



No. 633,487.

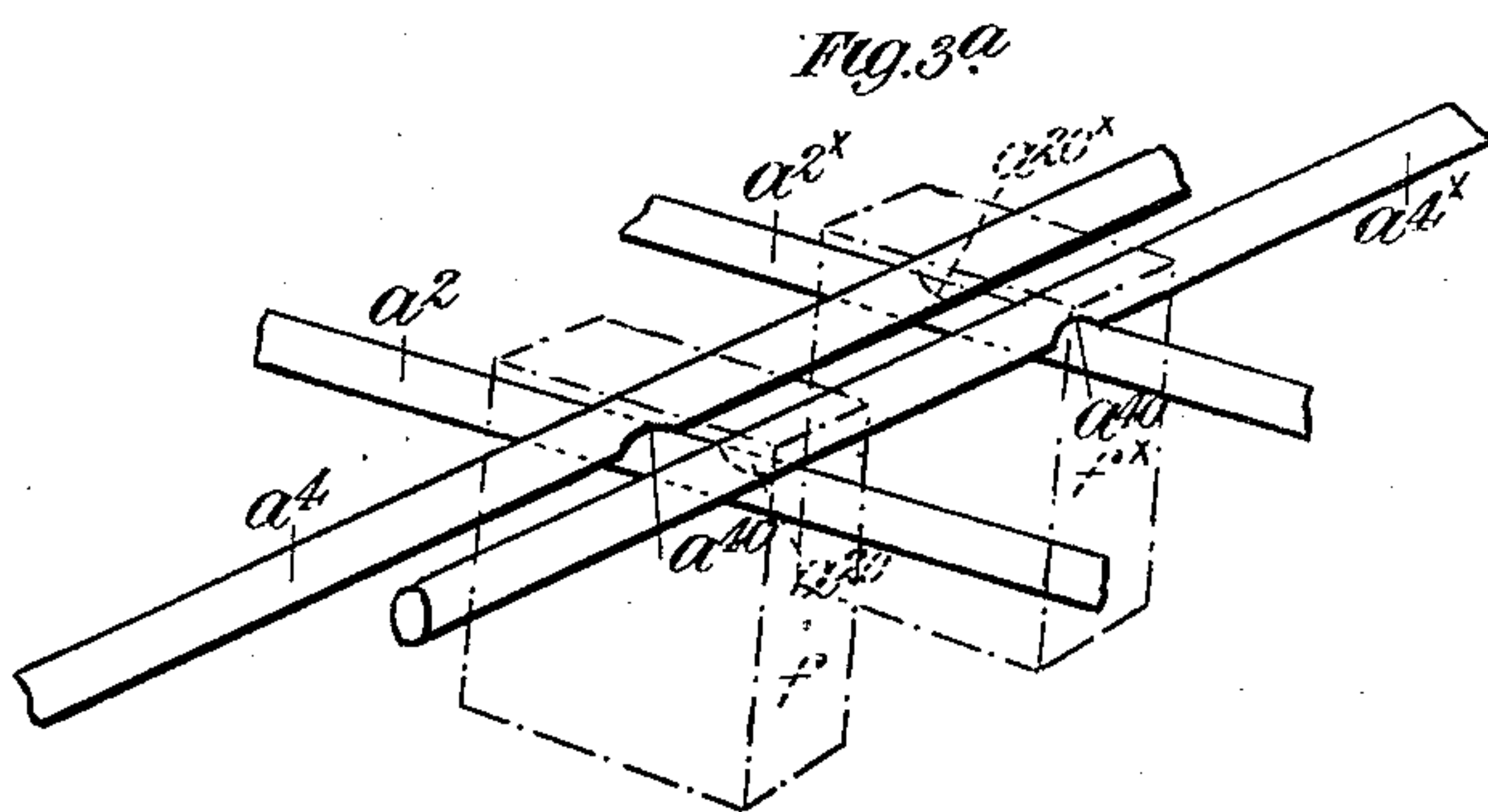
