(No Model.)

F. SWEETLAND.

BICYCLE SADDLE.

No. 476,838. Patented June 14, 1892.

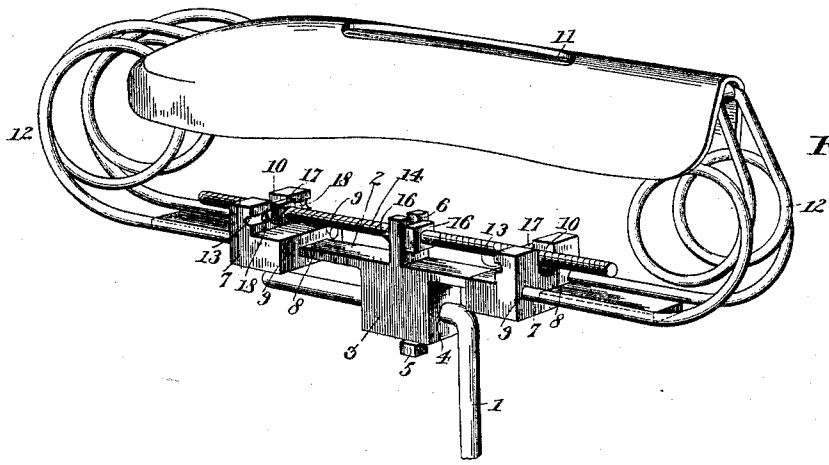


Fig. 1.

Fig. 2

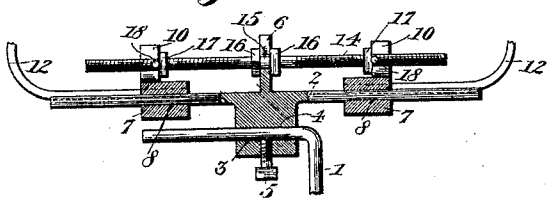
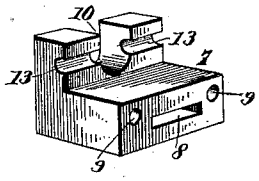


Fig. 3.



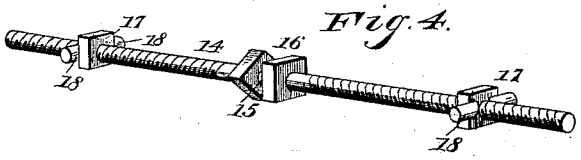
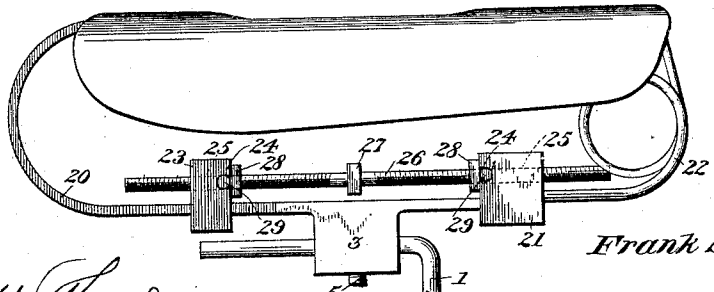


Fig. 4.

Fig. 5.



Witnesses;

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By his Attorneys,

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UNITED STATES PATENT OFFICE.

FRANK SWEETLAND, OF ANGOLA, NEW YORK.

BICYCLE-SADDLE.

SPECIFICATION forming part of Letters Patent No. 476,838, dated June 14, 1892.

Application filed February 3, 1892. Serial No. 420,203. (No model.)

To all whom it may concern:

Be it known that I, FRANK SWEETLAND, a citizen of the United States, residing at Angola, in the county of Erie and State of New York, have invented a new and useful Bicycle-Saddle, of which the following is a specification.

This invention relates to improvements in that class of bicycle-saddles known as "suspension," and employed particularly in that class of bicycles termed "Safeties," though, as will hereinafter appear, this saddle may be used upon the "ordinary."

The objects of my invention are to provide a cheap and simple construction of saddle capable of ready adjustment, so as to increase or decrease the tension of the same and adapt it for riders of various weights.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a bicycle embodying my improvements. Fig. 2 is a longitudinal section of the same. Fig. 3 is a detail of one of the sliding collars. Fig. 4 is a similar view of the adjusting-screw. Fig. 5 is a side elevation of a modified construction of saddle.

Like numerals of reference indicate like parts in all the figures.

1 designates the inverted-L-shaped seat-standard of a Safety bicycle, though it may be the backbone of an ordinary bicycle.

