

(No Model.)

2 Sheets—Sheet 1.

R. S. TRUE.
BICYCLE SADDLE.

No. 495,442.

Patented Apr. 11, 1893.

Fig. 1.

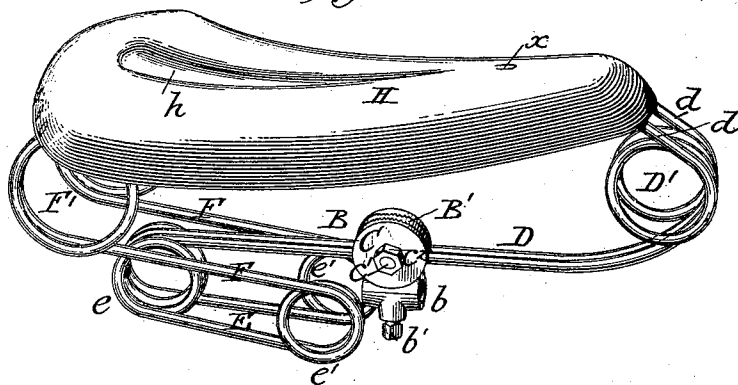
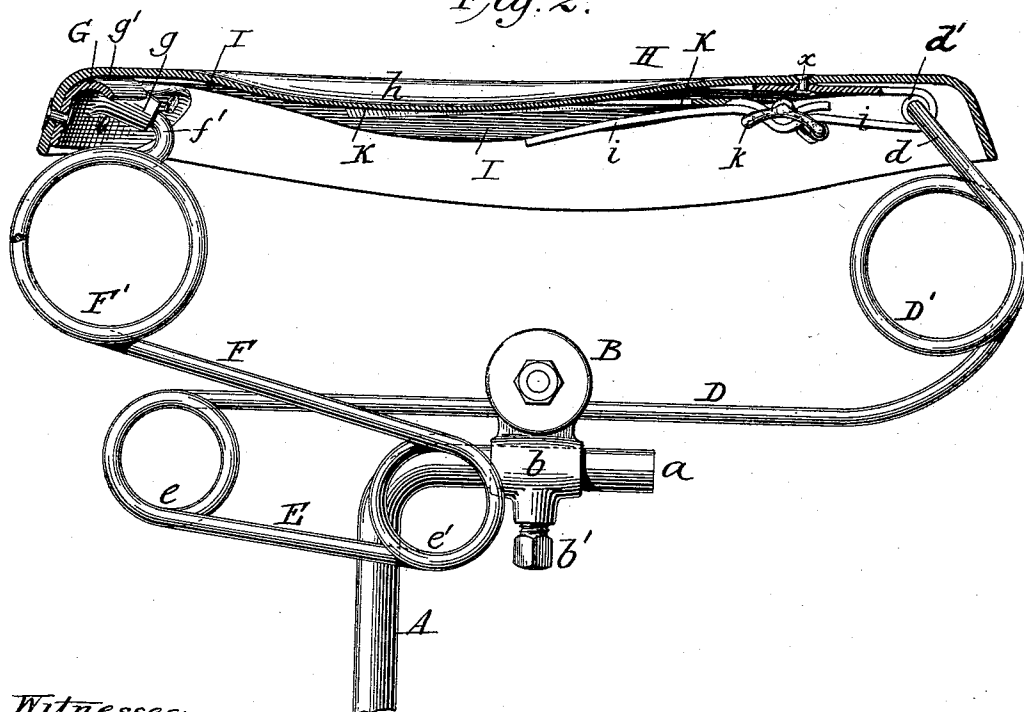


Fig. 2.



Witnesses,

Samuel P. Hallingsworth
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Inventor

Richard S. True
by his attorneys

Baldern Davidson & Wright

(No Model.)

