

(No Model.)

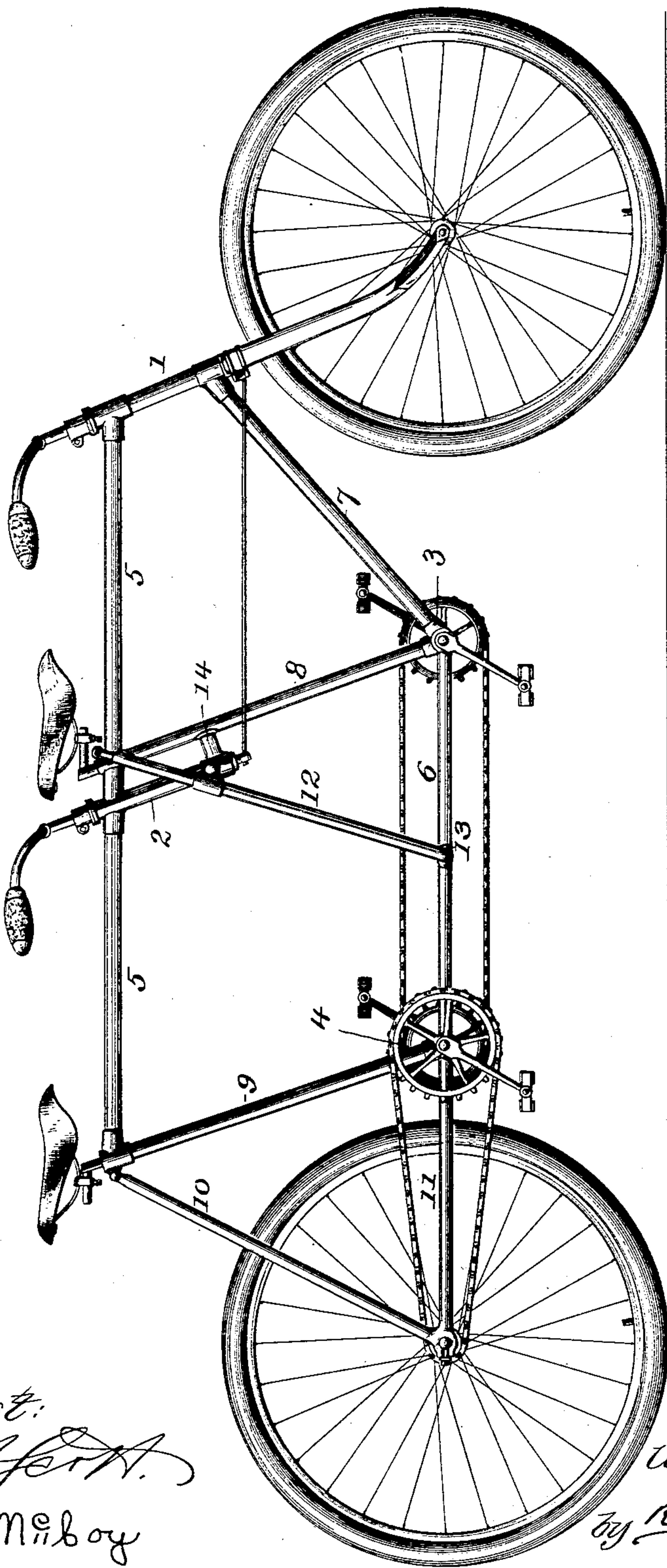
2 Sheets—Sheet 1.

W. H. BINNS.
TANDEM.

No. 593,291.

Patented Nov. 9, 1897.

Fig. 1.



Attest:
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Atty.

