(No Model.)

A. L. GARFORD.

VELOCIPEDE SADDLE.

No. 467,403. Patented Jan. 19, 1892.

Fig 1.

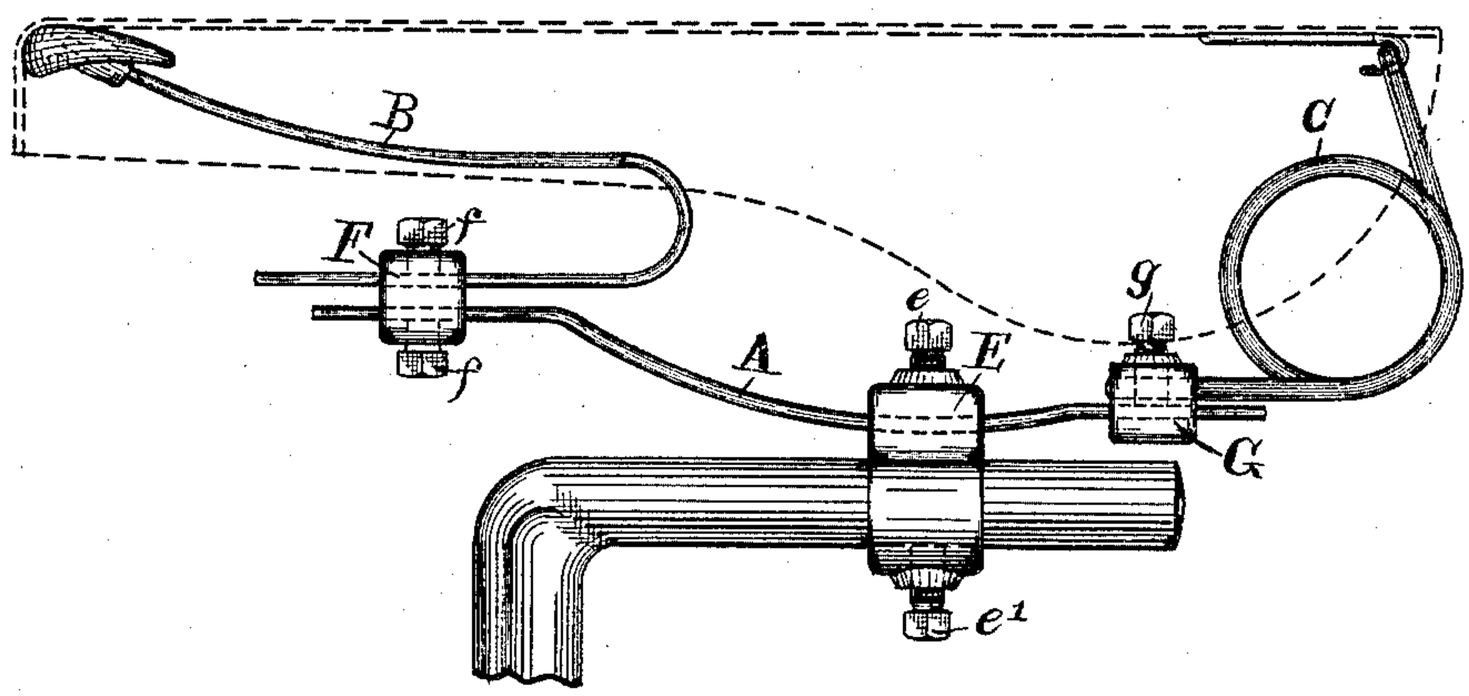
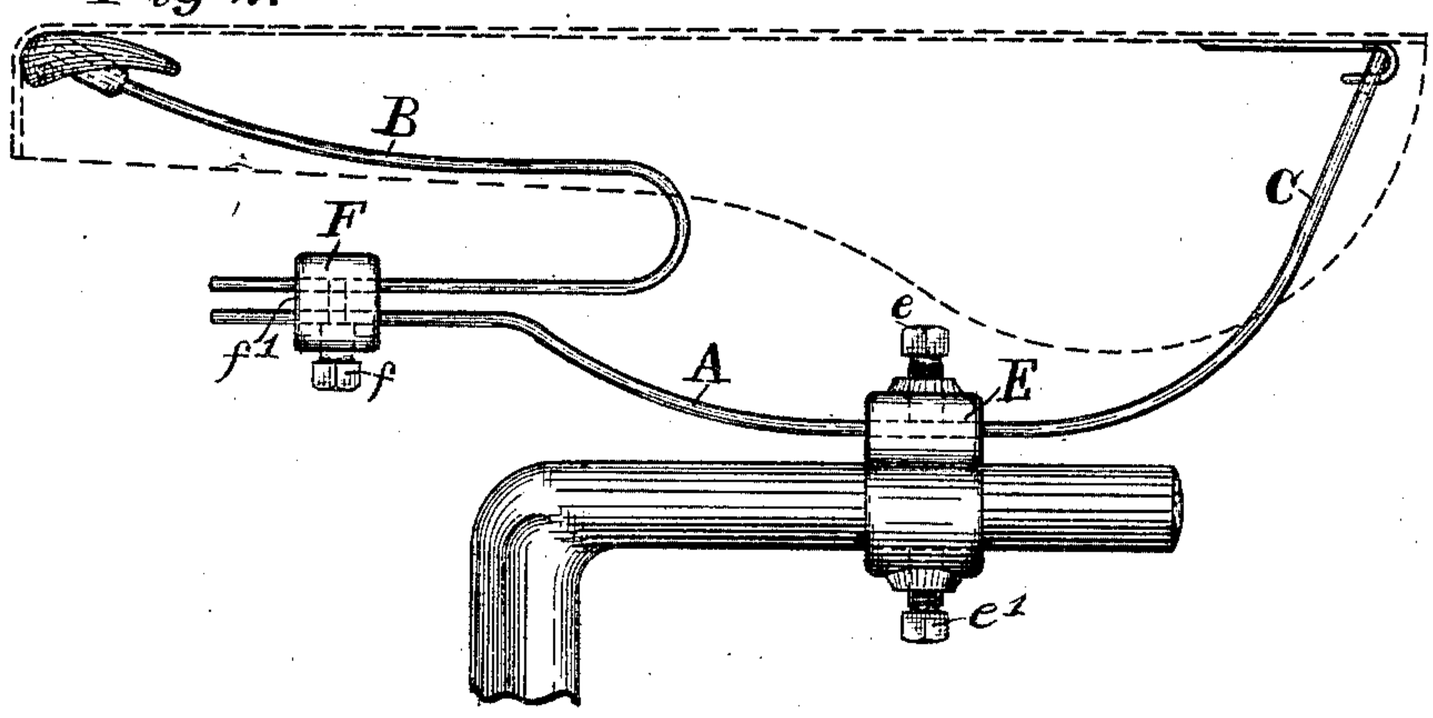