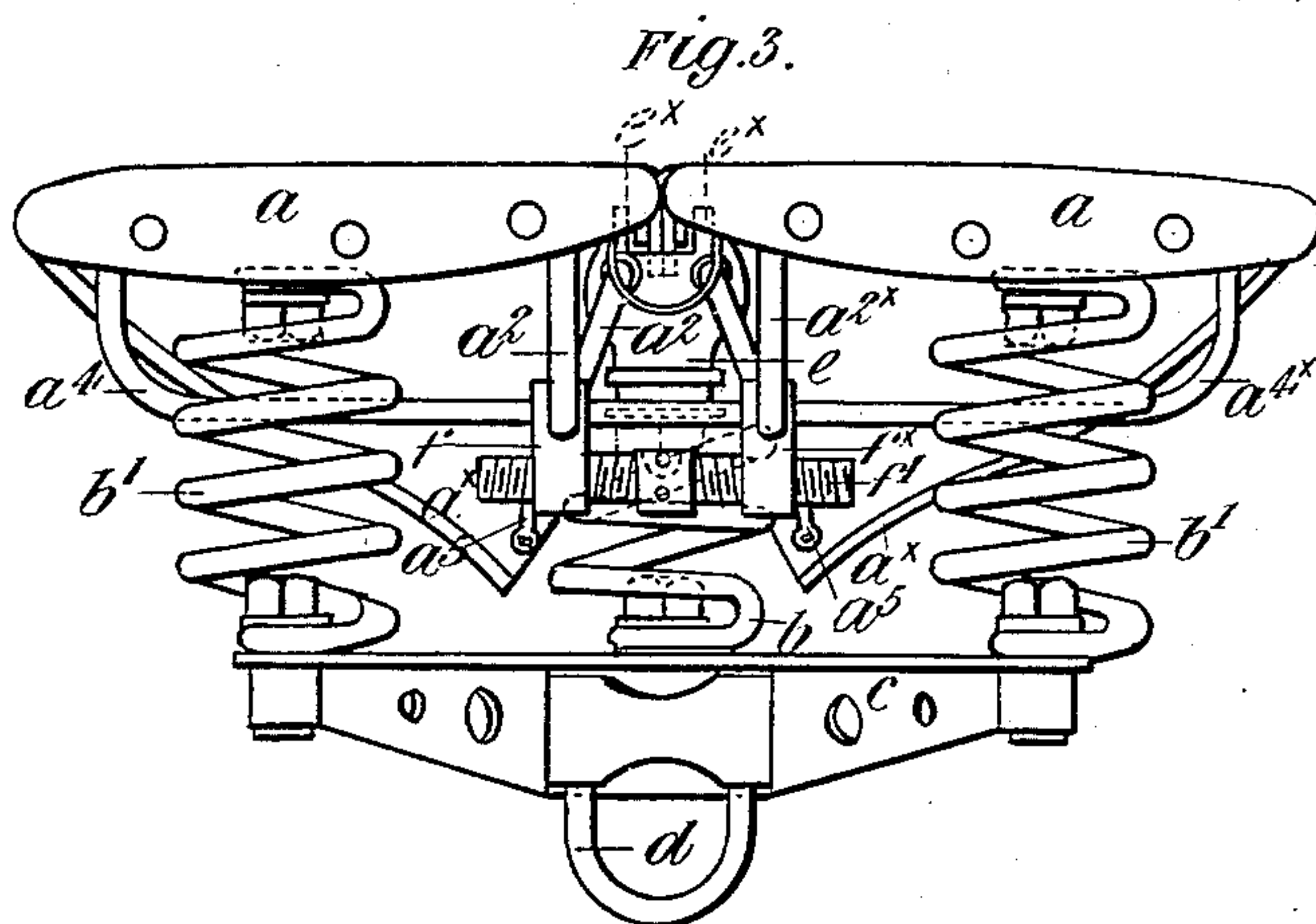
Patented Sept. 19, 1899.