2 Sheets—Sheet 2.

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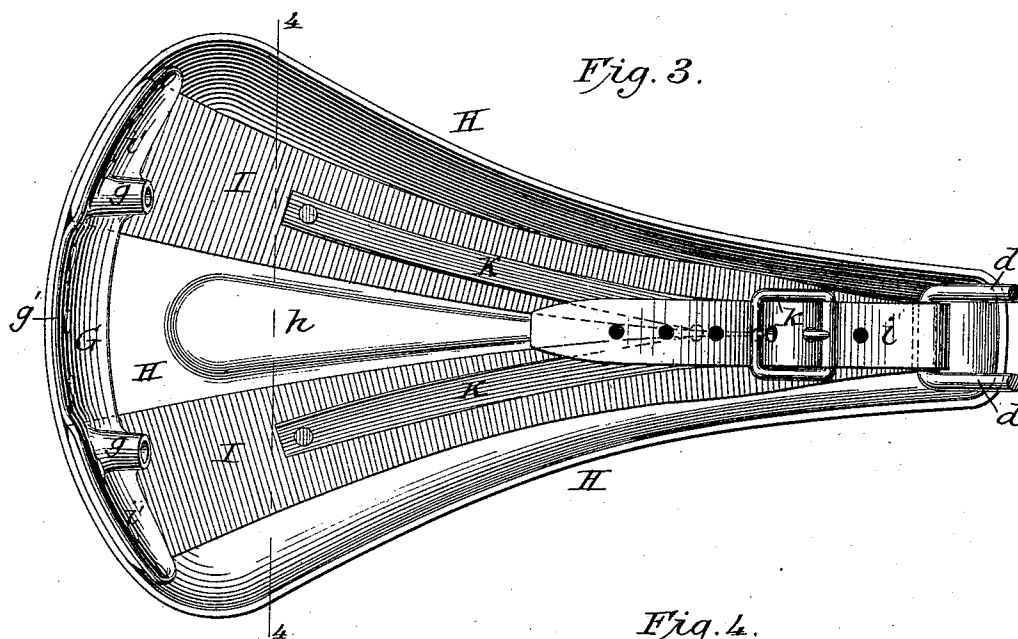


Fig. 4.
on line 4-4

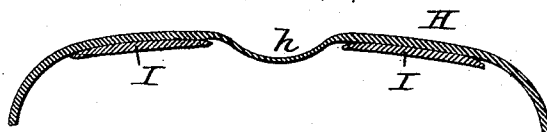


Fig. 5.

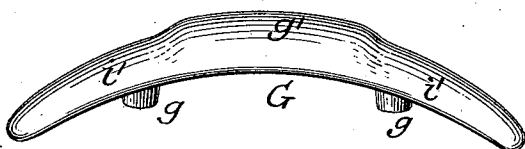


Fig. 6.

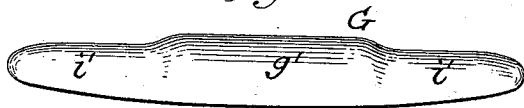


Fig. 7.

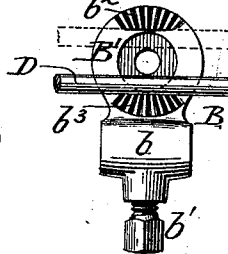


Fig. 8.

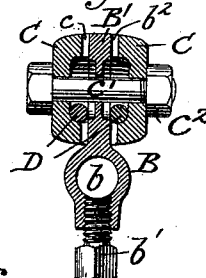
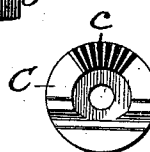


Fig. 9.



Witnesses:
Sidney P. Klingworth
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Inventor,
Richard S. True
by his attorneys

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UNITED STATES PATENT OFFICE.

RICHARD S. TRUE, OF SYRACUSE, NEW YORK, ASSIGNOR TO THE R. S. TRUE COMPANY, OF SAME PLACE.

BICYCLE-SADDLE.

SPECIFICATION forming part of Letters Patent No. 495,442, dated April 11, 1893.

Application filed April 4, 1892. Serial No. 427,715. (No model.)

To all whom it may concern:

Be it known that I, RICHARD S. TRUE, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Bicycle-Saddles, of which the following is a specification.

My invention more especially relates to the seat and its supporting-springs, of a bicycle-saddle, and contemplates the production of a convenient, simple and easy-riding saddle, readily adjustable both in regard to the tension of the seat and its supporting-springs, their position relatively to their support on the bicycle-frame, and the variation of their angle relatively to their normal horizontal position or plane.

My invention constitutes an improvement on the bicycle saddle shown in United States Letters Patent No. 455,027 granted to my assignee, Thankful E. True, June 30, 1891, and my present improvements consist in certain novel constructions, combinations and organizations of instrumentalities herein described and particularly designated in the claims.

Unless otherwise indicated, the parts are of usual approved construction and operation.

