(No Model.) 2 Sheets—Sheet 1.

W. W. SHOE.

BICYCLE SADDLE.

No. 589,581. Patented Sept. 7, 1897.

Fig. 1.

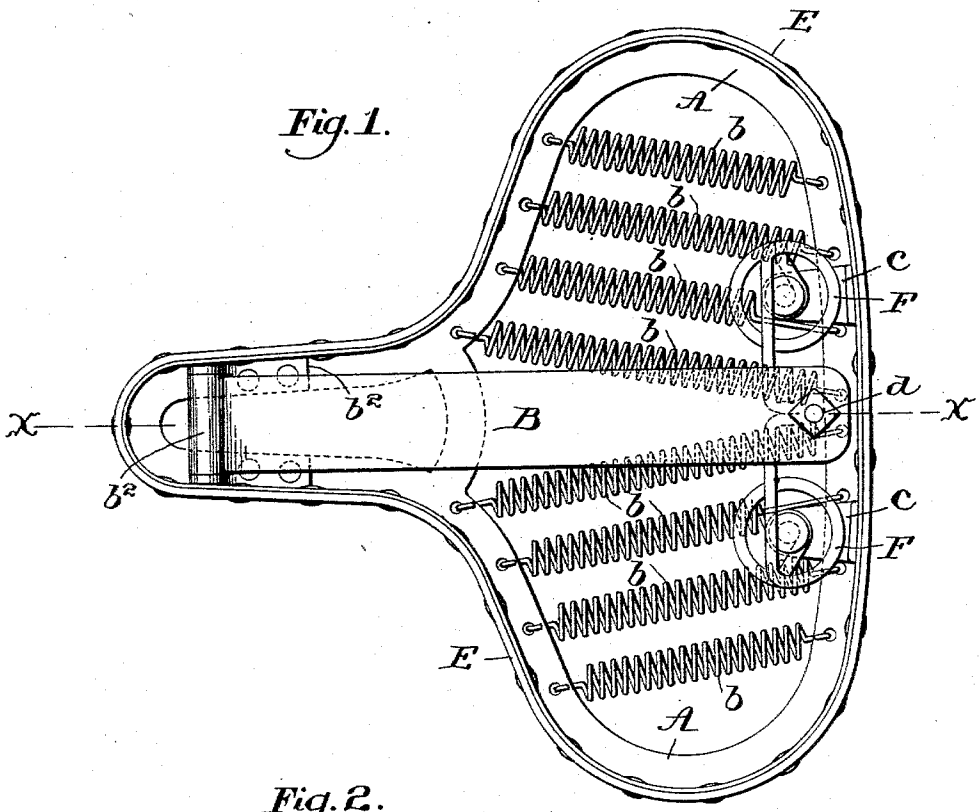
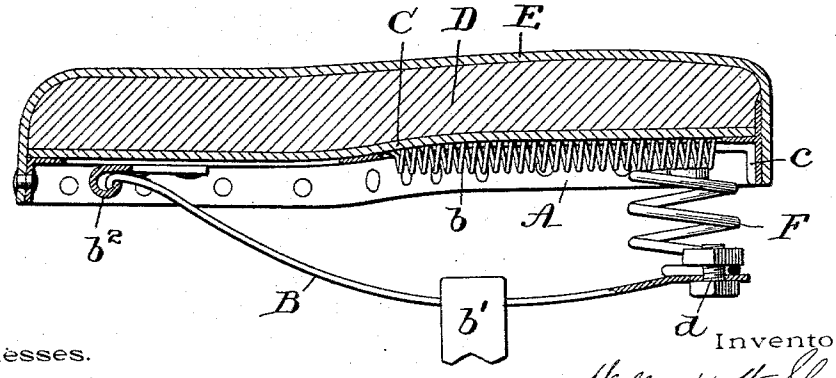


Fig. 2.



Witnesses.

J. A. Strauch

E. Fabel

Inventor.

William W. Shoe

by Shoemould & Co

Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

W. W. SHOE.

BICYCLE SADDLE.

