(No Model.) 2 Sheets—Sheet 1.

E. G. LATTA.

VELOCIPEDE SADDLE.

No. 472,732. Patented Apr. 12, 1892.

Fig. 1

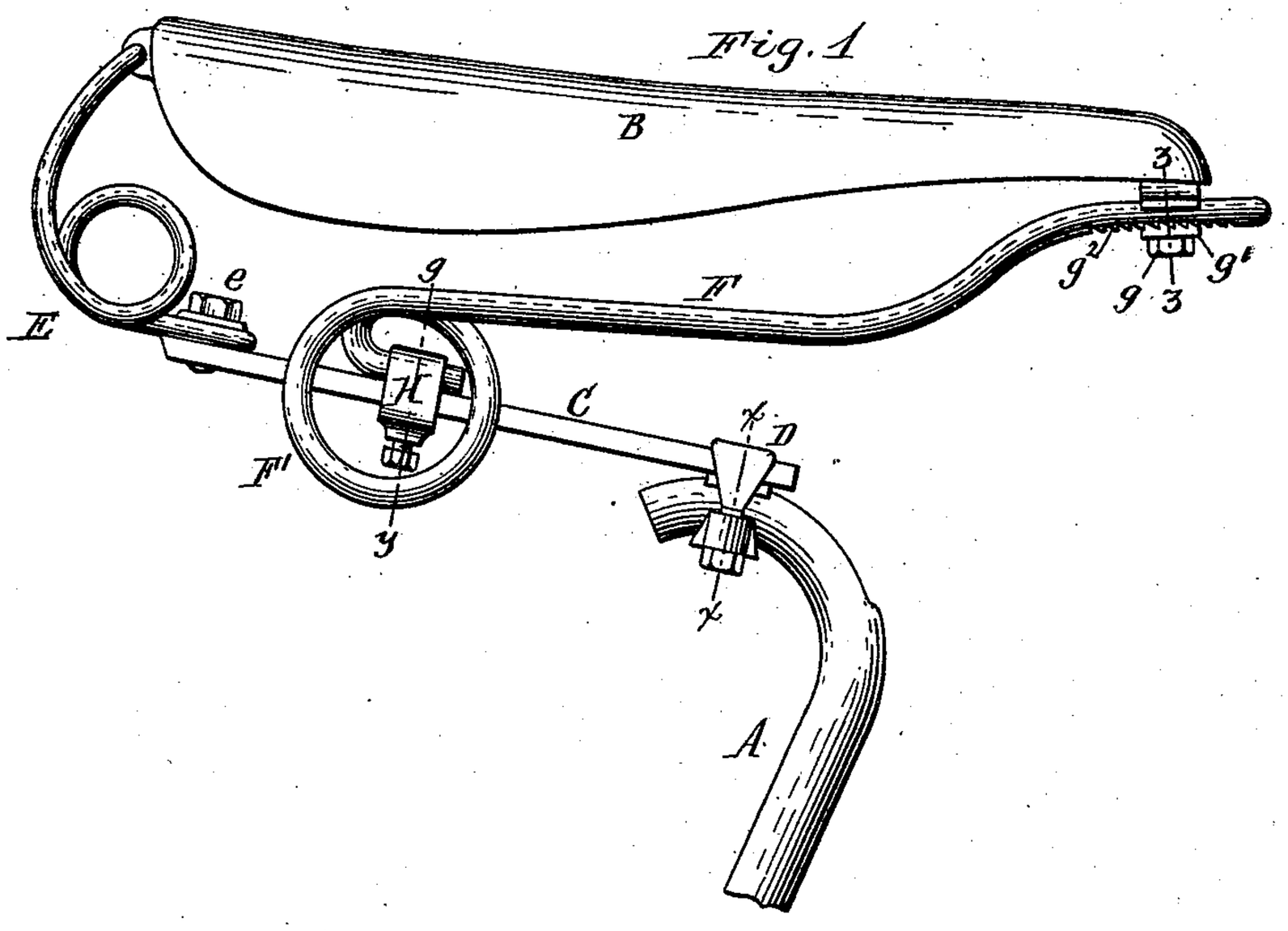


Fig. 2.

