

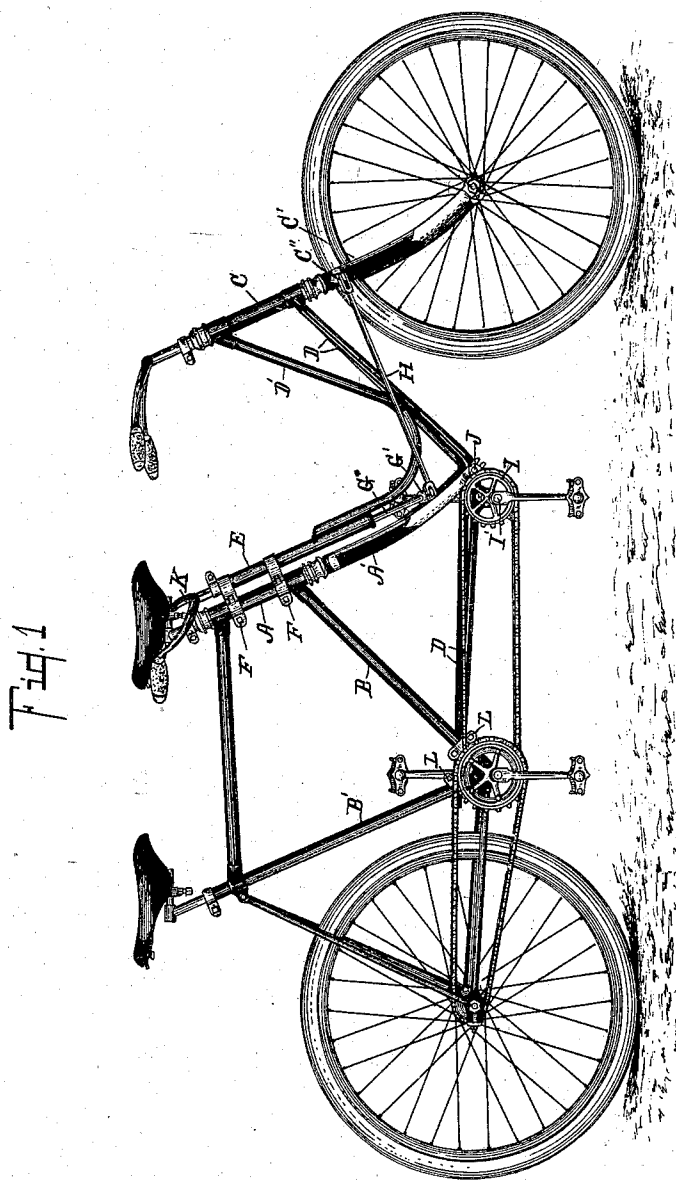
(No Model.)

2 Sheets—Sheet 1.

G. E. HEATON.
BICYCLE.

No. 558,069.

Patented Apr. 14, 1896.



Witnesses:

Walter S. Clark
Marian Longyear

Inventor,

George Elmer Heaton
By *Chas. L. Chaffell*
Att'y.