In the accompanying drawings,—Figure 1 represents a perspective view of my improved bicycle saddle, detached from its support; Fig. 2, a side elevation thereof, including its support, on an enlarged scale, showing the seat in vertical, central, longitudinal section; Fig. 3, a plan view of the under side of the seat; Fig. 4, a vertical cross-section through the seat on the line 4—4 of Fig. 3. Fig. 5, shows a rear perspective view of the cantle frame detached; Fig. 6, a rear elevation thereof; Fig. 7, a detail view, in side elevation, of the supporting clamp with one of its clamping-disks or washers removed; Fig. 8, a vertical cross-section through the clamp; and, Fig. 9, an elevation of the inner face of one of the clamping-disks.

The usual supporting-rod or standard A, is shown as provided with a substantially horizontal longitudinal bracket-arm *a*, on which the supporting-clamp B, turns freely and slides longitudinally, being provided with an eye *b*, and a set-screw *b'*, to hold it in the position desired. The central upright plate B'

of the clamp, is shown as provided with a double flanged rim and a central perforation. Radial corrugations *b²*, *b³*, on the faces of these flanges, engage with corresponding corrugations *c* on the inner faces of the flanged cup-shaped clamping-disks or washers C, placed on opposite sides of the clamp-plate B', and firmly clamped thereagainst by a screw-bolt *c'* passing through both the washers and the plate, and provided with a nut *c²* at one end.

Longitudinal recesses in the clamping-disks receive the central supporting spring-rods D, which are adapted to slide freely endwise in the clamping-disks, which, in turn can be rocked on their central screw-bolt or pivot *c'*, and securely clamped at any desired inclination, thus enabling me readily to move the rods backward or forward in the clamp, or to vary their inclination, so as easily to adjust the saddle to the size or weight of the rider. The drawings show the spring-rods as passing through the clamp below its pivot; but Fig. 7 shows the recesses in the clamp-disks as duplicated so that the spring-rods may be clamped above the pivot as indicated in dotted lines, thus giving a wider range of adaptability to the saddle. The entire spring is shown as double or with its parts duplicated, as usual, though a single proportionately stronger spring would obviously serve the same purpose, though less efficiently.

The central spring-rods D, carry coils D', at the front or "bow" of the saddle, the outer arms *d*, of which terminate under the seat H, and are bent inward to enter a sleeve *d'*, or these arms may be united to form a bar, around which the tongue-strap of the bracing strips I passes, as hereinafter more fully explained. The opposite ends of the spring-rods respectively carry coils *e*, connected by short spring-arms E, with coils *e'*, in turn connected by spring-arms F, with coils F', the outer ends or arms *f'*, of which are bent into hook-shape and inserted into holes in studs *g*, on the outer side of the cantle frame G. These coils F', which I call the cantle-coils, are shown in the drawings as lying between the spring-rods D, and seat H, and as somewhat larger than the bow-coils D', thus giving slightly more play to the rear end of the seat, while the outer lower coil *e*, and inner coil *e'* are shown as of equal

size, but of a somewhat smaller diameter than the bow-coils. The bow and cantle-coils are also shown as projecting slightly beyond the front and rear of the seat respectively, while the lower center coils *e* do not extend quite so far backward as the cantle-coils, below, between and inside of which they lie. These outer lower coils *e*, and the inner coils *e'*, are also shown as lying below the spring-rods D, while the inner coils lie close to the supporting-clamp; or, in other words, lie nearly centrally below the seat. The connecting spring-arms F, are also shown as lying outside of, and diagonally crossing the supporting spring-rods D. The above explained organization enables me to bring the seat closer to its support, and to use longer connecting-arms between the coils than could be done with the connecting-arms and coils between the supporting spring-rods and the seat as is the case in my patent above mentioned.

The cantle-frame G, is shown as consisting of a peculiarly-curved concavo-convex arched or bow-shaped bar, with a central boss or swell *g'*. The bracing strips I, pass over the back of the cantle-frame, and lie in the depressions *i'*, between the central boss and the outer ends of the cantle-frame, so as to make an even or flush surface over the cantle-frame for the seat H.

The seat proper H, of flexible material, is shown as connected directly with the cantle-frame and as having no other support than said cantle-frame, and the arms of the bow-coils, thus increasing its elasticity. The middle portion of the seat is made in the shape of a centrally depressed longitudinal gusset or gore *h*, and thinner than the outer portions, so as to prevent undue pressure on the overlying parts of the rider when seated.

