

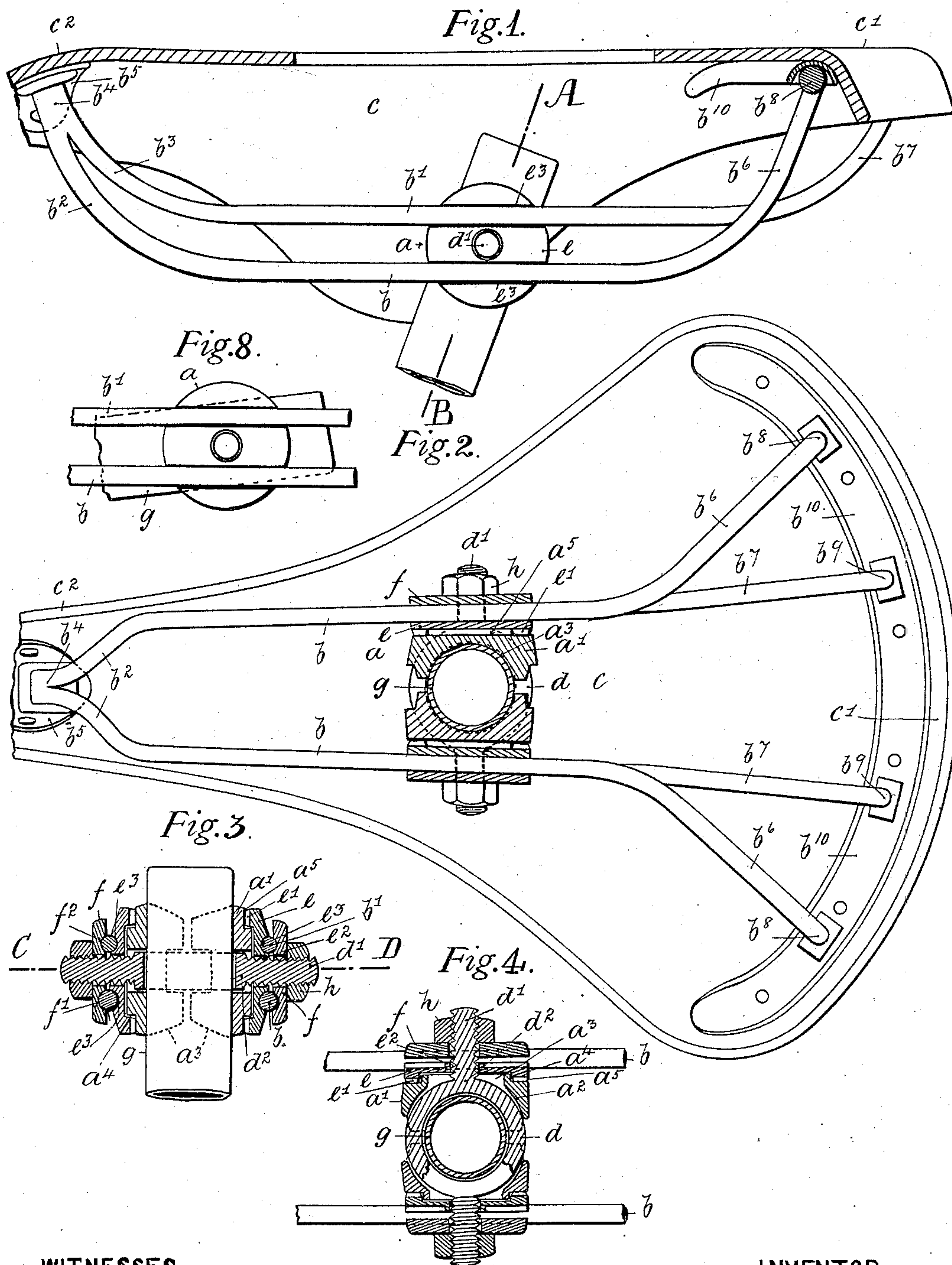
(No Model.)

2 Sheets—Sheet 1.

J. B. BROOKS.  
CYCLE SADDLE.

No. 567,883.

