

(No Model.)

T. BROADBENT.
SADDLE FOR VELOCIPEDES.

No. 507,413.

Patented Oct. 24, 1893.

Fig. 1.

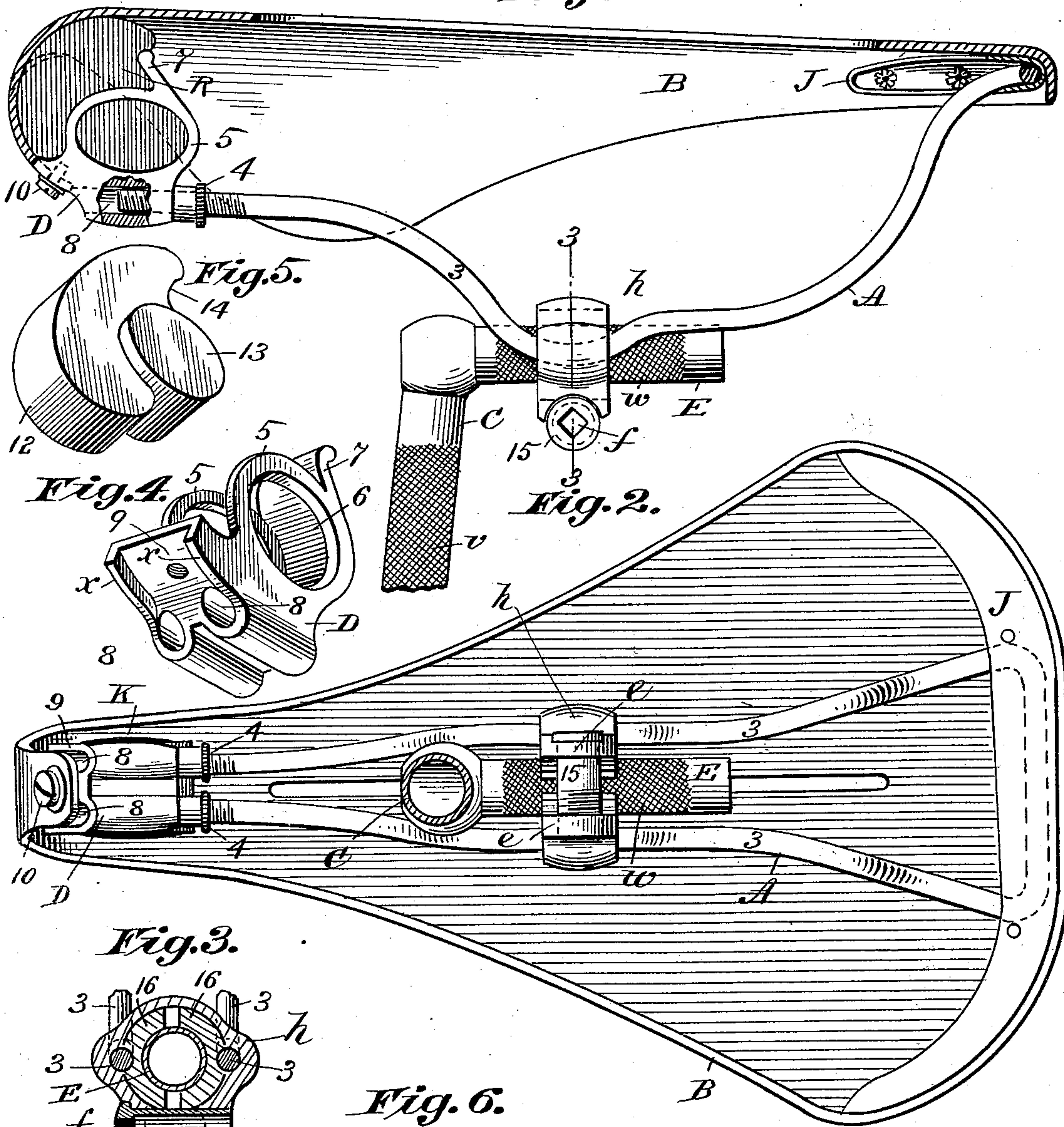


Fig. 5.

Fig. 2.

Fig. 3.

Fig. 6.

Fig. 7.

Witnesses:

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SADDLE FOR VELOCIPEDES.

SPECIFICATION forming part of Letters Patent No. 507,413, dated October 24, 1893.

Application filed March 23, 1893. Serial No. 467,235. (No model.)

To all whom it may concern:

Be it known that I, THOMAS BROADBENT, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented new and useful Improvements in Saddles for Velocipedes, of which the following is a specification.

This invention relates to saddles for bicycles and velocipedes, the object being to provide a saddle of this class of improved construction, all as hereinafter fully set forth.

In the drawings forming part of this specification Figure 1 is a longitudinal sectional view of a saddle embodying my improvements, said view showing in side elevation the upper extremity of the saddle-supporting post, and the horizontal arm thereon to which the saddle is immediately connected. Fig. 2 is a bottom plan view of the saddle. Fig. 3 is a section on line 3—3, Fig. 1. Fig. 4 is a perspective view of the cushion-case and Fig. 5 is a like view of the cushion which said case receives. Figs. 6 and 7 are detail views, in perspective, of the several parts of the clamping devices which serve to lock the saddle onto its supporting part.

