with the pillar-tube A of a bicycle-frame I provide a seat-post formed of two wedges, one of which, B, is tapered downwardly and has its large end at the top, and the other of which, B', is tapered upwardly and has its large end at the bottom,

and which, preferably, is formed of two plano-convex wedges. These parts may be formed of a tube split diagonally, as shown at b, or of two substantially-semicylindrical wedges which are struck up from appropriate blanks.

To hold the saddle in position and at the same time firmly secure the seat-post in engagement with the pillar-post of the bicycle, a seat-supporting lever C is provided and pivoted at c to the upwardly-tapering member. This seat-supporting lever is preferably formed of a tube flattened at c', so that it is considerably narrower at this point than it is in diameter at the cylindrical portion to enable it to easily enter a slot in the upper end of the downwardly-tapering member. The upwardly-tapering member, in which the seat-supporting lever is pivoted, is preferably provided with a block or flat surface b', which may be brazed therein or formed integral with the wedge by swaging inwardly. The inner portion of this block is cut away in its central portion to receive the flattened end of the seat-supporting lever and permit it to be pivoted to the upwardly-tapering member.

As above suggested, the seat-supporting lever is pivotally secured to the upwardly-tapering member of the seat-post. At the sides of the slot in the downwardly-tapering member through which the flattened portion of the seat-supporting lever passes I arrange toothed racks D, with the teeth d projecting forward on the outside of the post, as shown in Fig. 1. On the sides of the flattened portion of the seat-supporting lever I arrange lugs D', adapted to enter the recesses or depressions between the teeth of the racks when the parts are assembled, as shown in Fig. 1. By pivoting the seat-supporting lever on the upwardly-tapering member and by having its lugs engage with the toothed racks on the downwardly-tapering member any weight applied to the seat-supporting lever either by the hand or by the weight of the rider will have the effect of forcing the members in that direction which serves to lock the parts in position. The arrangement shown also provides a means for compensating for wear of the parts or the expanding of the pillar-tube. For instance, should the pillar-tube of the bicycle-frame expand to such an extent that



the seat-supporting lever would be tilted downwardly and its free end contact the upper tie-rod A' it would in ordinary instances be necessary to raise the entire seat-post and at the same time change the inclination of the saddle. With this construction, however, the lugs on the sides of the flattened portion of the seat-supporting lever can be arranged to engage the next-higher teeth in the toothed racks, and thus compensate for the expansion and permit the seat-supporting lever to occupy at all times when in use a substantially horizontal position.

When it is desired to remove my improved seat-post from connection with the bicycle-frame, all that is necessary to do is to raise the seat-supporting lever, which action raises the downwardly-tapering member of the post, relaxes the wedge connection, and thus permits both parts to be removed from the pillar tube or frame.

In Figs. 2 and 3 I have shown modifications in the application of the same principle or mode of operation. Fig. 2 illustrates a construction in which the racks D instead of having an outward projection have an inward projection, and the lugs are arranged accordingly. The racks may be made of an independent piece brazed or otherwise secured to the inside of the downwardly-tapered member of the post, or the racks may be formed by turning inward the body of the member. Fig. 3 illustrates a construction in which a single rack is located on the downwardly-tapering member of the post and projects inwardly. The seat-supporting lever is bifurcated, and the rack enters into the slot of the bifurcated end. The engaging lug D<sup>2</sup> of the lever is formed, preferably, on a separate piece d', inserted in the slot of the bifurcated end of the lever and secured in place by pins or rivets d<sup>2</sup>, as shown in the drawings, though the lug can be otherwise formed and secured in place, if desired. As the bifurcated end of the lever must be arranged in two slots in the downwardly-tapering member and the toothed rack on an intermediate piece between the two slots and between the bifurcated members of the lever, it is apparent that it should be pro-

vided with additional supporting means to give it the necessary strength and rigidity. I have shown such additional supporting means in Fig. 3 and indicated the same by the letter e. This piece so engaged forms, as it were, a head on the upper end of the piece containing the toothed rack, flaring or extending partially around the top of the seat-post member B, so that the two slots in the construction shown in Fig. 3 are closed at the top instead of being open slots, as shown in the other forms of construction. The operation with either form of construction shown in Figs. 2 and 3 is the same as that described for the construction shown in Fig. 1.

What I regard as new, and desire to secure by Letters Patent, is—

1. In a seat-post for bicycles, the combination of an upwardly-tapering member, a downwardly-tapering member, a seat-supporting lever pivoted to the upwardly-tapering member and adjustably engaging directly with the downwardly-tapering member, substantially as described.

2. In a seat-post for bicycles, the combination of an upwardly-tapering member, a downwardly-tapering member, a seat-supporting lever pivotally secured to the upwardly-tapering member and having an engaging tooth or lug arranged thereon, and a toothed rack on the downwardly-tapering member arranged to be engaged by the tooth or lug of the seat-supporting lever, substantially as described.

3. In a seat-post for bicycles, the combination of an upwardly-tapering member, a downwardly-tapering member provided with an external rack having forwardly-projecting teeth, and a seat-supporting lever pivoted to the upwardly-tapering member and provided with a rearwardly-projecting tooth or lug arranged to engage the external forwardly-projecting teeth of the rack of the downwardly-tapering member, substantially as described.

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Witnesses:

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