2 designates a spring-bar oblong in cross-section, and at its middle is provided with a depending stud 3, longitudinally bored, as at 4, so as to be adjusted upon the upper horizontal portion of the standard 1. In this position it may be secured by a binding-bolt 5, passing through the under side of the stud and at its upper end binding against the standard. At its center the spring-bar is provided with an upwardly-disposed bifurcated post 6. L-shaped adjustable collars 7 are located at opposite sides of the post 6. These collars are provided near their lower ends with spring-bar-receiving slots 8, and are adapted to freely slide upon the spring-bar. At opposite sides of the slots 8 the collars have perforations 9, and between the perforations the upper ends of the collars are provided with recesses 10.

11 designates the leather or seat portion of the saddle, and to the opposite ends of the same coiled springs 12 are secured. The terminals or lower ends of the springs pass through and are secured rigidly within the perforations 9 of the front and rear adjustable collars. At opposite sides of the recesses 10 the inner faces of the collars are provided with transverse notches 13.

14 designates an adjusting rod or bolt, and the same is provided at its center with a plain cylindrical portion 15, which fits for rotation within the bifurcation of the post 6, while the opposite ends of the same take into the recesses 10 of the collars. At opposite sides of the center the rod is threaded, the threads at one side being disposed to the right and those at the opposite side disposed to the left. At opposite sides of the plain bearing portion 15, and therefore at opposite sides of the post 6, the rod is provided with polygonal bosses 16, forming wrench-receiving portions, and their angles are arranged at variance with each other, as shown, so that in applying a wrench one or the other of the bosses may always be conveniently gripped. Between the bosses and the sliding collars nuts 17 are mounted upon the rod, and each is provided at radially-opposite sides with cylindrical lugs or trunnions 18, which are turned into engagement with the notches 13 of the movable collars.

From the foregoing description it will be seen that the spring-bar is free to vibrate without bending the threaded rod or bolt 16, and that by rotating either of the bosses 15 or by rotating them alternately for the purpose of convenience in gripping the sliding collars may be spread or drawn together, and thus the tension of the seat 11 increased or decreased and the saddle adapted for various riders.

In Fig. 5 I have illustrated a slight modification, and the same consists simply in extending the spring-bar 20 rearwardly and upwardly and securing the same to the rear end of the seat, thus omitting the rear sliding collar 7 and employing only the front sliding collar 21, which is perforated to receive the front coiled spring 22, which is connected at

its upper end to the seat or leather portion of the saddle. The post 23 is transversely recessed, as at 24, as is also the collar 21, and each has a transverse recess 25 to receive the threaded ends of the tension-bar 26, the threads of which are oppositely disposed at the opposite sides of the centrally-located boss 27 of the same. Nuts 28 are mounted on the ends of the rod at the inner sides of the post 23 and the collar 21, and radially-opposite trunnions 29, formed on the nuts, loosely fit in the recesses 24 of the post and collar. By rotating the boss 27 it will be obvious that the collar may be moved from or drawn toward the post and that the springs 20 and 22 may vibrate independent of and without bending the tension-rod 26.

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

1. In a saddle, the combination, with the spring-bar provided with a post having a bearing, a collar mounted for sliding on the bar at one side of the post, said collar having a perforation and a transverse groove or seat in its inner face, a threaded rod journaled in the post and provided with a collar or angular boss, of the leather-seat connections between its rear end and the spring-bar, the pair of springs connected to the front end of the seat and having their lower ends passed through the perforations in the collar, and the nut 17, having lugs 18, threaded on the rod and adapted to engage the seat of the collar, substantially as specified.

2. In a saddle, the combination, with the spring-bar, the bifurcated post rising therefrom, the opposite collars mounted for sliding on the bar, the seat, and the opposite pairs of springs connected thereto, of the right-and-left-hand-threaded rod mounted in the recesses formed in the collars and having the plain central bearing portion located in the bifurcation of the post and provided at opposite sides of the post with polygonal bosses, the angles of which are at variance with each other, substantially as specified.

3. In a saddle, the combination, with the spring-bar having upon its upper side the bifurcated post and at its lower side the bored stud, the L-shaped standard, and the binding-bolt 5 for securing the stud thereto, of the opposite L-shaped sliding collars 7, having the recesses 10 in their upper sides, slots 8 near their lower ends and opposite perforations 9, the seat 11, the springs 12, connected thereto and terminating in the perforations 9, the adjusting-rod 14, having the plain bearing 15, polygonal bosses 16, mounted in the bifurcated post and having its opposite ends threaded in opposite directions, the nuts 17, having the trunnions 18 at diametrically-opposite sides thereof and seated in recesses 13 formed in the inner faces of the collars, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FRANK SWEETLAND.

Witnesses:
LAUREN W. RACE,
E. M. CLARK.