Patented Sept. 15, 1896.



WITNESSES

J. E. Beaufort  
Arthur. T. Sadler

INVENTOR

John B. Brooks  
by Connally Bros  
Atty

(No Model.)

2 Sheets—Sheet 2.

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Fig. 9

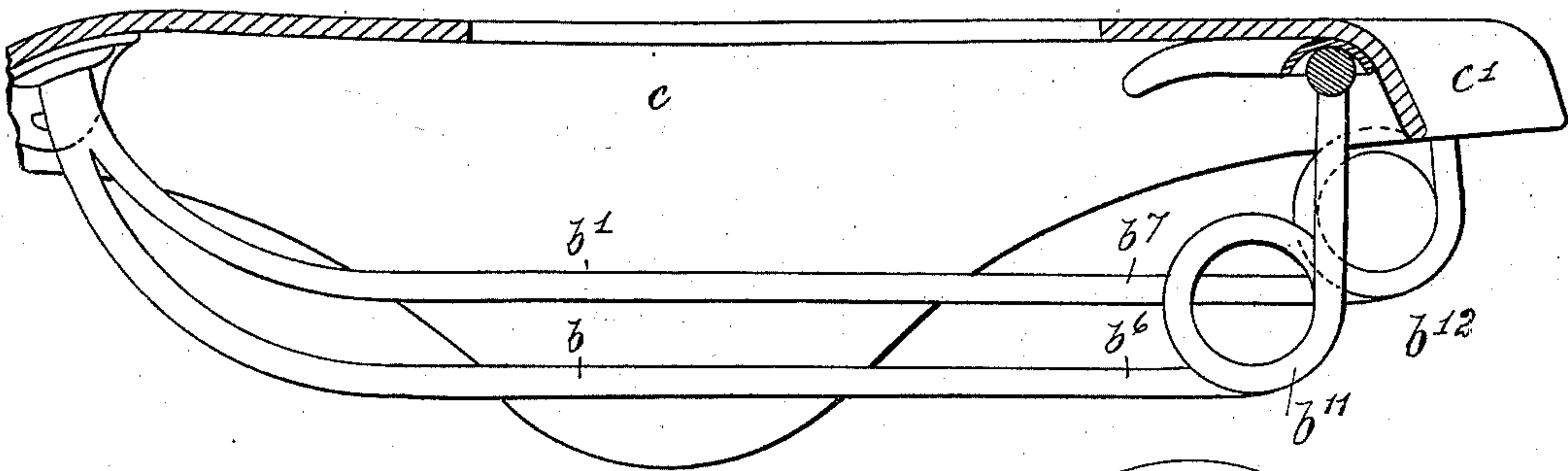


Fig. 10

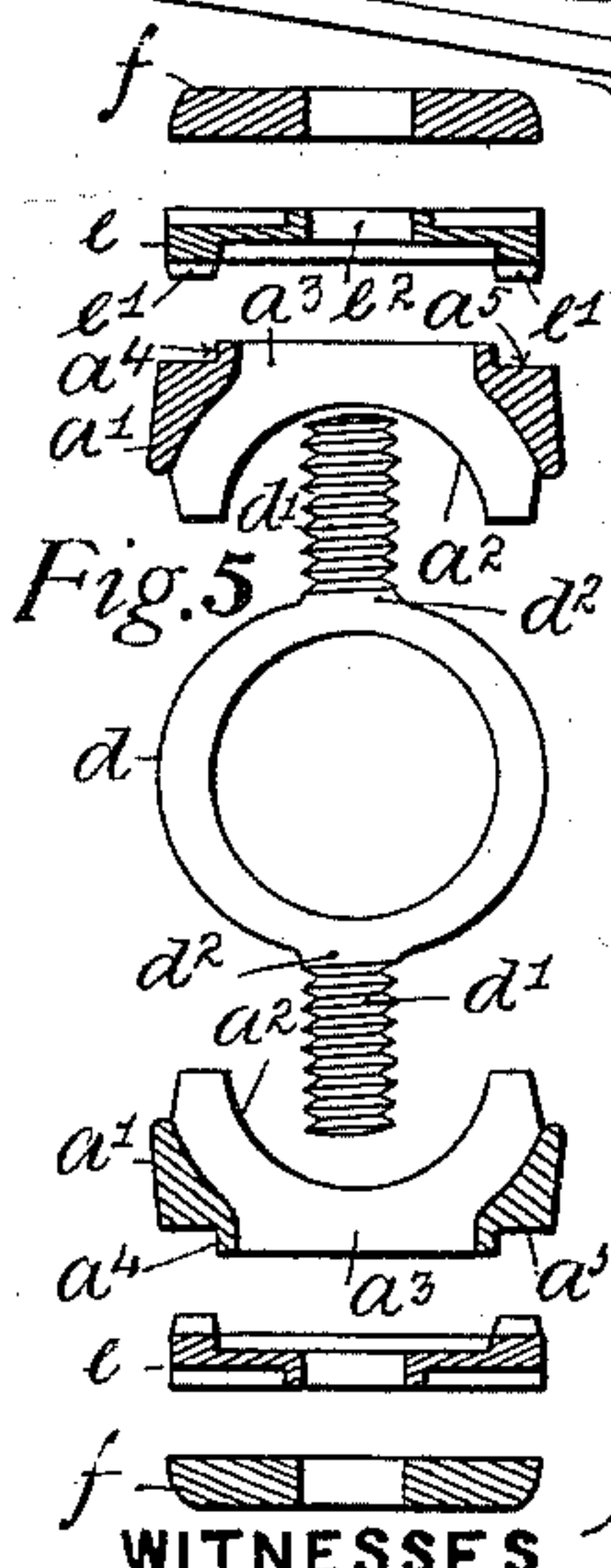
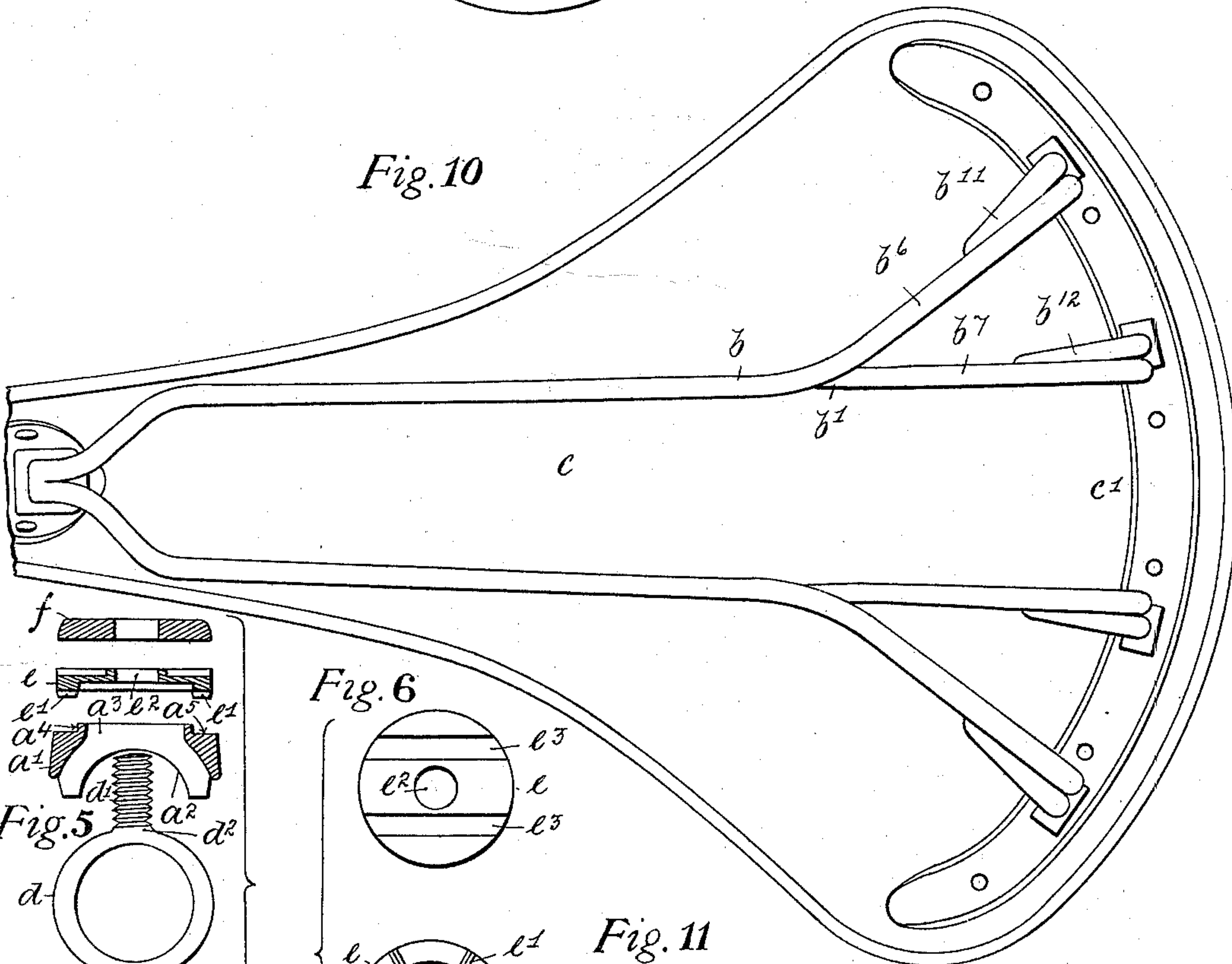


