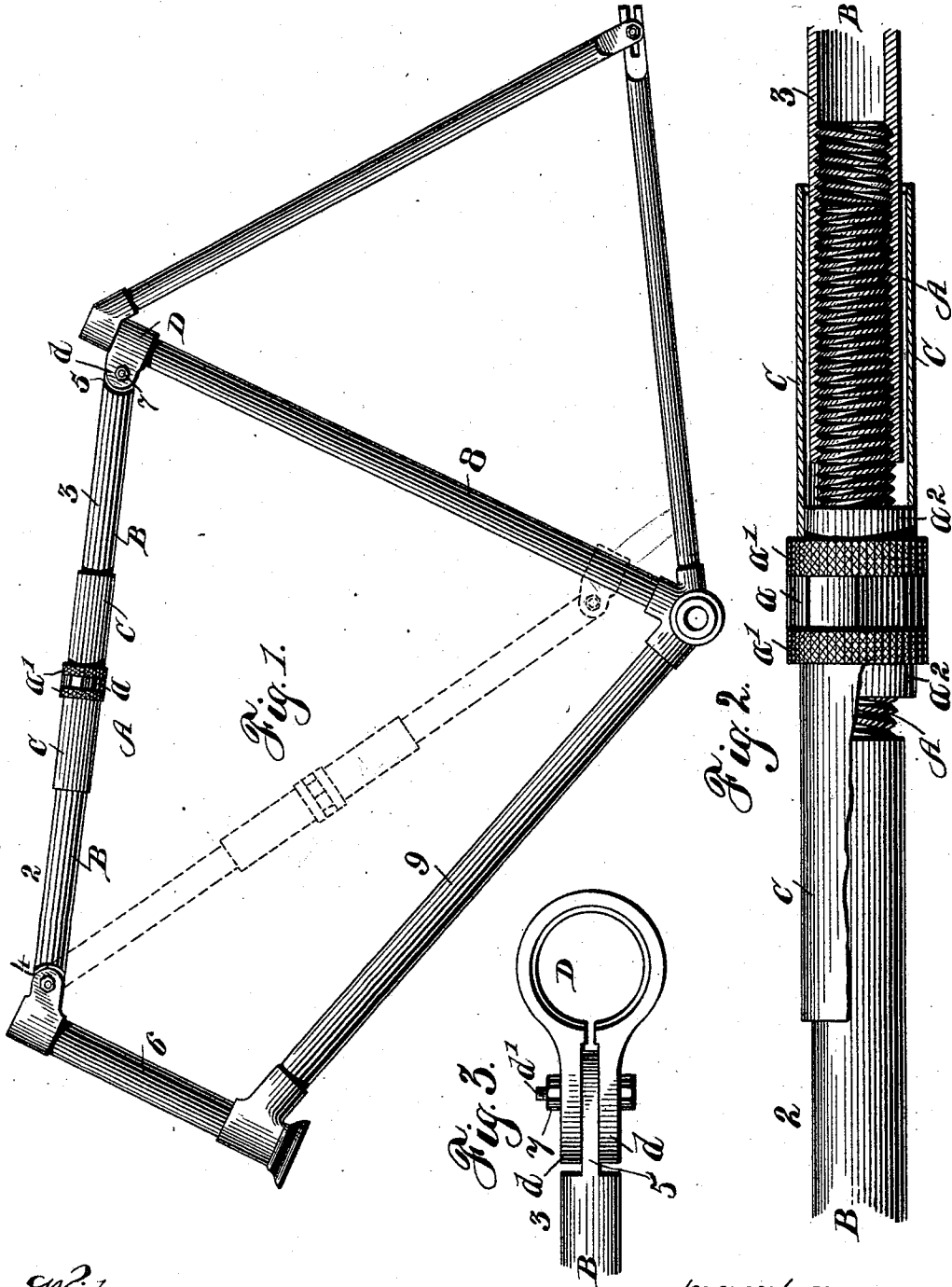


(No Model.)

E. E. HERSH.
CYCLE FRAME.

No. 529,861.

Patented Nov. 27, 1894.



Witnesses:
H. G. Winterich
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Inventor
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UNITED STATES PATENT OFFICE.

EDGAR ELIAS HERSH, OF ALLENTOWN, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND HARVEY E. HERSH, OF SAME PLACE.

CYCLE-FRAME.

SPECIFICATION forming part of Letters Patent No. 529,861, dated November 27, 1894.

Application filed January 3, 1894. Serial No. 495,521. (No model.)

