

C. A. PERSONS.
SADDLE.
APPLICATION FILED JUNE 27, 1908.

987,825.

Patented Mar. 28, 1911.

Fig. 1.

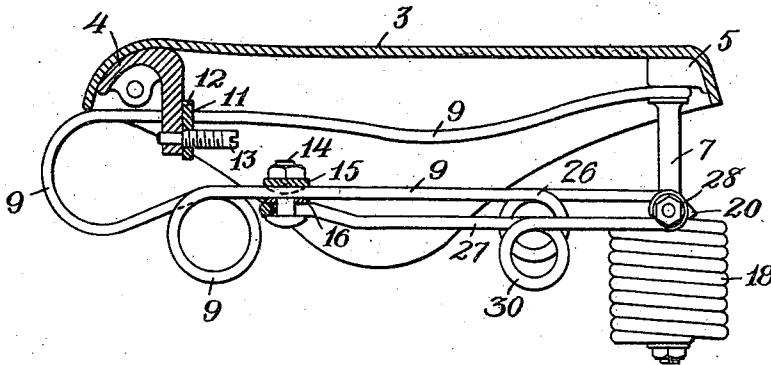
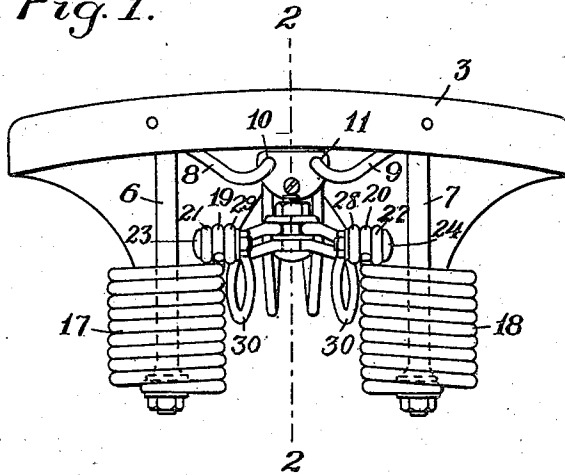


Fig. 2.

Witnesses

A. D. Tolman.

A. H. Nelson.

Inventor

Charles A. Persons.

By Montgomery W. Bartlett

Attorney

UNITED STATES PATENT OFFICE.

CHARLES A. PERSONS, OF WORCESTER, MASSACHUSETTS.

SADDLE.

987,825.

Specification of Letters Patent.

Patented Mar. 28, 1911.

Application filed June 27, 1908. Serial No. 440,753.

To all whom it may concern:

Be it known that I, CHARLES A. PERSONS, a citizen of the United States, residing at Worcester, in the county of Worcester, State of Massachusetts, have invented a certain new and useful Improvement in Saddles, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to seats or saddles, but more particularly to such as are used on velocipedes, bicycles, and the like. These are generally provided with some form of resilient support, frequently consisting of
15 spring wires connecting the peak or pommel with the cantle plate, and passing through a clamp by means of which the saddle is attached to the post.

Numerous forms of compound springs
20 have been devised, generally comprising a compression and an extension spring. These springs are supported by a truss or frame, which when made with the necessary strength, causes the saddle to be extremely
25 heavy. Heretofore, these springs have been of the coil type, and were placed with the axis parallel.

One feature of the present invention is a compound spring seat having a frame constructed wholly or in part of resilient material. The extension springs are preferably suspended from the resilient portion thereof, so that the frame performs the function of a compression spring, allowing
35 the latter to be dispensed with. This resilient portion is preferably located at the rear of the frame.

Heretofore, the range of action of compound spring saddles have been comparatively small, as a considerable depression of the saddle would cause it to come in contact with the frame or truss, to the discomfort of the rider. In the present invention the extension springs are suspended from the resilient portion of the frame, as mentioned above, and a depression of the seat causes a corresponding depression of the frame, allowing the saddle to descend considerably lower than would be possible with a rigid truss. This is particularly advantageous in the case of seats for motor cycles, which are generally tipped backward.

This device will be described hereinafter as relating to compound rear springs for bicycles and the like, but it should be clearly

understood that the same might be applied to the peak of the saddle.