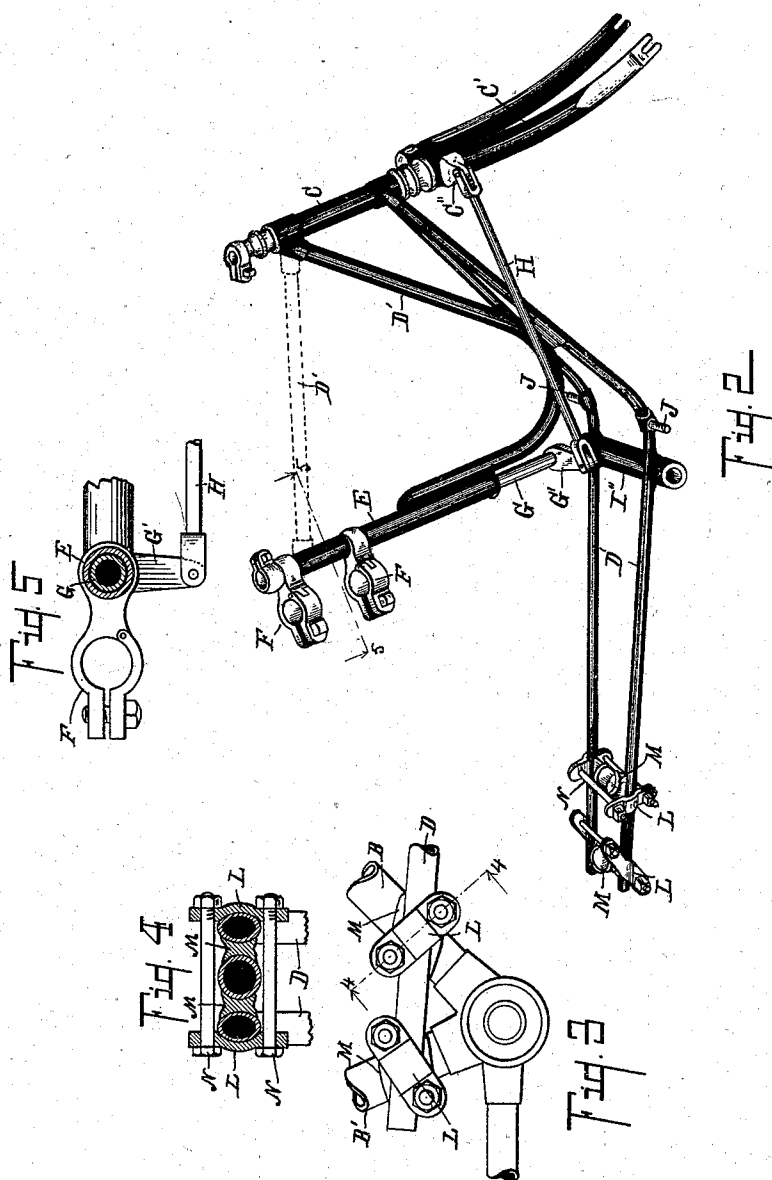
(No Model.)

2 Sheets—Sheet 2.

G. E. HEATON.
BICYCLE.

No. 558,069.

Patented Apr. 14, 1896.



Witnesses:

Walter S. Wood
Marian Longyear

Inventor,

George Elmer Heaton
By *Edw. L. Chappell*
Att'y.

UNITED STATES PATENT OFFICE.

GEORGE ELMER HEATON, OF THREE RIVERS, MICHIGAN.

BICYCLE.

SPECIFICATION forming part of Letters Patent No. 558,069, dated April 14, 1896.

Application filed September 3, 1895. Serial No. 561,276. (No model.)

To all whom it may concern:

Be it known that I, GEORGE ELMER HEATON, a citizen of the United States, residing at the village of Three Rivers, in the county of St. Joseph and State of Michigan, have invented a certain new and useful Bicycle, of which the following is a specification.

My invention relates to improvements in bicycles, and more particularly to an attachment to the ordinary single bicycle.

The object of my invention is to provide a means which will adapt an ordinary single bicycle for use as a tandem bicycle capable of easily carrying two persons; and other minor objects which will appear in the detailed description. I accomplish this object of my invention by the device and mechanism shown in the accompanying drawings, in which—

Figure 1 is a view of an ordinary diamond-frame bicycle with my attachment in place. Fig. 2 is a detail view of the framework of my attachment detached from the machine. Fig. 3 is an enlarged detail view of the clamp and horizontal arms, showing the method of attaching my improved device to the lower portion of the bicycle-frame. Fig. 4 is an enlarged detail sectional view on line 4 4 of Fig. 3, looking in the direction of the little arrows at the ends of the section-line. Fig. 5 is an enlarged detail sectional view on line 5 5 of Fig. 2, looking down.

Similar letters of reference refer to similar parts throughout the several views.

Referring to the drawings and the lettered parts, it will be seen that to the frame of an ordinary bicycle is joined my new attachment, in Fig. 1. A is the head of the main frame. B is the lower forward brace of the frame and B' is the diagonal brace of the frame, which unite at the lower part and form a bearing for the main crank-shaft of the machine.