Fig 2.



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ARTHUR L. GARFORD, OF ELYRIA, OHIO.

VELOCIPEDE-SADDLE.

SPECIFICATION forming part of Letters Patent No. 467,403, dated January 19, 1892.

Application filed May 28, 1891. Serial No. 394,373. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR L. GARFORD, a citizen of the United States, residing at Elyria, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Velocipede-Saddles, of which the following is a full, clear, and exact specification.

My invention relates to saddles for bicycles, tricycles, and like vehicles; and it consists in the construction and combination of parts hereinafter described, and pointed out definitely in the claims.

The objects of my invention are to provide an easy-riding spring-saddle which may be attached to any machine and which will prevent the rider from feeling the vibration of the wheels to any considerable extent, which may be adjusted to suit riders of different weights and with different styles of riding, and which may be adjusted toward the front or rear of the machine without necessarily varying the elasticity.

Referring to the drawings, Figure 1 is a side view of one form of my improved saddle, and Fig. 2 is a side view of another form thereof.

I will now proceed to describe in detail the two saddles shown in the drawings, in which my invention is embodied, although I do not intend to limit my claims to details to any greater extent than is expressly stated therein.

Referring now to the drawings, A represents a spring, and E a clamp through which the spring may slide and to which it may be rigidly secured at any point by the set-screw *e* or other equivalent means. This clamp is provided with means, as a hole through its lower part and the set-screw *e'*, by which it may be secured to the part of the machine intended to support it, as the ordinary L-saddle support. The part of the spring A which is slidable through the clamp E may be curved, as shown, whereby the tilt of the saddle may be varied as said saddle is moved through said clamp. Another result secured by this bend is that somewhat more of spring action is secured from the part of the spring behind the clamp E. The shape of this spring, however, is not a material feature of the broad invention, so long as the other springs may be attached to it, as hereinafter described.

B represents a U-spring, the lower arm of which is adjustably secured to the part of the spring A at the rear of the clamp E.

The means for attaching the springs B and A consists of the clamp F, which may be moved on either or both springs, and the set-screw *f*, with which they may be clamped therein. A distance-block *f'* is interposed between the springs within the clamp, whereby the full effect of each spring is secured. The bent part of the U-spring is toward the forward end of the saddle, and the upper arm of said spring extends rearward beyond the clamp F. The rear end of the upper arm is curved upward sufficiently to afford means for attaching the rear end of the leather thereto, and to prevent the leather from striking said spring when depressed by a rider. The spring C, which supports the front end of the leather, is attached to the spring A in front of the clamp E. This spring C may be an upward and forward curving integral part of the spring A, as shown in Fig. 2, or it may be adjustably attached thereto, as shown in Fig. 1. In the latter figure the lower end of the spring C is rigidly attached to the clamp G, which is slidable on the spring A, and may be secured thereto at any point by the set-screw *g*.

The construction shown in Fig. 2 is the cheapest and lightest construction, while that shown in Fig. 1 is capable of the greatest amount of adjustment. When constructed as shown in Fig. 2, I prefer that all the springs should be flat springs. In the construction shown in Fig. 1 the spring C is made of coiled round wire. The spring C is attached to the leather by means of a hook, secured to said leather, which hooks over the end of said spring. The spring B is secured to the leather by means of a cantle attached to the leather, having a socket which receives the end of said spring. The particular means employed for making these connections are not material parts of the invention; nor is it material whether the springs described are flat springs or wire springs. It may be said, however, that there is no appreciable side motion of the saddle when flat springs are used, while there may be more or less side motion when wire springs are employed.

The above-described saddle is more elastic as the spring A is moved backward through

the clamp E. It is also more elastic as the clamp F is moved rearward on the springs A and B. If the spring A is moved backward through the clamp E, the clamp F may be moved forward on the springs A and B far enough to preserve substantially the same elasticity in the saddle, which has been moved bodily rearward. The reverse motion of these parts carries the saddle forward, but may preserve the elasticity unchanged.

In the saddle shown in Fig. 1 the entire seat is carried rearward and made more elastic if the spring B is moved backward through the clamp F and the clamp G is moved backward along the spring A, and the seat may be carried forward and the saddle at the same time made stiffer by the contrary movement of these parts.

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

1. The combination of the spring A and a clamp through which said spring is slidable for connecting the same with the saddle-support, a U-spring, a clamp adapted to adjustably connect the lower arm of said U-spring with the spring A on one side of its clamp, a spring C, connected with the spring A on the other side of its clamp, and a leather suitably connected with the spring C and with the upper arm of the U-spring, substantially as and for the purpose specified.

2. The combination of a spring A and a clamp E, through which said spring is slidable for connecting the same to the saddle-support, with a U-spring, a clamp slidable on the lower leg of said U-spring and on the spring A on one side of the clamp E, whereby said springs are secured to each other, a spring C, secured to a clamp G, which is adjustably secured to the spring A on the other side of the clamp E, a leather, and suitable connections between the upper end of the spring C and one end of the leather and between the end of the upper arm of the U-spring and the other end of the leather, substantially as and for the purpose specified.

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