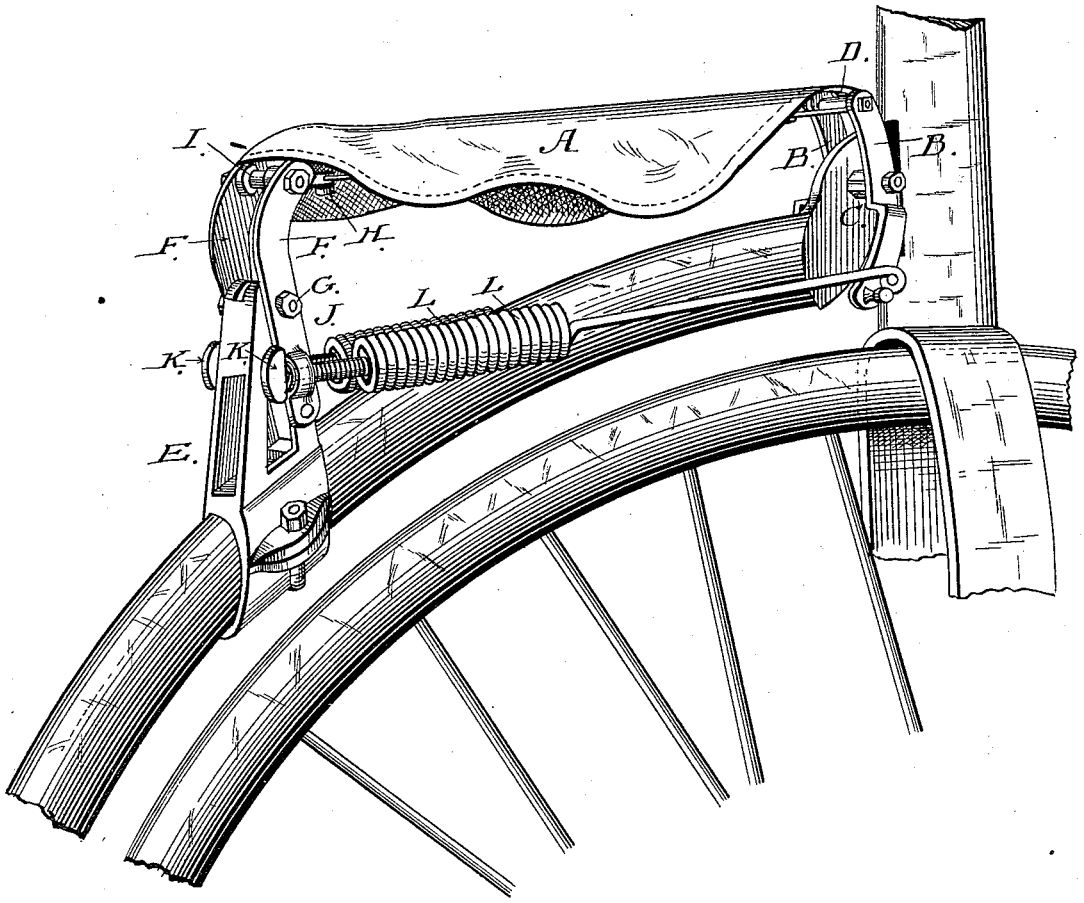
(No Model.)

J. PAYNE.

BICYCLE SADDLE.

No. 342,925. Patented June 1, 1886.



Witnesses
T. W. Fowler
H. B. Applewhite,

Inventor
John Payne,
By his Attorneys
Dewey & Co

UNITED STATES PATENT OFFICE.

JOHN PAYNE, OF SAN FRANCISCO, CALIFORNIA.

BICYCLE-SADDLE.

SPECIFICATION forming part of Letters Patent No. 342,925, dated June 1, 1886.

Application filed January 20, 1886. Serial No. 189,219. (No model.)

To all whom it may concern:

Be it known that I, JOHN PAYNE, of the city and county of San Francisco, State of California, have invented an Improvement in Bicycle-Saddles; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to certain improvements in saddles for bicycles, by which greater freedom of movement is allowed and a more perfect adjustment of the saddle to varying weights and conditions.

It consists of a flexible suspension-saddle the front end of which is connected with a lever or levers turning upon a journal-pin fixed to the neck of the machine, and the rear end connected to the upper end of similar levers fulcrumed upon a standard which is fixed to the backbone of the machine. The lower ends of the front and rear levers are united by longitudinally-working springs having both a vertical and a longitudinal adjustment, by which the action of the saddle and the degree of tension may be regulated.