To all whom it may concern:

Be it known that I, EDGAR ELIAS HERSH, a citizen of the United States, residing at Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Cycle-Frames; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters and figures of reference marked thereon, which form a part of this specification.

My invention has relation to cycle frames and more particularly to the rear frame of bicycles, and it has for its object the provision of means whereby a cycle provided with my improved rear frame is adapted for use by either sex, as will now be fully described, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation of a bicycle frame of the class known as the "diamond frame" illustrating my improvements. Fig. 2 is an elevation partly in section of a portion of the adjustable brace or auxiliary reach. Fig. 3 is an end view of the clip at one end of the said auxiliary reach.

Similar symbols indicate like parts wherever such may occur in the above described figures of drawings.

Bicycles for the use of the male sex only, require a stronger rear frame in order to properly support the weight of the rider, and in order to impart the proper strength and rigidity to such frames, a cross brace or an auxiliary cross reach has been used for connecting the upper ends of the front and rear uprights of such frames, which cross brace or reach cannot be used for cycles constructed for use of the female sex only, for well known reasons.

In order to adapt a rear frame provided with or strengthened by a cross brace, for use by either sex, the use of a removable or a reversible brace provided with a central portion out of line with its ends has been proposed. It has also been proposed to use a brace having one end detachably connected with the rear upright member of the frame and adapted to be dropped down and secured to the front

upright member of said frame. Where a removable brace or one adapted to be dropped down and secured to the front vertical member of the frame is used the function of said braces ceases when removed or displaced from their normal position, and when an invertible brace is employed it becomes necessary to entirely remove the same and then replace it in its inverted position. My invention is designed to obviate these inconveniences by so constructing the brace that it may be dropped down out of the way when the cycle is to be used by a lady, without removing such brace and without completely annulling its function as such.

To this end I employ an extensible brace, that is to say, a brace that is adjustable as to length, and pivotally connect one end thereof to one of the uprights, while the other end is adjustably connected with the other upright of such frame, said brace being applicable to frames of the diamond form, as shown in Fig. 1. The lengthwise adjustment of the brace B may be effected in various ways, according as a solid or tubular brace is used, and for the purpose of illustration I have shown a tubular brace in the drawings.

The brace B is made of two sections, 2 and 3, the proximate ends of which are screw-threaded interiorly, one section having a right hand thread and the other a left hand thread for the reception of a correspondingly threaded adjusting bolt or screw A that has a central portion *a* of polygonal form for application of a spanner or wrench, and on opposite sides of said polygonal portion the periphery of the screw is milled as shown at *a' a'* so as to afford a good hold for revolving the screw by hand, the polygonal portion being provided simply in case the screw cannot be revolved by hand. The adjusting screw A is further provided with a cylindrical shoulder or bearing *a²* next to each milled rim *a'* for the reception of a shield or guard plate or tube C, for the purpose of covering the joint between the screw and brace sections and prevent injury to clothing. This bearing or shoulder *a²* is of such a diameter that when the guard plate or tube C is secured thereto in any desired manner the outer face of the plate or tube will be nearly flush with

the milled rim *a' a'*, so as to leave as small a projecting shoulder as possible at those points. The opposite ends of the two sections 2, 3, are provided with a perforated ear, 4, 5, respectively. The ear 4 is pivotally connected with the front upright member 6, that ordinarily receives the steering bar, while the ear 5 is secured in the lugs of a clip D by means of a bolt and ordinary nut, or by means of a bolt and thumb nut, or a thumb screw, as may be desired, by means of which bolt and nut said clip is also secured to the rear upright member, 8, of the frame.

The clip D may be constructed in the form of a split sleeve provided with suitable perforated ears *d* for the securing bolt *d'*, as shown in Fig. 3, or said clip may be constructed of two semicylindrical sections hinged together. It is obvious that by loosening the nut 7 on bolt *d'* the clip D will become loose on the rear upright member 8 of the frame, said member receiving the usual saddle bar or pillar, not shown.

By suitably lengthening the brace it can be dropped down as shown in dotted lines in Fig. 1, when the cycle is to be used by a lady; and in case of the application of said brace to a diamond or V-shaped frame, said brace, even when dropped down, will still afford some support for the rear vertical member 8.

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

The combination with the front and rear uprights of a diamond frame for cycles, of an extensible brace pivotally connected with said front upright and adjustable along the rear upright, whereby said brace can be dropped down out of the way, for the purposes set forth.

In testimony whereof I have hereto signed my name in the presence of two witnesses.

EDGAR ELIAS HERSH.

Witnesses:

J. A. ZIMMERMAN,
ROBERT H. SMICKLEY.