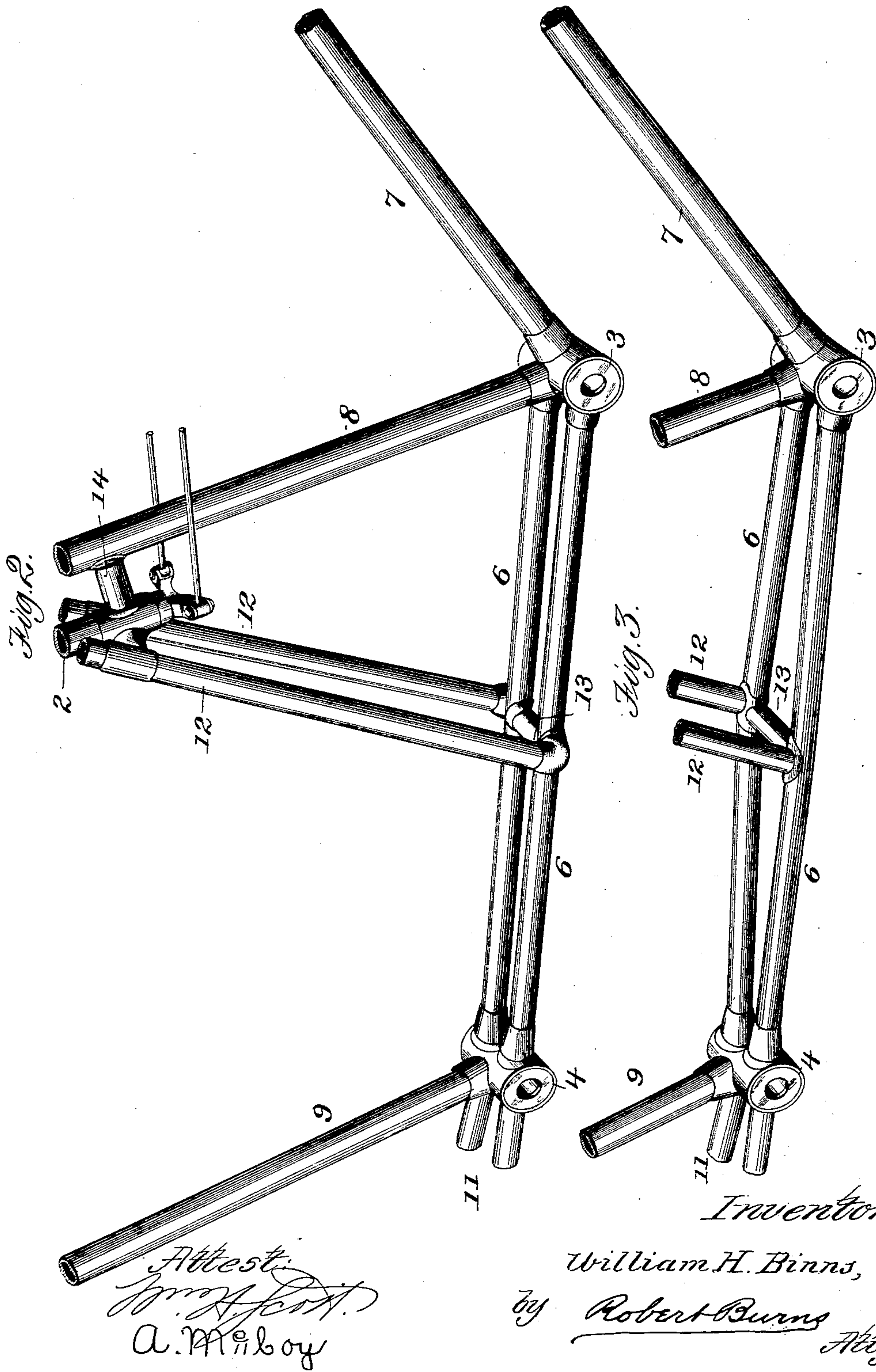
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2 Sheets—Sheet 2.

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Patented Nov. 9, 1897.



UNITED STATES PATENT OFFICE.

WILLIAM H. BINNS, OF CHICAGO, ILLINOIS.

TANDEM.

SPECIFICATION forming part of Letters Patent No. 593,291, dated November 9, 1897.

Application filed August 10, 1896. Serial No. 602,349. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BINNS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Tandem-Bicycle Frames; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to the tandem order of bicycle-frames, the object of the present improvement being to afford a simple, light, and durable construction of the frame, and in which rigidity is attained in a lateral as well as a vertical direction in a very perfect and efficient manner, all as will hereinafter more fully appear, and be more particularly pointed out in the claims. I attain such object by the arrangement and connection of parts illustrated in the accompanying drawings, in which—

Figure 1 is a general side elevation of a tandem bicycle embodying the present invention; Fig. 2, an enlarged detail perspective view of the central and lower portions of the frame, illustrating the details of the present invention; Fig. 3, a similar view of a modification.