A, is the seat-frame consisting of a single, round, metal rod bent to suitable form to constitute a support for the usual leather saddle-seat, B. Said frame is bent, as aforesaid to form two parallel members, 3, 3, having suitable dip or deflection about mid-way between its extremities, to adapt it to support said seat thereon and the weight of the rider, and allow for any ordinary deflection of said seat without bringing the central part of the latter against any of the metallic seat-supporting devices. The rear end of said frame is made of such width as best adapts it to engage with the rear end of the seat, and the forward end of each of its said members, 3, 3, is screw-threaded to adapt it to receive a tension-nut, 4.

A metallic cushion-case, D, of peculiar construction, is cast, or otherwise suitably formed, having a chamber therein open at its upper edge to receive a rubber cushion (below described) and each of the side walls, 5, of said chamber contains a suitable perforation, as shown, to receive trunnion-like or lateral projections on the opposite sides of

said spring. The base, 6, of said case, D, is concaved between said side-walls to a curve corresponding, substantially, to the contour of that part of said cushion between the extremities of said trunnions. An upwardly and forwardly inclined bracket, 7, projects from said base, 6, and forms an abutment for said cushion to support it against the rearward, tensional strain of the seat, B, when loaded. Said cushion-case is also provided with two cylindrical, parallel sockets, 8, 8, which receive the free ends of the frame-members, 3, 3, as shown in Figs. 1 and 2, and said tension-nuts, 4, 4, abut against that part of the said cushion-case surrounding the rear ends of said sockets. That part, 9, of said spring-case, above the forward ends of said sockets, 8, 8, (see Fig. 4) is made flat and has, preferably, a raised border, x, x , on its opposite edges to receive the forward extremity of the said seat, B, said extremity being secured to said case by a screw, 10, or other suitable means. The rear end of the seat, B, has riveted to its under side the usual sheet metal shell, or cantle J, which secures its requisite lateral distension and provides a bearing to receive the rear end of the frame, A, as shown.

The form of the above-mentioned rubber spring, K, is clearly illustrated in Fig. 5, and its application and structural relation to said case, D, and to the forward extremity of the saddle-seat, B, are shown in Fig. 1. Said spring consists of the curved body-portion, 12, and said trunnion-like part, 13. Said body, 12, constitutes a non-metallic resilient base or support on the pommel of the saddle under the end of seat B, which is of such form and nature as tends to secure the utmost ease of riding motion, and to guard against the inconvenience and injurious results, physically, consequent upon the presence in, or under, a saddle-seat of any, more or less, unyielding metallic or other similar rigid support for the seat at that point. That portion of the cushion, K, designated by 14, bears against and extends over the end of the bracket, 7, of the frame, D, and its trunnions, 13, enter said perforations, 5, in the side walls thereof, as in Fig. 1. Thus said cushion is retained in said frame, and constitutes a firm, but easy, support which receives the strain

of the seat over the pommel of the saddle, and maintains said portion of the seat permanently above said frame, so that the downward motion of the seat under the weight of the rider meets no other obstruction than said rubber spring. By turning the nuts, 4, well back on the ends of the members, 3, of the frame, A, the ends of said members are entered far enough into the sockets, 8, 8, of the frame to enable one to engage the rear end of the frame with the rear end of the seat; after which said nuts are screwed against the adjoining side of frame, D, until seat, B, is brought under sufficient strain, and the latter may, from time to time, be adjusted by operating said nuts.

The saddle-supporting post, C, and its arm, E, to which the saddle is directly connected, have those portions of their surfaces at *v*, *w*, respectively, against which clamping devices are fastened, cross-filed or milled, or otherwise similarly roughened, in order to prevent said post from turning in its supporting part, and to prevent the saddle from turning laterally on the arm, E, and thereby tending to throw the rider. The saddle is secured on its supporting-arm, E, adjustably, by means of the below-described peculiarly constructed clamping devices. A split, metallic clamp-shell, *h*, internally of substantially cylindrical form, has the bolt-receiving collars, *e*, *e*, thereon which receive the headed screw-bolt, 15, said bolt passing freely through one of said collars, and screwing into the second one, as shown. Said bolt serves to draw the parted portions of said shell toward each other thereby tightly clamping the below-mentioned parts and simultaneously securing the saddle to the clamping devices, and the latter to the supporting-arm, E. Said bolt is provided at one end with a rectangular wrench-socket, *f*, adapted to receive the end of a similarly formed turning wrench applied to either the outside or inside of the nut-head. Said bolt is also made of tubular form to reduce its weight. The inner wall of said shell, *h*, has two half-round longitudinal grooves, *n*, *n*, therein, and two longitudinal sections, 16, 16, of a split bushing are fitted into said shell, *h*, as illustrated in Fig. 3, each of which has an internally corrugated or serrated longitudinal groove, *v*, in its outer surface which is brought opposite one of said grooves, *n*, in said shell when said bushing-parts are placed in the latter. The grooves thus formed between said bushing-parts and shell are adapted to receive portions of the said members, 3, of the frame, A, as illustrated in said last-named figure. Said bushing-parts are adapted to be clamped against the opposite sides of the arm, E, and consequently their adjoining edges, when so placed, do not meet, and therefore they offer no obstruction to the clamping movement of the sides of the shell, *h*, when bolt, 15, is screwed up, and the corrugations in grooves, *n*, of the bushing parts, 16, prevent the frame-members from slipping therein.

