

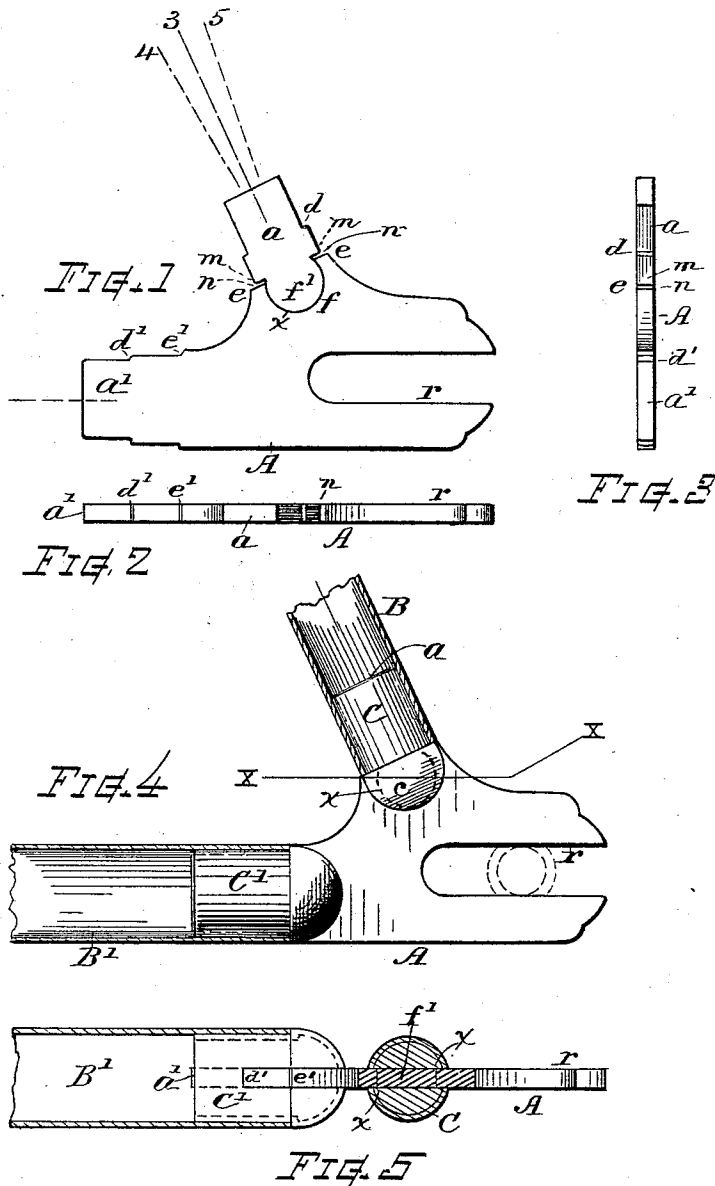
(No Model.)

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BRANCH CONNECTION FOR BICYCLE FRAMES.

No. 585,176.

Patented June 29, 1897.



Witnesses.

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BRANCH CONNECTION FOR BICYCLE-FRAMES.

SPECIFICATION forming part of Letters Patent No. 585,176, dated June 29, 1897.

Application filed December 21, 1896. Serial No. 616,391. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. BENNETT, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Branch Connections for Bicycle-Frames, of which the following, together with the accompanying drawings, is a specification sufficiently full, clear, and exact to enable persons skilled in the art to which this invention appertains to make and use the same.

The object of my present invention is to provide, as a new article of manufacture for the purpose specified, a branch connection-plate with an articulated tube-supporting branch adapted for slight oscillative adjustment, whereby said plate is rendered practically convertible for use in bicycle-frames of different sizes or with varied degrees of angularity of the braces, thereby obviating the necessity or requirement of separate and special forms of plates for each and every variation of bicycle-frames; also, to provide a branch connection-plate, for the purpose specified, having a branch that can be adjusted to accommodate the configuration of the bicycle-frame in which it is assembled, the adjusting-joint of said branch disposed for permanent fixture by the attachment and fixture of the tube-supporting thimble, thereby affording ready and accurate assemblage and giving rigid support for the tubes or braces in a completed frame. These objects I attain by the branch connection shown in the drawings, wherein—

Figure 1 is a side view of my improved branch connection-plate. Fig. 2 is a top edge view, and Fig. 3 a front end view, of the same. Fig. 4 is a side view showing the arrangement of the joint-thimbles and tubular frame-bars upon the connection-plate, and Fig. 5 is a horizontal section through the branch at line X X on Fig. 4.