W. RADERMACHER.  
SADDLE FOR VELOCIPEDES.

(No Model.)

(Application filed Dec. 24, 1897.)

2 Sheets—Sheet 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

WALTER RADERMACHER, OF LONDON, ENGLAND.

## SADDLE FOR VELOCIPEDES.

SPECIFICATION forming part of Letters Patent No. 633,487, dated September 19, 1899.

Application filed December 24, 1897. Serial No. 663,388. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER RADERMACHER, a subject of the Queen of Great Britain, residing at 18 Maygrove road, Brondesbury, N. W., London, England, have invented certain new and useful Improvements in Saddles for Velocipedes, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in saddles for velocipedes, and has reference more particularly to saddles of the kind or class in which the saddle cover or seat is formed with a longitudinal opening or recess to avoid perineal pressure.

The object of my invention is to provide means for adjusting or varying the distance of the two portions or halves of the saddle from each other and for adjusting the tension of each portion or half of the saddle independently of the other portion.

My invention is applicable to saddles supported on various forms of spring or cushioning devices.

In the accompanying drawings, Figures 1, 2, and 3 are respectively an under side view, a side elevation, and a rear elevation of a saddle constructed according to my invention and provided with vertical spiral springs. Fig. 3<sup>a</sup> is a detail view hereinafter referred to. In Fig. 1 a portion of the under frame is removed, and in Fig. 2 one-half of the saddle is removed, so as to more clearly show the arrangement of the parts.

In all the figures like letters of reference indicate similar parts.

The cover or seat of the saddle is supported on three spiral springs  $b\ b'\ b''$ , arranged one at the peak and one under the rear part of each half of the cover. Each of the saddle-leathers  $a\ a'$  is riveted or otherwise secured at its rear end to a separate segmental plate or cross-piece  $a' a'$  and at its front end to a separate plate  $a^3$ . The rear springs  $b' b'$  are connected one to each of these segmental plates  $a'$  by a bolt and nut or other convenient means. The front spring  $b$  is at its upper extremity similarly connected to a block  $e$ . At their lower extremities the springs  $b$  and  $b' b'$  are connected, respectively, to the front and rear ends of a girder-like under frame  $c$ , that may be formed of a single piece or strip

of flat steel bent to the required shape and adapted to receive the bolt  $d'$  of the clip  $d$  for securing the saddle to the saddle-pin of the velocipede.

A pair of suitably curved stretchers or frame-wires  $a^2\ a^{2x}$  extend longitudinally slightly below and on each side of the opening between the two seat-leathers and are secured at their rear ends one to each of the plates  $a' a'$ . At their front ends these stretchers pass through closely-fitting apertures in the block  $e$  and are riveted one to each of the plates  $a^3$ . These plates  $a^3$  are held in position between the jaws  $e^x$  of the block  $e$ . Each of the said longitudinal stretchers or frame-wires is divided at a convenient point in its length, and the adjacent extremities are fitted in a sleeve  $g\ g^x$ . The extremity of the rear portion of the stretcher simply fits the rear portion of the sleeve and abuts against an internal projection or stop  $g'$ , provided therein. The sleeve is therefore capable of revolving freely on the said extremity. The extremity of the front portion of the stretcher is screw-threaded and engages an internal thread in the front portion of the sleeve. Means are provided for enabling the sleeve to be turned, whereby the front portion of the stretcher may be screwed in or out of the sleeve and the tension of that half of the saddle corresponding to such sleeve be thereby adjusted. Such means may consist, for example, in forming a portion  $g^2$  of the sleeve of hexagonal shape, so as to constitute a nut. If, however, it be not required to adjust each half of the saddle independently of the other, I may dispense with the sleeve  $g\ g^x$  and form each of the stretchers  $a^3$  of a single length of wire. In such case both stretchers would be secured to the block  $e$  and both seat-leathers would be riveted to a single plate  $a^3$ , connected to the block  $e$  by any well-known tension device.

To the outer extremities of the plates  $a'$  are secured stretchers or frame-wires  $a^4\ a^{4x}$ , arranged transversely of the saddle and with their ends overlapping for a considerable distance. These ends pass through apertures in a pair of blocks  $f\ f^x$ , each of the ends passing through both blocks. Each of the longitudinal stretchers or frame-wires  $a^2\ a^{2x}$  also passes through one or the other of the blocks  $f\ f^x$  in a direction at right angles to that of the



