No. 638,396. Patented Dec. 5, 1899.

H. LAVIERS.

BICYCLE FRAME.

(Application filed Aug. 4, 1899.)

(No Model.)

FIG. 1.

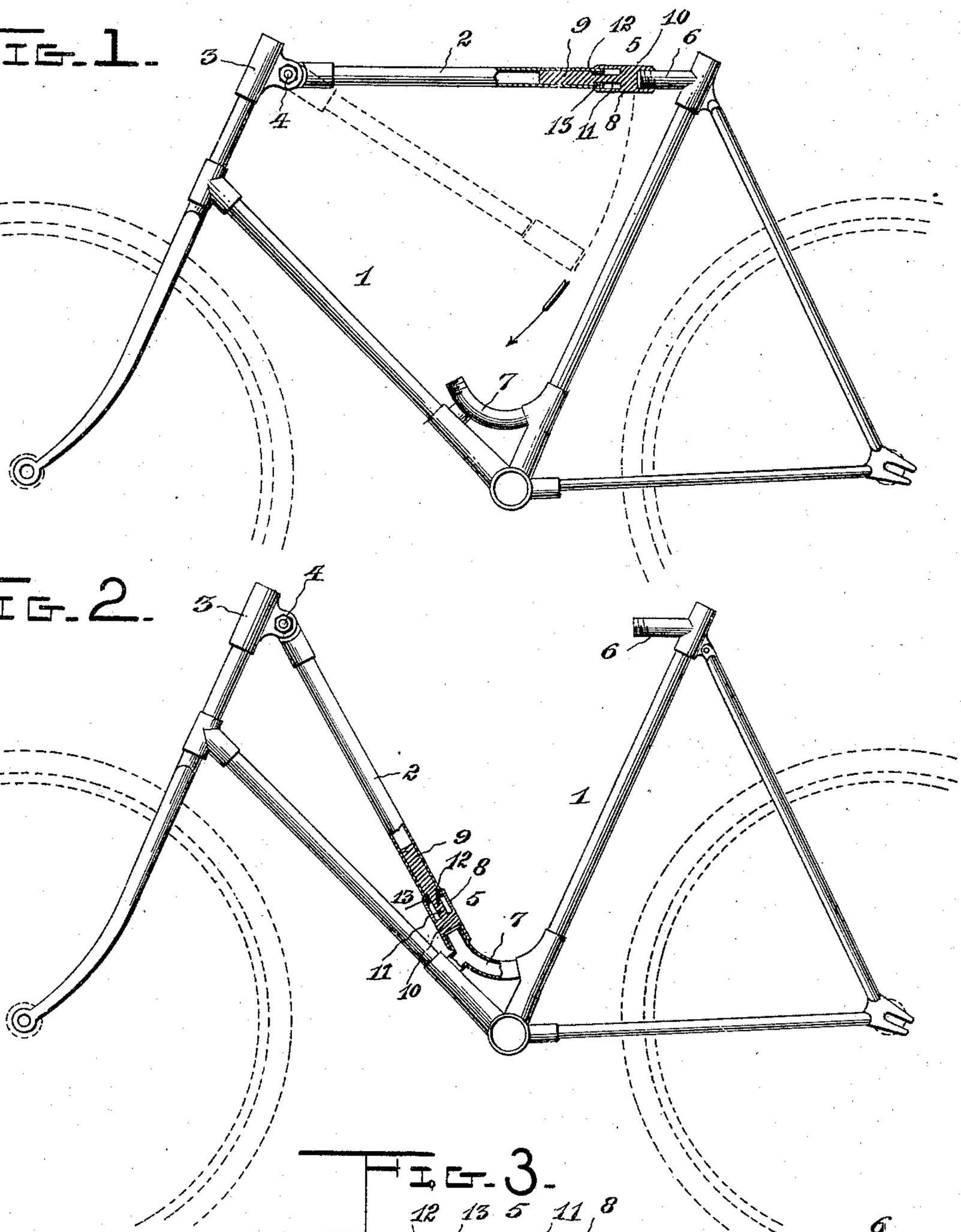
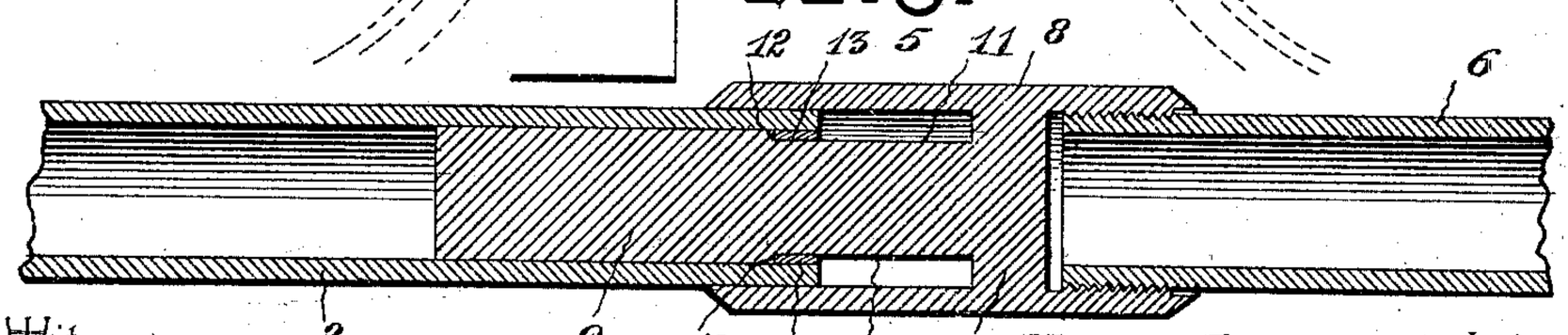


FIG. 2.