Bracing-strips I, preferably of stout leather, pass over and are secured to, the back of the cantle-frame in the recesses *i'*, and extend forward under and close to the seat on each side of its central depression, or groove *h*. These strips converge toward the saddle-bow, and unite with each other near it being secured at *x*, to the seat at or near their junction. These strips terminate in a tongue-strap *i*, which encircles the loop or stem *d'*, of the bow-coils, and then passes backward through a buckle *k*, secured on the forward converging ends of the adjusting-strips K, secured to the under side of the bracing-strips near their rear ends. By this organization, the spring-tension may be adjusted, and yet leave the seat and spring free to yield to prevent undue shocks to the rider in traversing rough surfaces. The seat not being attached directly to the bow-springs but to the bracing-strips, is free to flex crosswise, and its outer edges also tend to bend inward and become narrower by use, not only by the yielding or inward turning of said edges, but by the collapsing of its thinner, central depression or gored portion. I am thus by my improvements, enabled to secure an effective, simple,

convenient, safe, readily-adjustable and easy-riding bicycle-seat admirably adapted to the needs of the rider.

Having thus fully described the construction and operation of my improved bicycle-saddle, what I claim therein as new and as of my own invention is—

1. The hereinbefore described saddle-spring comprising a central supporting portion or spring-rod D, a bow-coil D', and a cantle-coil F' above the rod D, both adapted to connect said central supporting portion and the seat, a spring-arm E, below the central supporting portion, and connected therewith, a second spring-arm F, connected with the first mentioned spring arm E, and with the cantle-coil F', and the device B, for connecting the rod D to the bicycle frame attached to the rod D in front of the rear end of the spring-arm E, substantially as set forth.

2. The hereinbefore described saddle-spring, comprising a central supporting portion or spring-rod D, a bow-coil D', and a cantle-coil F' both above the rod D, both adapted to connect said central supporting portion and the seat, a spring-arm E, below the central supporting portion and connected therewith, a second spring-arm F, connecting the first mentioned spring-arm E, and cantle-coil F' one or more coils connecting the central supporting-portion and spring-arms, a clamping device (B) for connecting the saddle to the frame of a bicycle secured to the arm D, above the spring-arm E, substantially as set forth.

3. The hereinbefore described saddle-spring, comprising a central supporting-rod or portion D, a bow-coil D', connecting it with the seat, a spring-arm E, below the spring-rod, a coil *e*, connecting this spring-rod and spring-arm, a connecting spring-arm F, crossing the spring-rod diagonally, an inner coil *e'*, connecting these arms E and F, a cantle-coil connecting the arm F and cantle, a securing device B, attached to the spring rod D, above the spring-arm E, substantially as set forth.

4. The combination with a seat, of a spring comprising a pair of supporting-rods D, a pair of bow-coils connected therewith and with the seat and arranged above the supporting rods D, a pair of cantle-coils connected with the seat and arranged above the supporting rods D, two pairs of spring-arms below the supporting arms, on opposite sides thereof, and coils connecting the spring-arms with the supporting-arms, and a supporting device secured to the supporting rods D, above the lower spring-arms for fastening the saddle to the frame of a bicycle.

5. The herein described cantle-frame having the recesses *i'*, for the bracing-strips, substantially as set forth.

6. The herein described concavo-convex cantle-frame provided with recesses *i'*, and studs *g* for the purpose specified.

7. The herein described bicycle seat of flexible material, in combination with forwardly converging longitudinal bracing strips, con-

5 nected with the cantle and terminating in a forward tongue-strap, and longitudinally-converging adjusting strips secured to the bracing strips, in advance of the cantle and carrying a buckle with which the tongue-strap engages, substantially as set forth.

10 8. The combination with the recessed cantle-frame, of the longitudinal bracing strips having their rear ends secured in the recesses of the cantle-frame, and having a tongue-strap at their front ends, and the adjusting strips, carrying a buckle with which the tongue-strap engages, substantially as set forth.

9. A seat provided with a cantle-frame and having longitudinally - converging bracing strips I I, formed with a tongue-strap *i*, the adjusting strips K and the buckle *k*, in combination with the springs connected with the cantle-frame and with the tongue-strap, substantially as set forth. 15 20

In testimony whereof I have hereunto subscribed my name.

RICHARD S. TRUE.

Witnesses:

L. E. FELLOWS,
F. H. PRESCOTT.