C. A. WATERMAN AND H. F. SMITH.

MOTORCYCLE SADDLE.

APPLICATION FILED MAY 14, 1919.

1,384,791. Patented July 19, 1921.

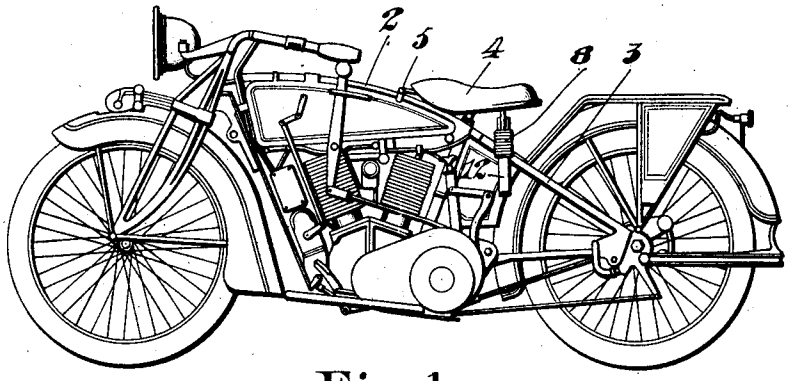


Fig.1.

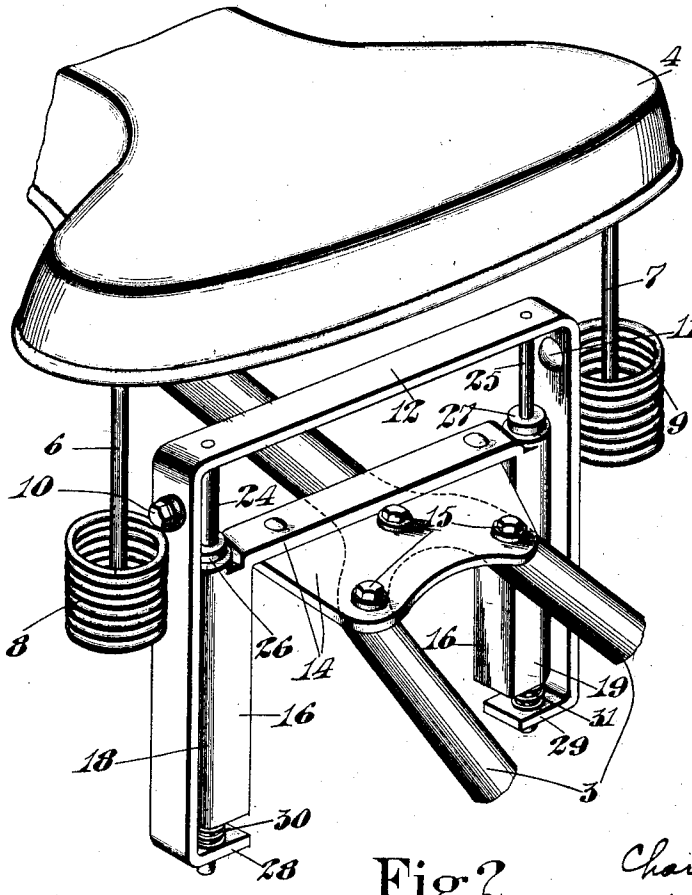


Fig.2.

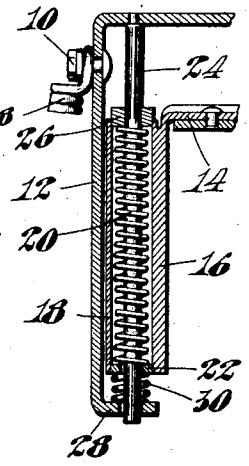


Fig.3.

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UNITED STATES PATENT OFFICE.

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MOTORCYCLE-SADDLE.

1,384,791. Specification of Letters Patent. Patented July 19, 1921.

Application filed May 14, 1919. Serial No. 296,997.

To all whom it may concern:

Be it known that we, CHARLES A. WATERMAN and HUBERT F. SMITH, citizens of the United States, residing, respectively, at Boston, in the county of Suffolk and State of Massachusetts, and at Medford, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Motorcycle-Saddles, of which the following is a specification.

This invention relates to saddles for motor cycles and it aims to devise a more comfortable saddle than those now available. It is also an object of the invention to devise an attachment which can be used with saddles of the form now on the market to improve their riding qualities and which can be economically manufactured. The nature of the invention will be readily understood from the following description when read in connection with the accompanying drawings, and the novel features will be particularly pointed out in the appended claims.

Referring now to the drawings,

Figure 1 is a side elevation of a motor cycle equipped with a saddle construction embodying the present invention;

Fig. 2 is an angular view showing the details of construction of the attachment proyided by this invention; and

Fig. 3 is a vertical cross sectional view through one side of the saddle frame.