Referring to parts, A denotes the branch connection-plate, B and B' the braces or tubular bars of the bicycle-frame, and C C' the joint-thimbles or slotted nipples that support the tubular braces upon the branches of the connecting-plate. Said tubes B B' and thimbles C C' may be of usual form.

The plate A is formed with projecting

branches *a* and *a'*, having shoulders *d* and *e*, against which the edges of the thimbles and tubes abut, the outer end of the branch being of suitable width to fit the interior of the thimble.

According to my invention one of the branches *a* is joined to the main body or section of the plate by a close articulation or interlocked in a manner that will afford a slight backward and forward oscillative adjustment of the branch *a* relatively to the axis of the other branch *a'*, while holding said branch section securely in connection with the main section of the plate without permitting longitudinal looseness of the branch. The juncture of the parts is preferably as shown in Fig. 1, the main section of the plate A being provided in its upward-projecting part with a circular recess *f* between the shoulders *e* and including about three-fourths of a circle. The branch section *a* is provided with a circular end *f'*, of the same diameter of circle as the recess, which fits into said recess by lateral insertion, forming a close interlocking attachment one part with the other, as shown. The shoulders *m* on the branch *a* are sufficiently short to leave a narrow space *n* between *m* and *e*, which permits of the top end of the part *a* being forced forward or backward to a limited degree of oscillative adjustment, whereby the inclination of the branch *a* can be varied relatively to the axis of the branch *a'* as desired, (see dotted lines 3, 4, and 5 on Fig. 1,) so that when the connection-plate A is applied to use in assembling a bicycle-frame the branches can be relatively adjusted to suit the particular angular relation required for the respective braces or tubes B B' of that particular frame, the same branch connection-plate being adapted for different forms of bicycle-frame without change in the manufacture.

The two portions of the plate are made of the same thickness, and the line of juncture between the main and branch sections is disposed so as to lie just within the spherical head *c* of the thimble C. When the tubes and thimbles are brazed or soldered together after the frame is set up, the joint *x* is rendered permanently solid and the parts rigidly fixed in the frame, giving as strong a connection as if made in a single piece. The

plate is provided with the usual jaw or slot for receiving the bicycle-axle.

These improved branch connection-plates are made and sold as separate articles of manufacture and present the important advantages of simplicity, economy, and ready adaptability for meeting the requirements of various bicycle-frames.

I claim as my invention herein to be secured by Letters Patent—

1. A branch connection-plate for bicycle-frames, provided with an articulated branch, the main portion of the plate, and said branch being formed of flat plate metal and both disposed in the same plane; substantially as and for the purpose set forth.

2. A branch connection-plate for bicycle-frames, provided with tube-supporting branches, one of said branches adapted to have a backward and forward oscillative adjustment for varying the relative angularity of the respective branches, in combination

with a joint-supporting thimble, covering the juncture of said branch with its plate, and adapted for telescopic connection with the frame-bar, and for permanent support of the branch joint in the completed connection, substantially as set forth.

3. The branch connection-plate composed of a main section forming the axle-receiving jaw and forwardly-projecting branch, and a branch section united with said main section by a close articulate interlocking engagement that permits the swinging or angular variation of said branch section in the plane of the plate; in combination with a joint-thimble adapted to embrace the juncture of said sections, as set forth.

Witness my hand this 17th day of December, 1896.

JOHN H. BENNETT.

Witnesses:

CHAS. H. BURLEIGH,
ELLA P. BLENUS.