One embodiment of the invention is shown in the drawings in which:—

Figure 1, is a rear view of the saddle complete. Fig. 2, a longitudinal section on the line 2—2 in Fig. 1, looking in the direction of the arrow, all parts in front being removed.

In the drawings, the seat 3 is supported by the pommel 4 and the cantle plate 5. This cantle plate 5 is provided with downwardly extending vertical rods 6 and 7, one being located at each side thereof. Near the junction of these rods 6 and 7 with the cantle plate 5, are fastened the spring wires 8 and 9 respectively, which extend under the seat and pass through apertures 10 and 11 in the tension plate 12, fastened to the pommel 4 by the adjusting screw 13.

After passing through the tension plate 12 as previously described, the spring wires 8 and 9 pass again under the seat preferably in the manner shown in Fig. 2, one passing on each side of the bolt 14. Upon this bolt, 80 is preferably a flanged washer 15 which binds these wires to the washer 16 and prevents spreading. To the lower ends of the rods 6 and 7 are attached the lower ends of the coil extension springs 17 and 18 respectively, the rods preferably passing upward within their respective coils. These wires 8 and 9 preferably diverge gradually after passing through the clamp formed by the bolt 14 and the washers 15 and 16 into a clearance sufficient for a seat clamp, running parallel for a short distance, then gradually diverging again to the upper ends 19 and 20 of the coils 17 and 18 respectively, and their extremities 21 and 22 are attached to the extremities 19 and 20 by the bolts 23 and 24 respectively. These wires 8 and 9 are preferably looped at 25 and 26 respectively, forming levering arm springs to give greater resiliency to the rear portion of the frame.

A spring wire 27 is preferably fastened at one extremity 28 to the bolt 24, and passes under the seat 3 around the bolt 14, and its other extremity 29 is fastened to the bolt 23. This wire 27 is preferably looped adjacent to each of the loops 25 and 26 on the springs 8 and 9. On account of their proximity to each other, it is generally advisable to loop each adjacent pair in op-

posite directions to avoid interference. These loops on the spring 27 are designated 30.

It may readily be seen that the saddle is supported by the springs 8, 9 and 27, forming a resilient frame or truss. The rear portion of this resilient frame or truss acts as a compression spring when the seat is depressed, and in combination with the extension springs 17 and 18, forms the compound spring to support the rear portion of the saddle. When the saddle is depressed the strain on the extension springs is communicated to the rear portion of the resilient frame, causing the latter to descend, thus giving the saddle greater radius of action than would be the case with a rigid frame or truss. It should be clearly understood that the invention is not limited to this form of spring framing, as any other form might be adopted without changing the result.

If additional strength is desired, the springs 8, 9 and 27 might be constructed of more than one strand of wire.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In a device of the class described, a seat, a supporting frame for said seat comprising rearwardly extending trusses constructed of resilient looped wires set one above the other and having the rear extremities of said wires positively connected, means for connecting the peak of said seat with the forward portion of the supporting frame, and an intermediate member connecting the rear extremity of each of said trusses with the cantle portion of the seat.

2. In a device of the class described, a seat, a supporting frame for said seat comprising rearwardly extending trusses constructed of resilient wires set one above the other, each of said wires being looped be-

tween the point of connection with the seat and the point of support of the frame, and having the rear extremities of said wires positively connected, means for connecting the peak of the seat with the forward portion of the supporting frame, and an intermediate member connecting the rear extremity of each of said trusses with the cantle portion of the seat.

3. In a device of the class described, a seat, a supporting frame for said seat comprising rearwardly extending trusses constructed of resilient wires set one above the other and having the wires composing each of said trusses looped, extension springs suspended by their upper extremities from the outer extremity of each of these trusses, means for rigidly connecting the lower extremity of each of these extension springs with the cantle of the seat, and means for resiliently connecting the peak of the seat with the forward portion of said supporting frame.

4. In a device of the class described, a seat, a supporting frame for said seat comprising rearwardly extending trusses constructed of resilient wires set one above the other and having their rearward extremities positively connected, each of said wires being looped at points equally distant from the rear extremity thereof, means for connecting the peak of said seat with the forward portion of the supporting frame, and an intermediate member connecting the rearward extremity of each of the trusses with the cantle portion of the seat.

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

CHARLES A. PERSONS.

Witnesses:

HARTLEY W. BARTLETT,
A. H. NEILSON.