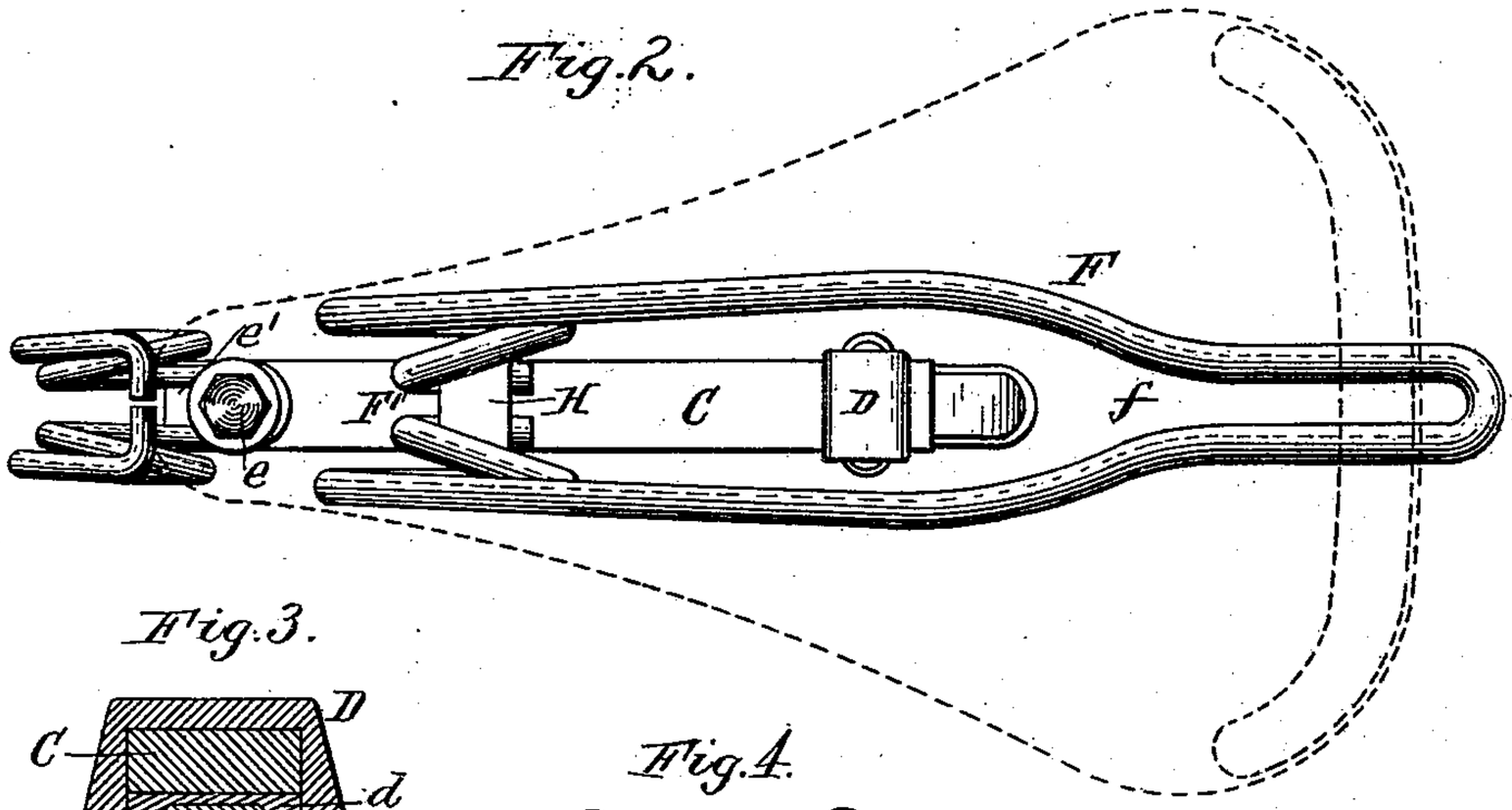


Fig. 3.

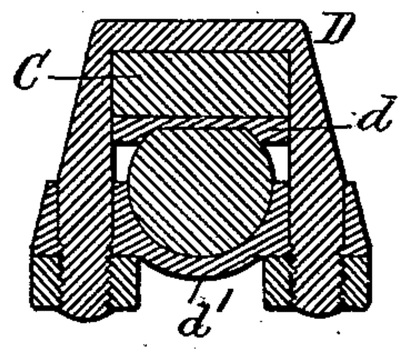


Fig. 4.