My improved device consists of an additional head C, which bears an ordinary bicycle-fork C'. Extending downwardly and rearwardly from this head C are braces D, which have outwardly-projecting studs J at their lower part to engage into the lower end of the fork A' of the rear machine. The braces D extend on rearwardly and pass to each side of the main frame of the bicycle, where they are clamped in position by the clamps L,

which are secured in place by the bolts N N, suitable protecting-blocks M M being placed between the braces. Extending downwardly from the top of the head C is the brace D, which is joined by suitable brazing to the braces D and is curved upwardly and rearwardly, so that its rear end is substantially parallel to the head of the main frame. A supplemental head E extends downwardly parallel with the head A of the main frame and is secured thereto by clamps F F, which are ordinarily two-member hinged clamps. In the supplemental head E is inserted a handle-bar post G, bearing handles K at the top. A short arm G' projects out from the lower end of the handle-bar post G and is connected by a link H to an outwardly-projecting arm C'' on the fork C' of my attachment for the purpose of uniting the two handle-bars to the steering-head so that they shall act together.

A seat is secured in the main head A of the machine for the support of the forward rider. The handle-bars K, being attached to the post G under this forward seat, project outwardly and upwardly to each side of the seat. A suitable crank-hanger I' is secured to the braces D a little to the rear of the lower end of the fork A', and in this hanger is inserted a crank-shaft I', and on the shaft is supported a sprocket-wheel I, which carries a suitable sprocket-chain which passes back over an additional sprocket-wheel of the same size on the crank-shaft of the main machine, this additional sprocket-wheel not being detailed out in the drawings, as it can be placed upon the shaft in a variety of positions.

It will thus be seen that a tandem machine can be made of an ordinary single bicycle by placing an additional sprocket-wheel on the crank of the machine, detaching the forward wheel from the fork of the machine, removing the handle-bars, and securing my improved attachment thereto by placing the forward fork over the studs J J, clamping the supplemental head E to the head A by the clamps F F, securing the rear end braces D to the lower part of the frame by the clamps L, placing a seat on the head of the machine, and the handle-bars in the supplemental head adapted to project out at each side.

I desire to state that my attachment for bi-

cycles can be considerably varied in its details without departing from my invention. It would be possible to dispense with the braces D' and substitute therefor the braces D'', (indicated by dotted lines,) and secured in substantially the horizontal position to the forward head C and supplemental head E. This is the construction adapted for use where the attachment is designed to make a tandem wheel adapted for the use of men. As I have shown the device in full lines the forward position is designed and intended for the use of female riders.

My attachment can be considerably varied in its details without departing from my invention.

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

1. The combination with the frame of an ordinary bicycle, of an additional head, C; a fork, C', in said head, C; braces, D, extending downwardly from said head, C, and adapted to attach to the lower end of the fork of the main bicycle-frame by means of studs, J, and extending rearwardly and secured to the lower part of the frame of the bicycle by clamps, L; the supplemental head, E, with clamps, F, thereon to be secured to the head of the main frame of the bicycle; a handle-bar post inserted into said supplemental head; an arm, G, on said post, and an arm, C'', on the fork, C'; a link, H, for connecting the said arms together; the curved brace, D', extending from the additional head, C, downwardly, rearwardly and upwardly to the supplemental

head, E; a seat to be secured to the forward head of the main bicycle-frame; handle-bars secured in the supplemental head, E, projecting outwardly and upwardly to each side of the forward seat; suitable handle-bars supported on the forward head, C'; the crank-hanger, I''; the crank-shaft, I', therein; a sprocket-wheel of the same size on the crank-shaft of the main machine, all coacting together substantially as described for the purpose specified.

2. The combination with the frame of an ordinary bicycle, of an attachment consisting of an additional head, C; the supplemental head, E, located parallel to the head of the main frame; suitable connecting-braces from the head, E, to the head, C; downwardly and rearwardly extending braces, D, from the head, C, engaging the lower end of the fork, A', of the main frame and clamped to the lower angle of the main frame of the bicycle; and suitable clamps clamping the supplemental head, E, to the main head, A, of the main frame, substantially as described.

3. An attachment for a bicycle consisting of an additional head, C, suitable brace-rods extending therefrom to connect it to the head of the main frame of the bicycle to the lower end of the fork of the main bicycle and to the lower angle of the frame, as specified.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

GEORGE ELMER HEATON. [L. S.]

Witnesses:

HENRY J. BARTON,
A. G. BARTON.