Fig. 6

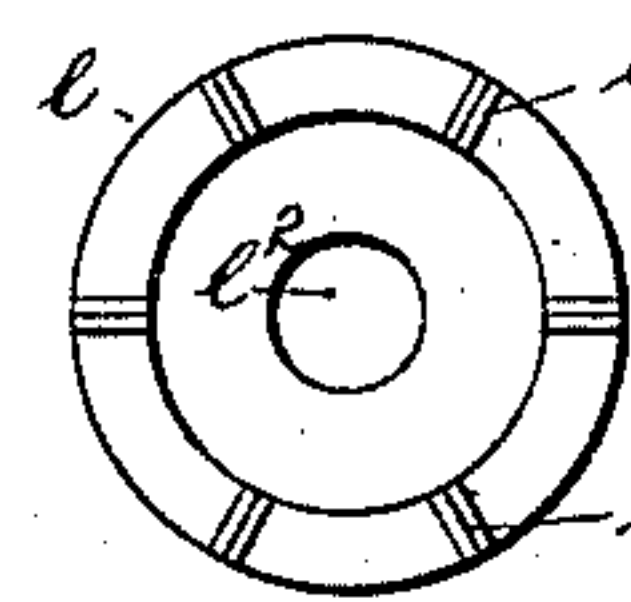
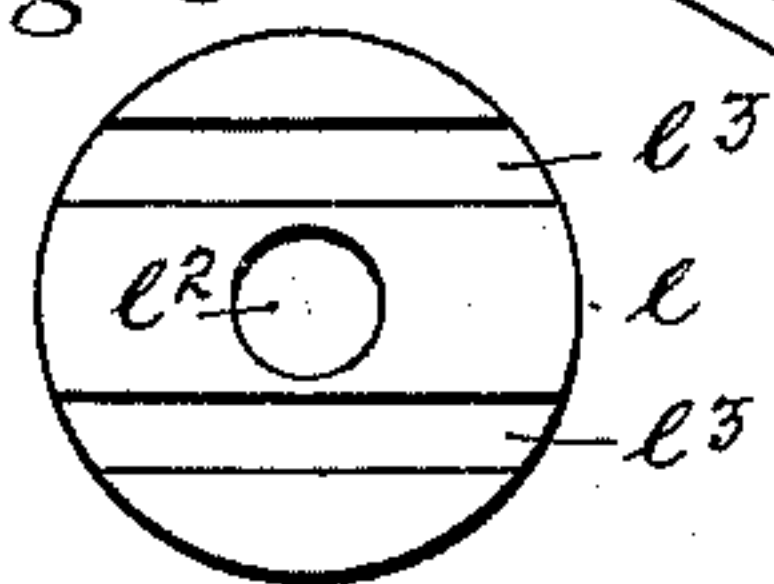