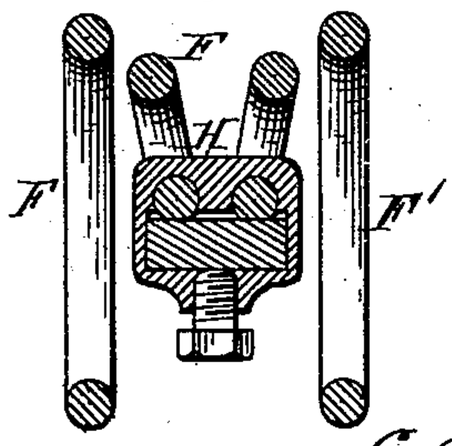
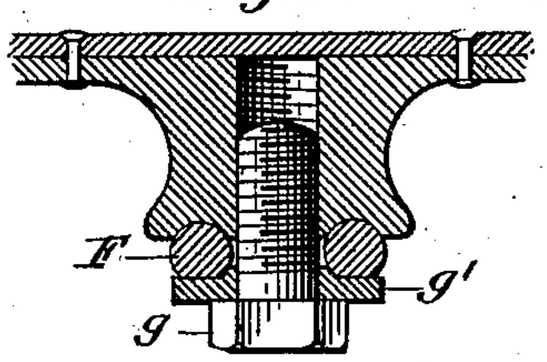


Fig. 5.



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(No Model.) 2 Sheets—Sheet 2.

E. G. LATTA.

VELOCIPEDE SADDLE.

No. 472,732. Patented Apr. 12, 1892.

Fig. 6.

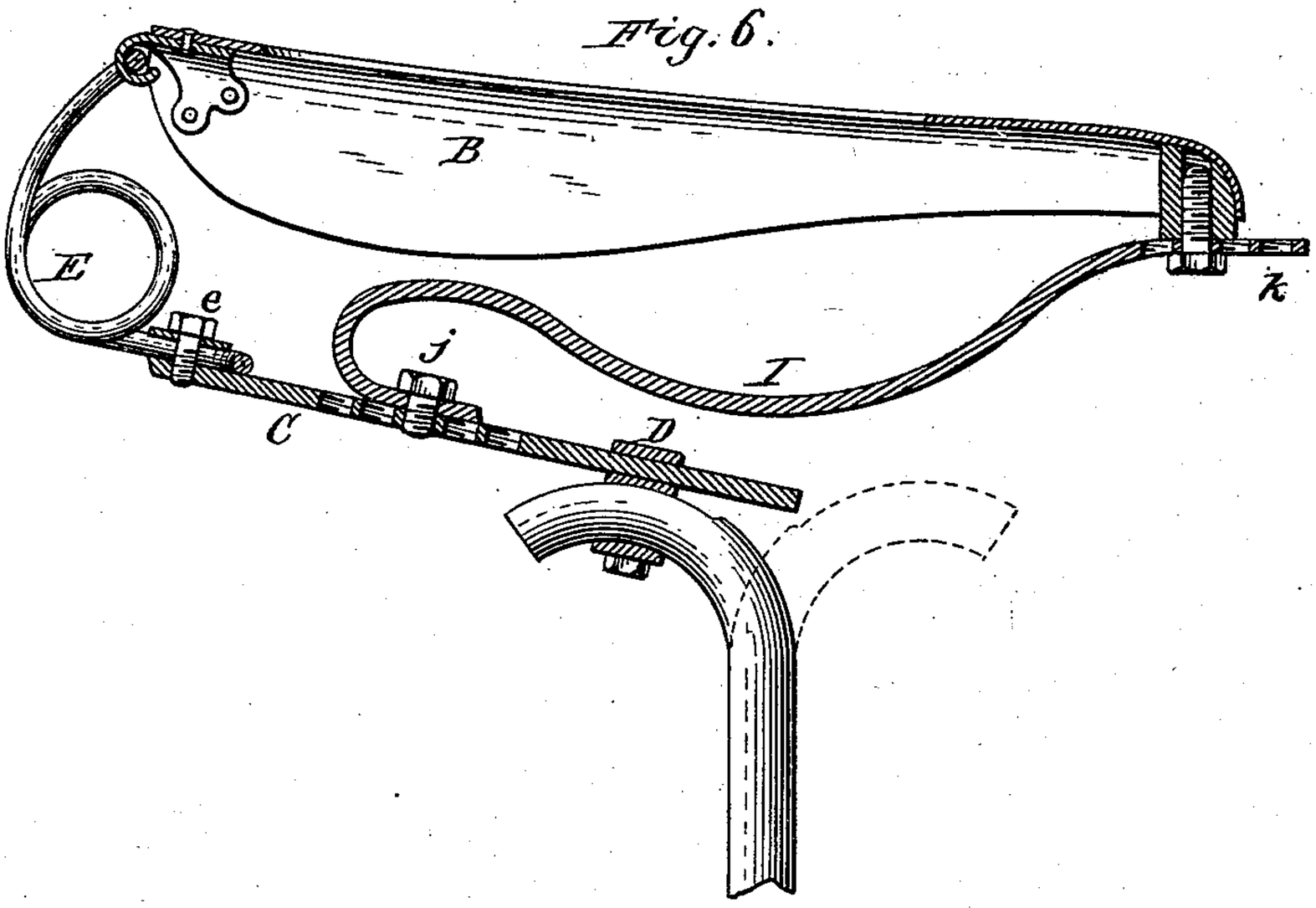


Fig. 7.