frame-wires  $a^4 a^{4x}$ , as shown. In order that the blocks  $f f^x$  shall maintain a constant position upon the wires  $a^2 a^4$  and  $a^{2x} a^{4x}$ , respectively, the longitudinal holes in the said blocks are arranged to partially overlap or impinge upon the transverse holes, so that a portion of one or other of the wires of each pair must be cut away before both wires can be passed through their respective block. The arrangement of these notches is shown in Fig. 3<sup>a</sup>, which is an enlarged perspective view of that portion of the four wires in and adjacent to the blocks. It will be seen that the wire  $a^{4x}$  is notched or has a portion cut away at  $a^{40x}$  to receive the wire  $a^{2x}$ , whereby the block  $f^x$  is prevented from shifting upon the wire  $a^{4x}$ . The wire  $a^{2x}$  is notched at  $a^{20x}$  to allow the free ends of the wire  $a^4$  to slide over the same, whereby the block  $f^x$  is prevented from shifting upon the wire  $a^{2x}$ , but is free to slide to and fro on the said end of wire  $a^4$ . Similarly the wire  $a^4$  is notched at  $a^{40}$  to receive the wire  $a^2$ , and this wire  $a^2$  is notched at  $a^{20}$  to receive the free end of wire  $a^{4x}$ , whereby  $a^2$  and  $a^4$  are fixed in position in the block  $f$ , while the said block is capable of sliding to and fro on the wire  $a^{4x}$ . An efficient connection between the frame-wires is thus obtained, whereby the plates  $a'$  are maintained in their proper position for supporting and stretching the seat-leathers. By means of a double bolt  $f'$ , having right and left hand screw-threads engaging in the blocks  $f f^x$ , said blocks can be moved toward or away from each other, the overlapping ends of the frame-wires  $a^4 a^{4x}$  serving as guides. The width of the saddle or the distance between its halves can thereby be varied. To prevent such transverse lateral adjustment unduly twisting the spiral springs  $b' b'$ , these latter are arranged so that when the parts are in their intermediate position the said springs are vertical. As this transverse adjusting device projects somewhat below the cover or seat, it might be liable to come in contact with the under frame  $c$  when the springs yield more than usual, and I therefore cause the parallel portions of this frame to diverge before they come beneath said adjusting device, as clearly shown in Fig. 1. This construction enables the frame  $c$  to clear the adjusting device no matter to what extent the springs may be compressed.

In order to prevent the flaps  $a^x$  of the cover or seat leathers at the sides of the peak from rising under the rider's weight and causing chafing, I provide a tie-piece or connection, which may consist of a strip of metal  $a^5$ , bent and riveted at its extremities to said flaps.

It is obvious that any form of spring may be employed in connection with my invention other than that shown in the drawings. It will also be readily seen that my improved tension devices and means for preventing the flaps  $a^x$  from rising are applicable to saddles constructed without a longitudinal opening.

No claim is made herein to a saddle having a longitudinal opening, a cantle-plate for each

half, a boss on the cantle-plate through which the extremity of the supporting-spring passes, means for adjustably securing the boss in said extremity, a second boss on each cantle-plate, and a double screw-bolt engaging said bosses for adjusting the latter toward and from each other, as the same forms the subject-matter of a separate application, Serial No. 703,888, filed January 30, 1899.

What I claim is—

1. In a velocipede - saddle having a longitudinal opening or recess in the seat, a pair of longitudinal stretcher - wires adapted to maintain the longitudinal tension of the seat; a pair of transverse stretcher - wires whose ends overlap; a pair of blocks through each of which passes one of the longitudinal wires and both of the transverse wires and a double screw-bolt engaging the said blocks for adjusting the latter toward and from each other, substantially as and for the purpose described.

2. In a velocipede - saddle having a longitudinal opening or recess in the seat, a pair of longitudinal stretcher-wires each comprising a front and a rear portion; a pair of sleeves into which the adjacent extremities of such portions fit, one portion of each sleeve and one extremity fitting thereinto being screw-threaded; a pair of transverse stretcher-wires whose ends overlap; a pair of blocks through each of which passes one of the longitudinal wires and both of the transverse wires; and a double screw-bolt engaging the said blocks for adjusting the latter toward and from each other, substantially as and for the purposes described.

3. In a velocipede - saddle having a longitudinal opening or recess in the seat, a pair of longitudinal stretchers  $a^2, a^{2x}$  each consisting of a front and a rear wire; a pair of sleeves  $g, g^x$ , having one portion screw-threaded internally and the other portion plain, and adapted to receive the adjacent extremities of the wires  $a^2, a^{2x}$ ; a pair of transverse stretcher-wires  $a^4, a^{4x}$  whose ends overlap; a pair of blocks  $f, f^x$  through each of which passes one of the longitudinal wires and both of the transverse wires, the holes in said blocks for receiving the longitudinal wires partially overlapping the holes for receiving the transverse wires, the wires  $a^{2x}$  and  $a^{4x}$  being provided with the notches  $a^{20x}$  and  $a^{40x}$  respectively whereby such wires are fixed in the block  $f^x$ , and the wires  $a^2$  and  $a^4$  being provided with notches  $a^{20}$  and  $a^{40}$  respectively whereby such wires are fixed in the block  $f$ ; and a double screw-bolt engaging the said blocks for adjusting the latter toward and from each other, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 1st day of December, 1897.

WALTER RADERMACHER.

Witnesses:

A. B. CROFTS,  
FRED C. HARRIS.