Fig. 7

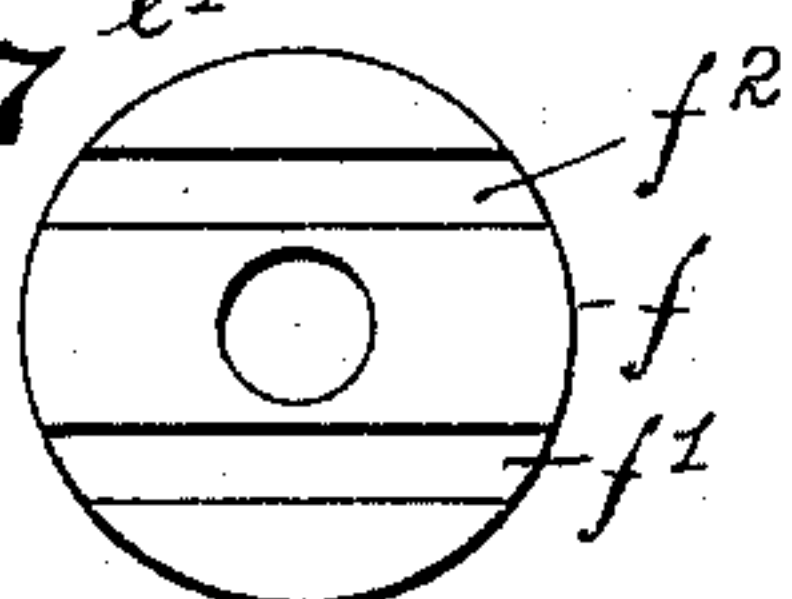
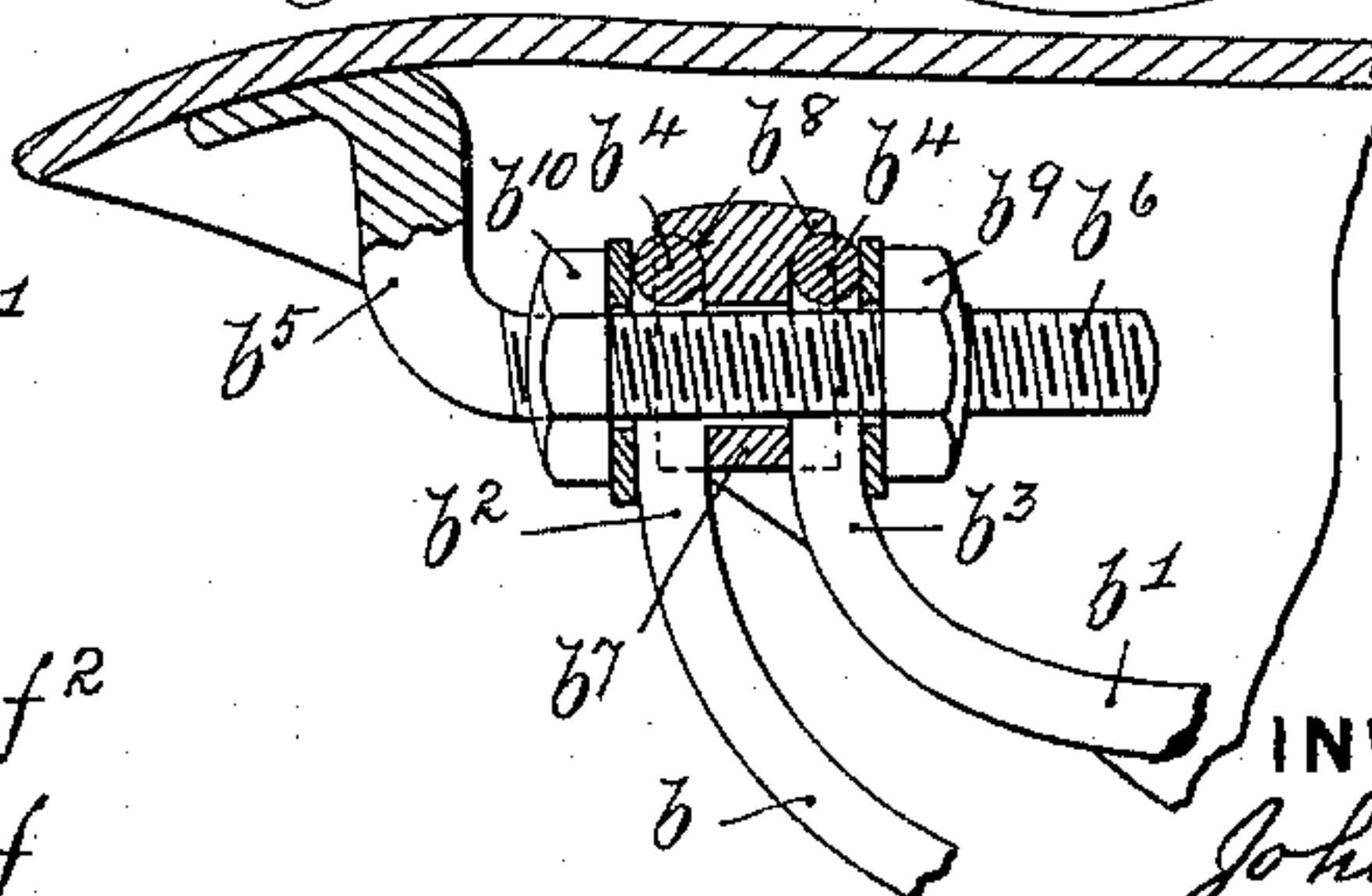