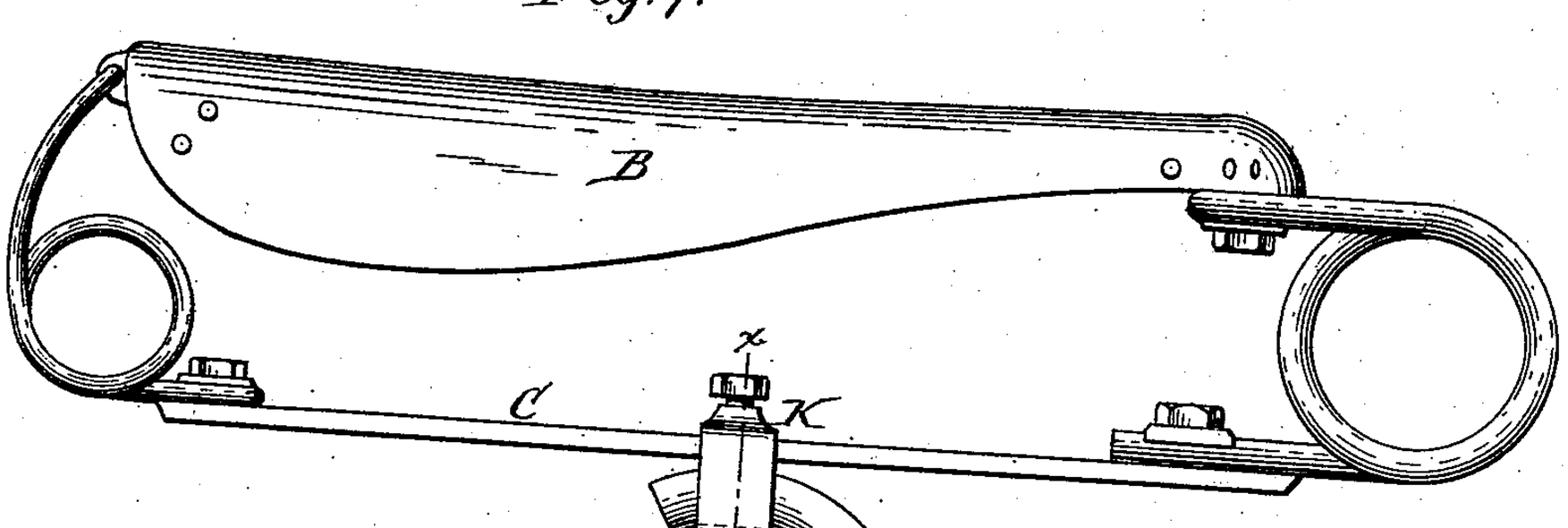
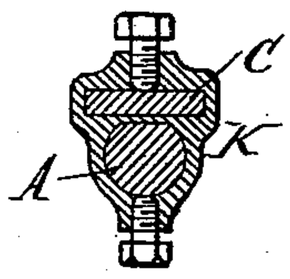


Fig. 8.



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UNITED STATES PATENT OFFICE.

EMMIT G. LATTA, OF FRIENDSHIP, NEW YORK.

VELOCIPEDE-SADDLE.

SPECIFICATION forming part of Letters Patent No. 472,732, dated April 12, 1892.

Application filed May 13, 1891. Serial No. 392,556. (No model.)

To all whom it may concern:

Be it known that I, EMMIT G. LATTA, a citizen of the United States, residing at Friendship, in the county of Allegany and State of New York, have invented new and useful Improvements in Velocipede-Saddles, of which the following is a specification.

This invention relates to a saddle which is more particularly designed for rear-driving Safety bicycles.

The invention has for its objects to so arrange the parts of the saddle that the resiliency of the springs may be changed in accordance with the rider's weight, to stretch or tension the flexible seat in a simple manner, and to provide light and sightly means for adjusting the saddle backwardly and forwardly and for raising either end of the saddle above the other at pleasure.