Referring to the accompanying drawing for a more complete explanation of my invention, the figure is a view of my saddle applied to a bicycle.

In the present case I have shown the levers by which the saddle A is suspended as formed in pairs. The levers B B extend down upon each side of the neck of the backbone and have a fulcrum-pin, C, passing through them and through the neck, so that they may turn about this pin. The forward end of the saddle-leather is connected with the upper ends of these levers by a pin, D, which passes through their upper ends, and through the bight formed by folding the front end of the saddle-leather over this pin, or it may be attached in any other suitable or convenient way. The lower ends of the levers extend downward a short distance below the pin, and are curved backward slightly, as shown.

Upon the backbone or spine of the bicycle is clamped a standard, E, at sufficient distance from the forward levers to support the levers F, which have their central portions turning upon a fulcrum-pin, G, which passes through the upper ends of the standard. The rear end of the saddle is secured to a spreader or plate, H, in the usual manner, and this has an arm or plate with lugs extending backward and downward, so that the pin I, in passing through the upper ends of the levers F, will pass through these lugs, thus holding the rear end of the saddle.

Upon each side of the lower ends of the levers F are formed open eyes or lugs J, through which adjusting-screws K pass.

L are the tension-springs, which in the present case are shown in the form of stout coils of sufficient length the ends of which are connected with the lower ends of the forward levers, B B, as shown. The rear ends of these springs carry nuts, in which the screws K enter, and by turning these screws the lower ends of the levers B and F are drawn nearer together or separated, as may be desired.

The tension upon the flexible suspended saddle A, which extends between the upper ends of the levers, may be increased or decreased at will by means of the levers B and F, having fulcrum-pins at their centers, and the saddle suspended between their upper ends, while the tension-springs unite their lower ends. It will be seen that any forward or backward vibration or movement of the machine in passing over rough or uneven ground is relieved by the swinging of these levers upon their pins. The peculiar shape and relation of the levers B and F are such that when the saddle swings forward the lower arms of the levers B approach a position more nearly in line with the connecting-springs, while the rear levers are carried backward, so as to produce more tension upon the spring and the saddle. If the saddle swings backward, the levers move about their fulcrum-pins so that the lower ends of the rear levers approach more nearly a line with the line of the springs, while the lower ends of the front levers are carried forward, so as to increase the tension.

The movements of this saddle are very easy, and relieve the rider and the machine from a great portion of the jar and strain induced by rough roads. The levers B and F have holes made in their lower ends or lugs or other devices, so that the connection of the spring with the levers may be adjusted near to or farther from the fulcrum-pins, thus increasing or diminishing the tension and also altering the effect of the forward and backward movement of the levers around their fulcrum-pins by in-

creasing or decreasing the amount of tension caused by this movement, this action depending upon the relative distance of the adjustment of the two ends of the spring to the front and rear levers.

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

1. A flexible suspension-saddle having its front and rear ends attached to the centrally-fulcrumed levers, in combination with a spring or springs extending between the lower ends of said levers, substantially as herein described.

2. A lever or levers having the centers fulcrumed to the front end or neck of the backbone of a bicycle, other levers having their centers fulcrumed to a standard extending upward from the backbone, a flexible saddle having its front and rear ends connected to the upper ends of said levers, respectively, in combination with an elastic extension-spring having one end connected to the lower ends of the front levers, and the opposite end to the lower ends of the rear levers, substantially as herein described.

3. The centrally-fulcrumed levers between the upper ends of which a flexible saddle is suspended, and between the lower ends of which elongating springs extend, in combination with an adjusting screw or screws, by which the tension of said springs is regulated, substantially as herein described.

4. The centrally-fulcrumed levers between the upper ends of which a flexible saddle is suspended, and between the lower ends of which an adjustable spring or springs extend, said levers being so curved or arranged that the tension of the springs will be increased by the movement of the levers forward or backward upon their fulcrum-pins, substantially as herein described.

5. The centrally-fulcrumed levers having a flexible saddle suspended between their upper ends, and a spring or springs uniting their lower ends, said levers having holes or devices at their lower ends whereby either the front or the rear end of the spring may be adjusted to a point nearer to or farther from the fulcum, substantially as herein described.

In witness whereof I have hereunto set my hand.

JOHN PAYNE.

Witnesses:
GEO. H. STRONG,
S. H. NOURSE.