Fig. 11



WITNESSES

J. B. Brooks  
Arthur T. Sadler

INVENTOR

John B. Brooks  
by Connolly, Bros.  
Attys



# UNITED STATES PATENT OFFICE.

JOHN BOULTBEE BROOKS, OF BIRMINGHAM, ENGLAND.

## CYCLE-SADDLE.

SPECIFICATION forming part of Letters Patent No. 567,883, dated September 15, 1896.

Application filed June 4, 1894. Serial No. 513,381. (No model.) Patented in England December 9, 1892, No. 22,608, March 18, 1893, No. 5,829, April 28, 1893, No. 8,553, and December 19, 1893, No. 24,371, and in France December 22, 1893, No. 235,012.

*To all whom it may concern:*

Be it known that I, JOHN BOULTBEE BROOKS, manufacturer, a subject of the Queen of Great Britain, residing at Great Charles Street, in the city of Birmingham, England, have invented certain new and useful Improvements in Cycle-Saddles; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification, and for which invention Letters Patent of Great Britain have been granted to me, bearing date, respectively, the 18th day of March, 1893, No. 5,829, the 9th day of December, 1892, No. 22,608, the 28th day of April, 1893, No. 8,553, and the 19th day of December, 1893, No. 24,371, and in the Republic of France, dated the 22d day of December, 1893, No. 235,012.

This invention relates to the framings of cycle-saddles and to their connection-bosses.

Figure 1 of the accompanying drawings represents a longitudinal section of a saddle having metallic under-framings and a connection-boss according to my invention. It will be seen that the connection-boss is shown applied to an upright seat-pillar and that the outer washer-plate and nut are removed. Fig. 2 is an under side plan of the said saddle with the boss in horizontal section. Fig. 3 represents a cross-section of the said boss upon the dotted lines A B, Fig. 1. Fig. 4 represents a horizontal section of the boss and framing-rods upon the dotted lines C D, Fig. 3. Fig. 5 represents the whole of the component parts of the said boss less the nuts separated. Fig. 6 represents back, front, and side elevations of one of the inner washers. Fig. 7 represents an inside elevation of one of the outer washers. Fig. 8 is a detail view, and Figs. 9, 10, and 11 are detail views of modifications.