In the accompanying drawings, consisting of two sheets, Figure 1 is a side elevation of the saddle and its supporting-pillar. Fig. 2 is a top plan view thereof with the seat removed, the outline of the latter being indicated by broken lines. Figs. 3, 4, and 5 are cross-sections in lines *x x*, *y y*, and *z z*, Fig. 1, respectively. Fig. 6 is a longitudinal sectional elevation of a modified construction of the saddle. Fig. 7 is a side elevation showing my improved tilting device applied to a saddle of the class having coiled supporting-springs at opposite ends and a base-plate to which said springs are secured. Fig. 8 is a cross-section in line *x x*, Fig. 7.

Like letters of reference refer to like parts in the several figures.

A represents the vertically-adjustable saddle pillar or member of the frame which supports the saddle. The upper portion of this pillar instead of being bent to form the usual horizontal arm is curved, as shown in the drawings.

B is the flexible seat of the saddle, and C the flat base plate or bar, which is adjustably secured with its rear portion to the curved head of the saddle-pillar by a clip or clamp D of any desired construction. In the construction represented in the drawings the bow or upper part of the clip bears against the upper side of the base-plate C, which latter rests upon a washer *d*, bearing against the upper side of the curved head of the saddle-pillar. The cross-bar *d'* of the clip is provided with a concave recess or depression, which bears against the under side of the saddle-pillar. The curved head of the latter is flattened on its upper side to afford a broad bearing for the clip and prevent the clip from turning on the pillar. Upon loosening the bolts of the clip D the base-plate may be adjusted backwardly or forwardly in the clip, and the latter may be likewise adjusted on the curved head of the saddle-pillar to change the angle of the base-plate, the latter being tilted upwardly by shifting the clip rearwardly on the curved head and downwardly by shifting the clip forwardly.

E represents a coiled spring supporting the pommel or front portion of the flexible seat, and which is curved forwardly and downwardly from the pommel. This spring is pivoted at its upper end to the pommel in the ordinary manner and its lower portion is adjustably secured to the front end of the base-plate C by a clamping-bolt *e*, the lower portion of the spring being doubled to form a longitudinal loop *e'*, which embraces said clamping-bolt, and against the upper side of which the head of the bolt bears. Upon loosening this bolt the lower portion of the front spring E may be adjusted backwardly or forwardly on the base-plate to change the tension of the flexible seat.

F is a spring supporting the cantle or rear end of the saddle and attached to the base-plate C. This spring is preferably double and bent from a single length of wire, the central or doubled portion of which forms a loop *f*, extending lengthwise of the saddle, as represented in Fig. 2. This loop is adjustably secured to the under side of the cantle by a clamping-bolt *g*, passing through the loop and having a washer *g'* bearing against the under side of the loop. The contiguous faces of the washer and loop are preferably formed with interlocking teeth g^2, as represented in Fig. 1, which avoid slipping of the loop. The branches of the spring F extend forwardly from the cantle and are each formed with a coil F', and their ends are adjustably secured to the base-plate C by a clamp or clip H, which embraces the base-plate and the ends of the spring. The upper cross-bar of this clip is provided with seats or cavities for receiving

the ends of the spring, as represented in Fig. 4. The rear spring is connected to the base-plate C under the front portion of the saddle, or, in other words, in front of the connection between the base-plate and the saddle-pillar. By this arrangement the saddle is given a greater range of movement, and the shocks caused by the rear wheel striking an obstruction are more completely absorbed.

Upon loosening the clamping-bolt *g* and the set-screw of the clamp H the spring may be adjusted backwardly or forwardly to shorten or lengthen its leverage, and thereby increase or diminish its resistance or resilience.

The rear spring F is stiffer or stronger than the front spring E, so that the latter is compelled to yield rearwardly and downwardly to a sufficient extent to permit the necessary movement of the cantle. By this action an increased tension is exerted upon the flexible seat at the proper time to prevent the latter from unduly sagging in the center under severe strains.

The saddle-pillar is clamped in the post or standard of the velocipede in the usual manner, so that the pillar may be raised and lowered or given a half-turn to reverse the position of its curved upper portion, as indicated by broken lines in Figs. 6 and 7. In the position of the parts represented in Fig. 1 the saddle is adjusted nearly to its extreme forward position. If it is desired to shift the saddle to its extreme backward position, the saddle-pillar is reversed to bring its curved head on the rear side of the pillar, and the base-plate C is adjusted in the clip D. These combined movements afford a range of adjustment of about seven inches.

