

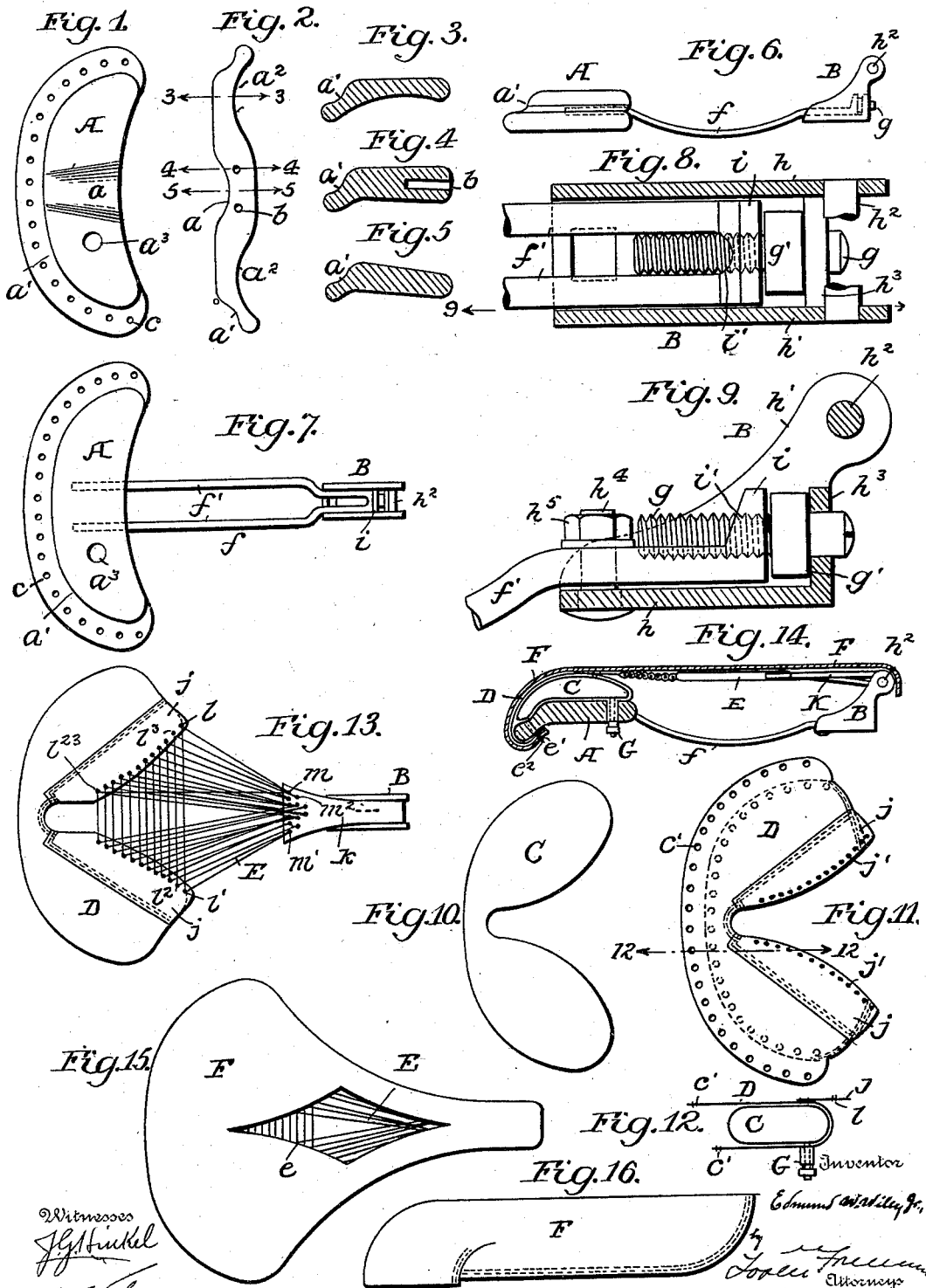
No. 647,547.

Patented Apr. 17, 1900.

E. W. WILEY, JR.
VELOCIPED SADDLE.

(Application filed Apr. 5, 1898.)

(No Model.)



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UNITED STATES PATENT OFFICE.

EDMUND W. WILEY, JR., OF LECOMPTE, LOUISIANA.

VELOCIPED-SADDLE.

SPECIFICATION forming part of Letters Patent No. 647,547, dated April 17, 1900.

Application filed April 5, 1898. Serial No. 676,577. (No model.)