In the two-sided and double-barred frame each side is composed of parallel or nearly parallel wire members  $b$   $b'$ , arranged one above another and with the front parts  $b^2$   $b^3$  of the said members collectively converging to a common point  $b^4$ , and being there riveted or otherwise connected to a plate  $b^5$ , secured to the under side of the front  $c^2$  of the saddle-seat  $c$ . The rear or back ends of each of the

sides  $b$   $b'$  branch or spread outwardly into ramified supports  $b^6$   $b^7$ , respectively, with the ends  $b^8$   $b^9$  secured to the back under plate  $b^{10}$ , attached to the under side of the back  $c'$  of the seat  $c$ . By arranging the said rods in manner as set forth an efficient under-framing is produced.

The boss  $a$ , which is a universal one, consists of an inner and carrier-ring member  $d$ , with loose component cheek or washer parts  $a'$ ,  $e$ , and  $f$  strung upon the opposite screw-pin ends  $d'$  and shanks  $d^2$  of it, and with the wires or rods  $b$   $b'$  gripped between the opposed faces of the outer and inner washers  $e$  and  $f$ , and with the whole of the said strung components forced inwardly and together and upon the pillar member  $g$  by the screwing up of end nuts  $h$ .

The washer-cheeks  $a'$ , upon each side of the carrier-ring  $d$ , have inner concaved seatings or clearances  $a^2$ , which embrace the outer concaved surface of the pillar member  $g$ , (when it and the parts at the back of it are forced home,) and have outer clearances or holes  $a^3$ , shoulders  $a^4$ , and outer faces  $a^5$ , which faces are of softer metal than the metal of the inner washers  $e$ , which are disposed upon each side of the cheek-washers  $a$ . Each of these said washers  $e$  has teeth or sharp projections  $e'$  upon its inner face, holes  $e^2$  through its middle, and keep-grooves  $e^3$  upon its outer face for receiving the frame wires or rods  $b$   $b'$ .

The outer washers  $f$  have upon their inner faces keep-grooves  $f'$   $f^2$ , wherein the wires  $b$   $b'$  of the framing take.

When the nuts  $h$  are loose, then the washers  $f$  and  $e$  move together with the saddle, and any tilt can be given by the parts turning upon the shoulder-collars  $a^4$  of the gripping-cheeks  $a'$  as centers. Thus, assuming that the whole of the parts are in the positions as represented in either Figs. 1, 2, 3, or 4, then by loosening the nuts  $h$  the strung-together parts become loose, and by turning the saddle about the cheeks as a center the inner and outer washers move bodily with the rods  $b$  and  $b'$  until the necessary tilt or adjustment is acquired. Then screw up the nuts, when the whole of the component parts are forced inwardly and forcibly upon



each other and the whole collectively set by the teeth or sharp projections  $e'$  upon the inner faces of the inner washers  $e$  impressing themselves or slightly embedding themselves in the opposed faces  $a^5$  of the gripping-cheeks  $a'$ , which are of softer metal than the inner washers  $e$ ; hence the clamping together or rigid fixing of the frame-wires of the saddle to the boss and the boss to the upright seat-pillar.

To readjust the seat horizontally and angularly upon the boss, loosen the screws from the ends, when the parts slightly open out and the teeth of the inner washers are taken from the opposed faces of the gripping-cheeks. Then slide or traverse the saddle horizontally by pulling the framing wires or rods through the keep-grooves sunken within the opposed faces of the inner and outer washers. Then turn the saddle, with the said washers, upon the gripping-cheeks as centers and again screw home the nuts.

Fig. 8 shows how the said universal boss, Fig. 1, is applied to an L-pin horizontal member.  $a$  is the boss,  $b b'$  the side-by-side framing-rods, and  $g$  the L-pin member.

Fig. 9 represents a saddle-framing constructed according to a modified form of the framings Figs. 1 and 2. In this arrangement the rear parts of the under-framings are formed into loop-coils, so as to impart resiliency thereto.