FIG. 3.



Witnesses
John T. Dunfee
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UNITED STATES PATENT OFFICE.

HENRY LAVIERS, OF WELLSTON, OHIO.

BICYCLE-FRAME.

SPECIFICATION forming part of Letters Patent No. 638,396, dated December 5, 1899.

Application filed August 4, 1899. Serial No. 726,161. (No model.)

To all whom it may concern:

Be it known that I, HENRY LAVIERS, a citizen of the United States, residing at Wellston, in the county of Jackson and State of Ohio, have invented a new and useful Bicycle-Frame, of which the following is a specification.

My invention relates to bicycles, and has for its object to so construct a bicycle-frame that it may be quickly changed to adapt it for the use of a gentleman or lady.

The invention consists in the combination and improved construction of the parts of a bicycle, as will be hereinafter more particularly set forth.

In the accompanying drawings, in which the same reference-numeral indicates a corresponding part in each of the views in which it occurs, Figure 1 is a partially-sectional plan view of a bicycle-frame embodying my invention, showing it arranged as a man's wheel. Fig. 2 is a similar view showing it arranged as a lady's wheel, and Fig. 3 is a longitudinal sectional view of a portion of the frame.

Referring more particularly to the drawings, 1 indicates the portion of the frame comprising the front and rear portions and one of the connecting-braces. These parts may be of the usual construction and to which my improvement may be applied.

Pivotally secured to the front or head of the machine is the top brace 2, the rear end of which is detachably secured to the rear portion or seat-post at two points. The connections may be of any suitable character; but I prefer to use a T-coupling 3 at front, to which the front end of the brace is secured by means of a bolt 4. The rear connection for the brace is preferably formed by a telescopic nut or union 5, which is adapted to engage with either of two projections 6 and 7 at the top and bottom, respectively, of the seat-post. Both of the projections are at the same distance from the pivotal point of the brace 2, so that the brace may be connected with either one of them, as desired.

Although any suitable coupling or union may be employed, yet I prefer to use the one shown in the drawings, in which 8 indicates a collar or sleeve, one end of which fits loosely over the end of the brace 2, and the other end is preferably screw-threaded to engage with the screw-threaded ends of the projections 6 and 7. To add to the strength and rigidity of the joint formed by this union, a central plug or core 9 is secured to the collar or sleeve by a web 10, which is intermediate the plain and the screw-threaded portions. The plug is located axially of the collar, so that it will fit into the end of the brace. It is preferably longer than the collar, so as to prevent any lateral movement of the collar on the brace, which would have a tendency to weaken the joint. As the screw-threads at the other end of the collar engage with the screw-threads of the projection much more closely than can be possible with only a sliding contact, it is not necessary to provide that end of the collar with a core, although one could be used, if desired, similar to the other end, except that it should be no longer than the collar to permit of its entering the end of the projection; but the projections are preferably formed solid, in which case there could be no core within that end of the sleeve.

The core 9 is preferably reduced adjacent to the web 10, as shown at 11, which forms a shoulder 12. A collar 13 is located within the end of the brace 2 and around the reduced portion in such relation to the parts as will prevent the web from coming in contact with the end of the projection.

When it is desired to adjust the frame for the use of either a lady or a gentleman, the coupling 8 is slipped up on the brace 2 until the screw-threaded end will pass the projection. The brace and the projection are then brought into a direct line with each other, when the coupling is then slipped over the end of the projection until their screw-threads engage. The coupling is rotated until its screw-threaded end has been forced over the projection far enough to form a firm and unyielding joint. When it is desired to change the frame, the coupling is unscrewed until it will pass the end of the projection, when the brace can be swung into line with the other projection and the coupling screwed onto it. In this manner the brace will perform its desired function in either position, and the bicycle is adapted for two uses with but trifling expense or trouble.

Having thus described my invention, I claim—

1. A bicycle-frame provided with two screw-threaded projections, a brace pivotally secured to the head with its free end common to both projections, a collar on the brace, one end of which is screw-threaded, a web within the collar and a core secured to the web in axial alinement with the collar and adapted to fit within the brace.

2. A bicycle-frame provided with two screw-threaded projections, a brace pivotally secured to the head with its free end common to both projections, a collar on the end of the brace, one end of which is screw-threaded, a web in the collar, a core secured to the web in axial alinement with the collar, the portion of the core adjacent to the web being reduced in diameter, and a collar within the end of the brace and fitting the reduced portion of the core.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HENRY LAVIERS.

Witnesses:
O. B. GOULD,
W. R. DAVIS.