To all whom it may concern:

Be it known that I, EDMUND W. WILEY, Jr., a citizen of the United States, residing at Lecompte, in the parish of Rapides and State of Louisiana, have invented a new and useful Velocipede-Saddle, of which the following is a specification.

My invention relates to saddles for bicycles and similar vehicles; and its primary object is to provide a saddle which will yield readily to avoid shocks and jars and will contribute to the comfort of the rider by avoiding pressure on the prostate gland.

A further object of the invention is to provide means for preserving the elasticity of the saddle and for readily tensioning the yielding seat to compensate for wear and slackness incident to use.

The characteristic features of the invention will be fully described hereinafter, reference being made to the accompanying drawings, in which—

Figure 1 is a plan view of the crosstree or rear part of the saddle-frame detached. Fig. 2 is a front elevation of the same. Figs. 3, 4, and 5 are cross-sections on the lines 3 3, 4 4, and 5 5, respectively, of Fig. 2. Fig. 6 is a side elevation of the saddle-frame complete. Fig. 7 is a plan view of the saddle-frame. Fig. 8 is an enlarged plan view of the front portion of the saddle-frame and its tensioning devices. Fig. 9 is a vertical section on the line 9 9 of Fig. 8. Fig. 10 is a plan view showing the contour of the pneumatic pad of the saddle. Fig. 11 is a plan view of the pad-inclosing casing. Fig. 12 is a vertical section on the line 12 12 of Fig. 11. Fig. 13 is a plan view of the saddle without its inclosing cover. Fig. 14 is a vertical sectional view of the saddle complete, and Figs. 15 and 16 are respectively a plan view and a side elevation of the saddle with its cover in place.

Referring to the drawings, A designates the crosstree of the frame, approximately semi-circular in shape and having its upper surface hollowed out or concave at the center, as shown at *a*. The rear and side edges of the crosstree are recessed circumferentially, which forms a rounded shoulder at the top and a bead-like portion *a'* at the bottom, said portion being deflected or beveled, as shown

in Figs. 2, 3, 4, and 5, and provided with a series of perforations *c* to receive lacing-cords. The under surface of the crosstree on either side of the center is of concave form, as shown at *a*², to contribute lightness without sacrificing strength. The front edge of the tree is formed with parallel openings or seats *b* to receive the rear ends of a truss-frame *f*, and the tree is also formed with an opening *a*³ to accommodate the air-valve of the saddle-pad.

The truss-frame comprises the rods *f'*, having their rear ends inserted into the openings *b* of the tree and their front ends connected by a cross-head *i*, provided with a threaded opening *i'* to receive an adjusting-screw *g*, having an annular shoulder *g'*. The front end of the truss-frame is adjustably secured to a headpiece B, comprising a base *h*, parallel sides *h'*, connected by a cross-bar *h*², and a vertical end bar *h*³, having an opening through which the end of the screw *g* passes freely, and against which bar the shoulder *g'* of the screw has a bearing. A bolt *h*⁴, extending between the rods *f'* of the truss and through an opening in the base *h* of the headpiece and provided with a nut *h*⁵, serves to lock the truss and headpiece together after adjustment by the screw *g*, as will be apparent.

C designates a pneumatic pad, preferably of the bifurcated form shown in Fig. 10 and adapted to be inclosed in a flexible casing D, which conforms generally in shape to the pad and is open along its rear edge for the insertion of the pad and provided with holes *c'* to receive a lacing-cord. The upper portion of the casing is longer than the lower one, so that when it is secured to the under side of the bead *a'* it will form, with the circumferential recess, a pocket the outer or rear wall of which is flexible. After the pad has been inserted within the casing the edges of the casing are placed together, so that the holes in them will register with each other, and when they are placed underneath the bead *a'* their holes register with the holes therein, and the lacing-cord is passed through the holes in the crosstree and the corresponding holes of the casing, which will thus simultaneously close the casing and secure it to the crosstree. The casing D is provided on its upper front

portion with two lacing-flaps j , secured at their rear edges to the diverging front edges of the casing and provided at their front edges with lacing-holes j' . After the pad is placed within the casing and the latter has been closed and secured to the crosstree the casing is turned up over the crosstree and the front portion is secured to the headpiece as follows:

To the cross-bar h^2 of the headpiece B is secured one end of a lacing-tongue k , the opposite end of which is formed with a number of small openings. The flaps j, j' of the pad-casing D are secured to the tongue k by a lacing-cord E. The peculiar manner of lacing this cord so as to effect an interweaving or crossing of the cord, as best shown in Fig. 13, constitutes an important detail feature of my invention. Thus the cord E is preferably first passed through the opening or eyelet m of the tongue k , then through the hole l of one of the flaps j , thence across the saddle to the hole l' of the other flap j , thence to the hole m' in the opposite side of the tongue, thence back to the hole l^2 of the flap, thence across to the hole l^3 of the other flap, thence forward to the hole m^2 of the tongue, and so on until the last hole l^{23} of the flap is reached, when the two ends of the cord are united firmly. This manner of lacing results in uniting the two flaps to each other as well as to the tongue k , and so distributes the weight of the rider as to avoid undue strain upon the lacing-cord.