Fig. 10 is an underside plan of Fig. 9.  $c$  is the saddle;  $c'$  the rear end.  $b b'$  are the frame-rods of each side,  $b^6 b^7$  the rear ends of them, and  $b^{11} b^{12}$  are loop-coils.

Fig. 11 represents a modified form of the means for connecting the converging member of the fore part of the framing to the under side of the seat.  $b b'$  are the framing-rods, with the terminal ends  $b^2 b^3$  of them formed into loops  $b^4$ , which are threaded upon the shank  $b^6$  of the pin-bracket  $b^5$ .  $b^7$  is a distance-piece with keep-grooves  $b^8$  formed within the opposite sides of it, between which piece and the nuts  $b^9 b^{10}$  the looped ends  $b^4$  of the ends  $b^2$  and  $b^3$  of the rods  $b b'$  are clamped.

It is obvious that the universal and interchangeable boss herein described can be applied to framings having longitudinally-pierced sides or to framings with single rods upon either side by the washers, in the latter case having single keep-grooves sunken within their presented faces instead of double keep-grooves, and that the screw-pin ends  $d^2$  may be in the form of bolts which screw into tapped lugs on the two opposite sides of the carrier-ring. The screwing up of the bolts or pins will draw the component washer parts and cheeks together and upon the object to be gripped.

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

1. The wire-supporting framings of cycle-saddles, consisting of a two-sided and double-membered frame, with the members of each

side running one above another, and parallel or nearly so to each other, and with their front parts converging to a common point, or toward each other, and with the back ends of the said members spreading themselves into extended and separated bearings, substantially as shown and described.

2. An attachment for cycle-saddles, consisting of two sets of gripping-cheeks and washer-plates, respectively strung upon opposite screw-pins of a carrier-ring, and adapted to embrace and grip both the wires or saddle-framing members and the saddle-supporting member, substantially as described and set forth.

3. In an attachment for cycle-saddles, the combination with a seat-pillar or L-pin support and the wires or saddle-framing members, of a carrier-ring  $d$ , having screw-pin ends  $d'$ , over and upon the two opposite sides of which, clamping-cheeks and washers  $a'$ ,  $e$  and  $f$ , take, and are forced home by screw-nuts  $h$ , taking upon the said screw-pin ends  $d'$ , and with teeth  $e'$ , of the middle washers  $e$ , embedding themselves into the softer metal of the faces  $a^5$ , of the clamping-cheeks  $a'$ , substantially as and for the purpose as described and set forth.

4. In an attachment for cycle-saddles, the combination with a carrier-ring  $d$ , having screw-pin ends  $d'$ , of opposite clamping-cheeks  $a'$ , having inner and concaved clearances  $a^2$ , shoulders  $a^4$ , and outside faces  $a^5$ , within the metal of which latter, teeth or sharp projections  $e'$ , upon the inner faces of inner washers  $e$ , having holes  $e^2$ , through their middles, and keep-grooves  $e^3$ , sunken within their outer sides, take, and with outer washers  $f$ , having keep-grooves  $f'$ , within their inner sides or faces, coming up to the said inner washers  $e$ , and with all the component parts forced together and the seat-supporting member gripped between the cheeks  $a'$ , and the frame members gripped between the inner and outer washers  $e$  and  $f$ , by the screwing up of nuts  $h$ , upon the ends of the pins  $d'$ , substantially as described.

5. In an attachment for cycle-saddles, the combination with the screw ends  $d'$ , adapted to receive the gripping-cheeks  $a'$ , and outer washers  $f$ , with frame-rod keep-grooves  $f'$ , crossing their inner faces, of inner washers  $e$ , having embedding teeth or sharp projections  $e'$ , upon their inner faces and frame-rod keep-grooves  $e^3$ , crossing their outer faces, and with the whole of the parts strung together and forced together and upon the members to be gripped by nuts  $h$ , or equivalents, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of May, 1894.

JOHN BOULTBEE BROOKS.

Witnesses:

J. E. BEAUJOY,  
ARTHUR T. SADLER.