The saddle-pillar is preferably set at a forwardly-inclined angle, as shown in Figs. 1 and 7; but it may be arranged in a vertical position, as shown in Fig. 6. In either case the pillar must be readjusted vertically after being reversed to raise the saddle to the proper elevation.

In effecting one of the adjustments just described care must be exercised so as not to disturb the other adjustment.

The modified construction illustrated in Fig. 6 forms a saddle which is lighter and in some respects less expensive than that shown in Figs. 1, 2, 3, 4, and 5. In this construction a flat steel spring I is used in place of the double-wire spring F. The rear end of the spring is bolted to the cantle, and its front portion is adjustably secured to the base-plate C by a bolt *j*. The spring I is provided in its rear portion with a series of bolt-holes *k*, extending lengthwise of the spring, and the base-plate is provided in front of its connection with the saddle-pillar with a similar series of holes, whereby the spring I may be adjusted backwardly or forwardly to change its resiliency by placing its fastening-bolts in one or another of said holes.

In the modification represented in Figs. 7 and 8 the saddle is provided at opposite ends with coil-springs, which are connected by a base-plate made longitudinally adjustable in a clamp K, which in turn is capable of backward and forward adjustment on the curved upper portion of the saddle-pillar to change the inclination of the saddle. In this construction the clamp K is provided with a set-screw for attaching it to the saddle-pillar and a separate set-screw for clamping the base-plate in the same, so that either adjustment can be accomplished without disturbing the other; but this construction is less desirable than those before described, because its clip is not so easily made as the clips of the other construction.

By using the adjustable base-plate in connection with a curved saddle-pillar for adjusting the saddle a material saving in weight is effected, as the long horizontal arm usually employed is replaced by the short curved portion of the pillar.

The curved saddle-pillar may be constructed of a single rod, as shown, or, if desired, it may consist of a light double rod.

It is obvious that the saddle-spring might be tensioned by adjusting the front spring on the base-plate and the rear spring on the cantle, instead of adjusting the clamp at the front end of the rear spring.

I claim as my invention—

1. The combination, with the frame of a velocipede, of a reversible saddle-pillar made vertically adjustable on the velocipede-frame and having a curved or arc-shaped head, and a saddle supported upon the curved head of the saddle-pillar by an adjustable clip or clamp, whereby the saddle can be tilted by shifting the clip on the curved head of the saddle-pillar, substantially as set forth.

2. The combination, with a vertically-adjustable saddle-pillar having a curved or arc-shaped head, of a clip or clamp adjustably attached to the curved head of the saddle-pillar, and a saddle having a longitudinal base-plate adjustably secured in said clip, whereby the saddle can be moved forwardly and backwardly by sliding the base-plate in the clip and be tilted by shifting the clip on the curved head of the saddle-pillar, substantially as set forth.

3. The combination, with the saddle-support and the seat, of a longitudinal member or base-plate attached to the saddle-support, and independent springs supporting the front and rear ends of the seat and both attached to the base-plate in front of its connection to the saddle-support, substantially as set forth.

4. The combination, with the saddle pillar or support and the seat, of a longitudinal member or base-plate attached to the saddle-pillar, a front spring supporting the front portion of the saddle, and a rear spring supporting the rear portion of the saddle and made adjustable on the latter, whereby the rear spring and the seat may be shifted with refer-

ence to each other to change the leverage of the rear spring, substantially as set forth.

5. In a velocipede-saddle, the combination, with the seat and a longitudinal base-plate or member, of a spring supporting the front portion of the seat and made longitudinally adjustable on the base-plate, and an independent spring supporting the rear portion of the seat and made longitudinally adjustable both on the base-plate and the rear portion of the seat, substantially as set forth.

6. In a velocipede-saddle, the combination, with the seat and the longitudinal base-plate, of independent springs supporting the saddle at opposite ends and both curved forwardly and downwardly from the ends of the saddle and connected to the base-plate under the front portion of the saddle, substantially as set forth.

7. In a velocipede-saddle, the combination, with the seat and the longitudinal base-plate, of a spring attached to the base-plate and supporting the front portion of the seat, a rear spring attached at its front end to the base-plate and composed of a single length of doubled wire forming a longitudinal loop, and a clamping-bolt whereby said loop is adjustably attached to the cantle of the saddle, substantially as set forth.

Witness my hand this 8th day of May, 1891.

EMMIT G. LATTA.

Witnesses:
F. H. RICE,
H. F. KLEE.