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Fig. 3.

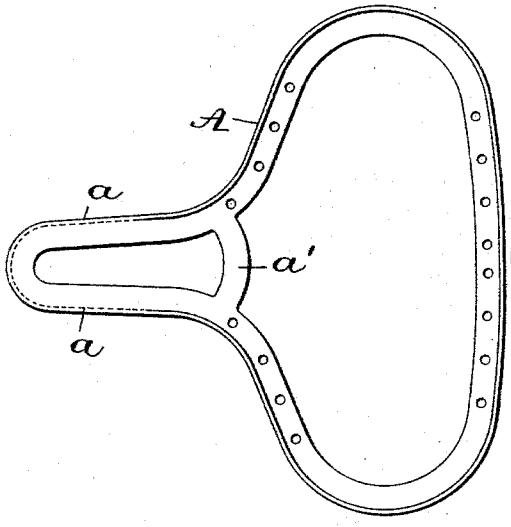


Fig. 5.

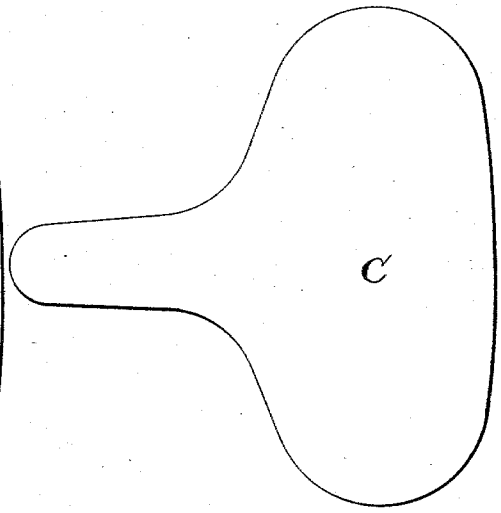


Fig. 4.

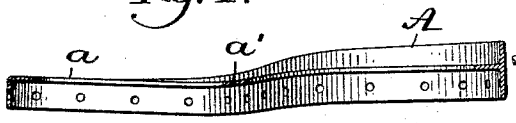
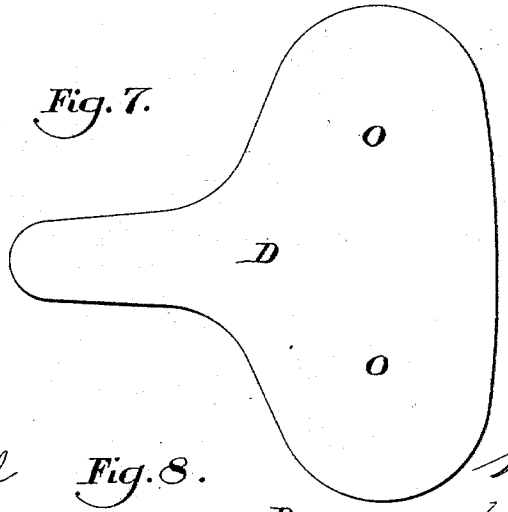


Fig. 6.



Fig. 7.

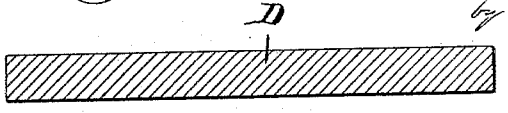


Witnesses.

J. A. Shank

E. Fable

Fig. 8.



Inventor,

William W. Shoe

by Thos. S. Mowlds

Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM W. SHOE, OF WALLINGFORD, PENNSYLVANIA.

BICYCLE-SADDLE.

SPECIFICATION forming part of Letters Patent No. 589,581, dated September 7, 1897.