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

1. Supporting devices for the seat of a bicycle saddle consisting of pommel-parts comprising a metallic cushion-case to which the foremost end of said seat-leather is attached, having therein a chamber to receive a spring, and parallel longitudinal sockets thereunder, and a spring of resilient material located in said chamber and constituting a flexible bearing under said end of the seat, combined with a frame consisting of a metallic rod bent upon itself, thereby forming two generally parallel members having free ends which loosely enter said sockets, and a tension-nut on each of said extremities screwing against said case, the opposite end of said frame engaging the rear end of said seat, substantially as set forth.

2. A saddle for bicycles comprising a frame consisting of a metallic rod bent upon itself thereby forming two generally parallel members having free ends, and an opposite extremity for engagement with the rear end of the saddle-seat, said free ends each having a tension-nut thereon, combined with a cushion-case or holder at the pommel of the saddle having sockets therein to receive the extremities of said frame-members, and a spring chamber therein, a resilient cushion held in said case-chamber and a seat having its foremost end secured to said case and lying upon said cushion, and its rear end supported by the rear part of said frame, substantially as set forth.

3. In a velocipede saddle the combination with a frame consisting of paired longitudinally ranging bowed supports with their round, forward ends screw-threaded, of the seat having a cantle and rearwardly supported by said members, a metallic cushion-support with longitudinal perforations into which the extremities of the saddle-frame members are loosely entered, nuts screw-engaging the spring members just inside of the cushion support and a cushion on the support by which the seat is forwardly supported, substantially as described.

4. In a saddle for a velocipede, the combination with a saddle-frame of a case or holder supported at the front thereof and comprising the apertured cheeks and the upwardly and forwardly inclined bracket, 7, the cushion having the trunnion like parts, 13, and extended in contact with and above said bracket and the seat-leather at its forward end supported by the cushion, substantially as described.

5. In a saddle for a velocipede, the combination with a saddle-frame of a case or holder supported at the front thereof and comprising the apertured cheeks and the upwardly and forwardly inclined bracket, 7, the cushion extended in contact with and above said bracket and the seat-leather at its forward end supported by the cushion, substantially as described.

6. The combination with a saddle-post-arm, or like support, of a pair of concavo-convex clamp-sections with longitudinally extending grooves in the outer sides thereof, and a strap to encircle the clamp-blocks with longitudinally extending grooves in its opposing inner sides, the saddle-frame comprising opposing longitudinally ranging members and means for insuring the constriction of the strap, substantially as described.

7. The combination with a saddle-post-arm, or like support, of a pair of concavo-convex clamp sections with longitudinally extending grooves in the outer sides thereof which are bowed or of arc-form in their lengths, and a strap to encircle the clamp-blocks with longitudinally extending grooves in its opposing inner sides which are of arc-form, the saddle-frame comprising opposing longitudinally ranging bowed members and means for insuring the constriction of the strap, substantially as described.

8. The combination with a saddle-post-arm, or like support, of a pair of concavo-convex clamp sections with longitudinally extending grooves in the outer sides thereof which are bowed or of arc-form in their lengths, and a strap to encircle the clamp-blocks with longitudinally extending grooves in its opposing inner sides which are of arc-form and which are serrated, the saddle-frame comprising opposing longitudinally ranging bowed members and means for insuring the constriction of the strap, substantially as described.

9. In a saddle in combination, the saddle-

post-arm, the concavo-convex blocks, 16, 16, with the external grooves, *v, v*, the split strap with the internal opposing grooves, *n, n*, and the ear-pieces, the members, 3, 3, of the saddle-frame and the constricting bolt, 15, all arranged substantially as described and shown.

10. The combination with the saddle-frame having the forwardly longitudinally extended screw-threaded members of the cushion, R, and cushion-holder longitudinally adjustably supported on said frame-members and having the base portion 9, provided with the edge-lips, *x, x*, the seat-leather rearwardly supported on the saddle-frame and having a forward portion thereof supported by the cushion while the forward end of the said leather is secured to the adjustable cushion-holder, substantially as described.

11. In a velocipede saddle the combination with a saddle-frame having at the forward end the rounded and screw-threaded parallel members, substantially as described, of the case or holder, D, comprising the base portion with the parallel longitudinal sockets, 8, 8, and the edge-flanges, *x, x*, the apertured cheek-pieces and the extension, 7, the cushion of rubber having the trunnions, 13, 13, supported by and within said holder and extended thereabove and the seat-leather, all combined and arranged substantially as described.

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Witnesses:

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