F designates a cover of leather or other suitable material formed to fit over the entire saddle, and preferably cut-out at its center to form a diamond-shaped aperture e . The front end of the cover fits over and is detachably secured to the headpiece B and at its rear edge is provided with lacing-holes e' . The cover is secured to the crosstree A by the cord or cords e^2 , passed through the holes provided for the purpose at the same time and in the same manner that the casing D is secured in position, as will be readily understood.

A valve G is provided for inflating the pad C, the stem of the valve projecting down through the opening a^3 of the crosstree, as shown.

It will be observed by reference to Fig. 14 that the deflected edge of the crosstree A permits the pneumatic pad to extend rearward below the top surface of the crosstree. The result of this relation of the parts is that when the pad is fully inflated (and particularly when the weight of the rider is on the pad) there is a rearward pressure which effectually and automatically compensates for any slack or tendency to sag in the suspending-cords. Owing to this rearward pressure of the pad when compressed by the weight of the rider the thickness of the pad on top of the crosstree, which is preferably very thin, is decreased to such an extent that if it were

not for the recessed portion a the pressure upon the person of the rider at that point would be almost as great as if there were no pad in use.

When the lacing becomes loosened by use, it can be readily tightened by loosening the locking-bolt h^4 and adjusting the parts by the screw g , as will be apparent.

Without limiting myself to the exact construction set forth, I claim—

1. In a bicycle-saddle, the combination with the frame provided at its rear edge with lacing-openings, of an inflatable pad arranged at the rear portion of the frame, a flexible casing inclosing the pad and adapted to be secured at the rear by a lacing-cord to the frame, flaps on the upper front portion of the casing, and means for securing said flaps to the front portion of the frame at a point relatively distant from the pad, substantially as described.

2. In a bicycle-saddle, the combination with the frame, of an inflatable pad, a yielding casing inclosing said pad and provided with lacing-flaps, a cord for suspending the casing from the front of the frame at a point relatively distant from the pad, and means for automatically tensioning the cord, substantially as described.

3. In a bicycle-saddle, the combination with a head, of a crosstree, the rear edge of the crosstree being recessed circumferentially and the top recessed centrally, a bifurcated inflated pad on top of the crosstree and in the recessed portion, and a casing for the pad, the rear portion of which is secured to the crosstree below the recessed portion and the forward portion is secured to the head, substantially as described.

4. In a bicycle-saddle, the combination with a head, of a crosstree, the rear edge of which is recessed circumferentially, an inflated pad on top of the crosstree and in the recessed portion, a casing for the pad, a cover for the casing, each of which is connected with the head in front and secured to the under side of the crosstree at the rear, substantially as described.

5. In a bicycle-saddle, the combination with the frame, of an inflatable pad secured thereon at its rear portion, a yielding casing inclosing the pad and provided on its upper front portion with lacing-flaps, a lacing-tongue secured to the front of the frame at a point relatively distant from the pad, and interwoven or crossed lacing securing said flaps and tongue together, substantially as described.

6. In a bicycle-saddle, the combination with a supporting-frame comprising a rear crosstree having its rear edge deflected, of an inflatable pad adapted to bear upon and be secured to the deflected edge of the crosstree, a casing inclosing the pad, the upper portion of which is longer than the lower portion, and forms with the deflected portion a pocket for a portion of the pad, and a lacing-cord for sus-

pending the upper front portion of the casing from the front end of the frame, substantially as described.

5 7. In a bicycle-saddle, the combination with a head and a crosstree, of an inflated pad on the crosstree, a bifurcated casing for the pad each portion of which is provided with a perforated lacing-flap, a perforated tailpiece on the head, and a lacing-cord passing succes-

sively through the perforations of the flaps 10 and the tailpiece, the portions of the cord between the flaps being interwoven with the portions extending therefrom to the tailpiece, substantially as described.

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