Application filed July 2, 1896. Serial No. 597,813. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. SHOE, a citizen of the United States, residing at Wallingford, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Bicycle-Saddles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to bicycle-saddles; and the object of my improvement is to construct a saddle that will when in use conform to the shape of the rider and support him wholly upon those parts of the body that would ordinarily carry his weight when sitting comfortably in a chair. To accomplish the desired result, I construct the several parts of the saddle in the manner hereinafter described, and more particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is an inverted plan view of the saddle. Fig. 2 is a sectional view through the middle of the saddle on line X X. Fig. 3 is a plan view of the metal frame of the saddle. Fig. 4 is a sectional view through the middle of the metal frame. Fig. 5 is a view of the bottom-leather resting on the springs. Fig. 6 is a sectional view through the leather. Fig. 7 is a view of the felt forming the cushion of the saddle. Fig. 8 is a sectional view through the felt cushion.

A represents the metal frame of the saddle. This frame is made of T-shaped metal or any other suitable material bent or cast to the desired shape. The top edge *a* of the frame is preferably tapered off gradually at the forward or pommel end until the edge comes flush with the stem of the T-iron. (See Fig. 4.)

a' is a support or stiffening-piece secured in the saddle-frame just forward of the part that forms the seat.

b b are two series of separate and independent spiral springs secured in the seat-frame, and extend from back to front therein in the manner shown in Fig. 1.

B is a flat spring supporting the saddle and secured to the saddle-post by the clamp *b'*. This spring has the forward end curved in the manner shown in Fig. 2 and fits into the curved plate b^2, secured on the forward end of the saddle.

C is a leather bottom cut to the shape shown in Fig. 5 and resting on the top of the springs *b b*.

D is a felt cushion cut to the shape shown in Fig. 7 and resting on the leather C.

E is the leather cover extending over the top of the felt cushion and secured to the metal frame by being riveted thereto around the edges.

c c are two supports secured on the rear of the saddle-frame on the under side thereof.

F is a double spiral spring secured on the rear end of the flat spring B by the bolt *d* and having the ends thereof resting against the supports *c c*.

When the saddle is constructed in the manner shown, the lower part of the T-shaped iron, from which the frame is made, gives ample room for riveting the leather cover thereon, while the projecting top and the horizontal part of the frame, when the springs *b b* are secured therein, form a receptacle for the felt cushion, holding it securely in position and preventing any slipping from side to side. The double spiral spring secured on the rear part of the saddle forms a support for the rear of the flat spring B and prevents any tilting. The forward end of the flat spring being loosely hinged to the front of the saddle allows a free movement of that part of the spring. The spring F coming in contact with the cantle of the saddle on both sides of the spring B and some distance therefrom very little, if any, twist or torsional strain is thrown on the bolt *d* or on the cantle of the saddle by any sudden jolt to one side, and all liability to breakage from this cause is removed.

The weight of the rider on the saddle slightly depresses the double spring F and correspondingly elevates the forward end of the saddle, bringing it into the slightly-in-

clined position most advantageous to the rider. To adapt the saddle to any weight of rider, it is only necessary to change the double spring F for one lighter or heavier, as desired.

In a saddle constructed as shown the entire weight of the rider is supported upon the cushion D, being equally distributed around the two points marked O O. As these portions of the cushion rest upon the flexible springs *b b*, the springs will be depressed and the cushion D allowed to conform to the shape of those parts of the body that should carry the weight when sitting down. The weight of the rider being thus evenly distributed and wholly supported around about the points O O, as designated, the middle or central part of the saddle will carry no weight at all, and there will be no pressure upon delicate parts.

Having thus described my invention, what I claim as new is—

In a bicycle-saddle a frame made of T-shaped metal formed to the desired shape, the top edge *a* of said frame extending upward and around the rear or seat portion of said frame to form a receptacle for the cushion, the said top edge *a* of the frame being tapered off gradually at the forward or pommel end until the edge comes flush with the stem of the T-iron, the support *a'* in said frame, and the springs *b*, *b*, secured to the stem of said T-iron, in combination with the cushion, and springs for supporting said saddle and securing it to the machine, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM W. SHOE.

Witnesses:
THOS. D. MOWLDS,
SAML H. KIRKPATRICK.