Similar numerals of reference indicate like parts in different views.

As represented in the drawings, the cycle-frame will in the main be of the usual and ordinary construction, comprising the usual front and rear steering-heads 1 and 2, front and rear crank-hanger shells 3 and 4, horizontal top connecting member 5, extending the full length of the frame, counterpart horizontal lower members 6, connecting the hanger-shells 3 and 4 together, diagonal member 7, connecting the lower end of the front steering-head 1 to the front hanger-shell 3, front and rear seat posts or standards 8 and 9, and usual top and bottom rear forks 10 and 11, all of which parts are connected together in any usual and approved manner.

In the present invention the usual diagonal member that connects the lower end of the rear steering-head and the rear crank-hanger shell together is dispensed with wholly and in its place the following improved construction employed:

12 12 are counterpart diagonal members that are secured at their upper ends to the sides of the forward standard or seat-post tube 8, at the upper end of the same, while the lower ends of such diagonal members spread outwardly and are attached to the horizontally-arranged connecting members 6, near the mid-length of the same.

It is within the scope of the present invention to attach the lower ends of the diagonal members 12 directly to the horizontal members 6, the said horizontal members being bowed or spread apart in a horizontal plane for such purposes, as clearly indicated in Fig. 3, or the same may be secured to the sides of such horizontal members by means of the laterally-arranged stay member 13, that has a rigid attachment to and between the horizontal connecting members 6 6 of the frame, as shown, the ends of such stay projecting at the outside of said frame members 6 6, so as to constitute a means for the attachment of the lower ends of the diagonal brace members 12 12, as illustrated in Fig. 2.

The diagonal brace members 12 12 are also attached intermediate of their length to the lower portion of the rear steering-head 2 of the frame, as indicated in Figs. 1 and 2, so as to attain, in connection with the short stay connection 14, between the rear steering-head 2 and the front seat-post 8, a very strong and substantial bracing of such parts together.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a tandem-bicycle frame, the combination with the front seat-post standard 8, and the horizontal members 6, 6, that connect the front and rear hangers of the frame together, of a pair of diagonal brace members 12, 12, secured at their upper ends to the upper end of the seat-post standard, and at their lower ends to the horizontal frame-connecting members 6, 6, intermediate of their length, substantially as set forth.

2. In a tandem-bicycle frame, the combination with the front seat-post standard 8, and the horizontal members 6, 6, that connect the front and rear hangers of the frame together, of a pair of diagonal brace members 12, 12, secured at their upper ends to the upper end of the seat-post standard, and at their

lower ends to the horizontal frame-connecting members 6, 6, intermediate of their length, by means of cross-stay 13, attached to the members 6, 6, with the ends of such stay projecting outside the members 6, 6, to receive the lower ends of said diagonal members, substantially as set forth.

3. In a tandem-bicycle frame, the combination with the front seat-post standard 8, rear steering-head 2, and the horizontal members 6, 6, that connect the front and rear hangers of the frame together, of a pair of diagonal brace members 12, 12, secured at their upper ends to the upper end of the seat-post standard, intermediate of their length to the rear steering-head, and at their lower ends to the horizontal frame-connecting members 6, 6, intermediate of their length, substantially as set forth.

4. In a tandem-bicycle frame, the combination with the front seat-post standard 8,

rear steering-head 2, and the horizontal members 6, 6, that connect the front and rear hangers of the frame together, of a pair of diagonal brace members 12, 12, secured at their upper ends to the upper ends of the seat-post standard, intermediate of their length to the rear steering-head, and at their lower ends to the horizontal frame-connecting members 6, 6, intermediate of their length, by means of cross-stay 13, attached to the members 6, 6, with the ends of such stay projecting outside the members 6, 6, to receive the lower ends of said diagonal members, substantially as set forth.

In testimony whereof witness my hand this 8th day of August, 1896.

WILLIAM H. BINNS.

In presence of—

ROBERT BURNS,
ARTHUR MCCOY.