The drawings show a motor cycle of a well known construction having a frame which comprises an upper tubular member 2 and a rear fork 3. The saddle includes a seat 4 of any suitable form and a bar extending longitudinally of this seat and pivoted at 5 to a bracket secured on the frame member 2, the pivotal point being just in front of the saddle horn. The type of seat shown usually is provided with a cantle plate to which a U-shaped rod is secured, the legs of this rod projecting downwardly and constituting posts 6 and 7 at opposite sides of the saddle. The lower ends of the posts 6 and 7 are secured to the lower ends of two coiled tension springs 8 and 9, respectively.

The construction so far described is well known to those skilled in this art. Usually the upper ends of the springs 8 and 9 are secured to a rigid support so that the weight of the rider is sustained entirely by these two springs. The present invention, however, provides a yieldingly supported frame to which the springs 8 and 9 are secured and this frame preferably is not only yieldingly supported against downward movement, but it also is cushioned against upward movement.

As best shown in Fig. 2, the upper ends of the springs 8 and 9 are secured by bolts 10 and 11, respectively, to the sides of a U-shaped bridge piece 12 forming part of the frame just mentioned. A truss 14 is secured rigidly to the rear fork 3 of the motor cycle frame by bolts 15 and has depending legs 16, 16 at opposite sides of the fork to which are welded, brazed, or otherwise secured, two tubes 18 and 19, respectively. These tubes form housings for two compression springs, one of which is shown in Fig. 3 at 20. This spring rests at its lower end on a collar 22 brazed, welded, or otherwise rigidly secured to the lower end of the tube, and a rod 24, extending through this tube and having its upper end entered in a hole in the bridge piece 12, has a collar 26 rigidly secured thereto and resting on the upper end of the spring 20. This collar slides freely in the tube 18. The tube 19 has similar parts coöperating therewith including a rod 25 and collar 27.

It will now be evident that when the rider goes over a rough place in the road the downward thrust on the seat 4 will be cushioned not only by the tension springs 8 and 9 but also by the compression springs inclosed in the housings 18 and 19, the entire frame consisting of the parts 12, 24 and 25 moving downwardly against the resistance of the two compression springs and yieldingly checking the downward movement of the rider. This arrangement thus provides a very resilient spring support for the seat, giving the easy riding qualities which are so desirable in devices of this character.

In order to check the re-bound of the frame following the downward movement of the saddle, the lower ends of the legs of the bridge piece 12 are turned inwardly toward each other, as indicated at 28 and 29 in Fig. 2, and these inturned portions are drilled to allow the rods 24 and 25 to pass through them. Two coiled springs, indi-

cated at 30 and 31, encircle the respective rods 24 and 25, and are interposed between the inturned members 28 and 29, and the lower ends of the housings 18 and 19. These springs act as shock absorbers and cushion the re-bound of the frame following a sudden downward movement.

It will now be seen that the device comprising the parts 12 to 31, inclusive, form an attachment which can be readily secured to practically any form of motor cycle and that it will coöperate with the present forms of saddle constructions to provide a very comfortable and easy riding saddle. At the same time this attachment can be economically manufactured and can be easily attached to the machine. Preferably the housings 18 and 19 are filled with grease to ease the action of the springs inclosed therein and to prevent them from making any noise.

While we have herein shown and described the best embodiment of the invention of which we are at present aware, it is obvious that this embodiment may be modified in many particulars without departing from the spirit or scope of the invention.

What is claimed as new, is:

1. A motor cycle saddle comprising a seat, posts at opposite sides of said saddle supporting the seat, two tension springs encircling, respectively, said posts and supporting the posts, a frame to which the upper ends of said springs are secured, a truss constructed to be secured to a motor cycle and having two vertical housings mounted respectively at opposite sides thereof, coiled springs mounted in said housings, posts extending through said springs and supporting said frame for upward and downward movement relatively to the truss, and additional springs between said truss and frame for yieldingly resisting the upward movement of the frame relatively to the truss.

2. A motor cycle saddle comprising a seat, posts at the opposite sides of said seat supporting the seat, two tension springs encircling, respectively, said posts and supporting the posts, a sliding frame to which the upper ends of said springs are secured, a truss constructed to be secured to a motor cycle and having two substantially vertical tubular housings mounted, respectively, at opposite sides thereof, coiled springs in said housings supporting said frame for upward and downward movement relatively to the truss, and a pair of compression springs supported between said respective housings and parts of said frame to yieldingly resist the upward movement of the frame relatively to the truss.

In testimony whereof we have signed our names to this specification.

CHARLES A. WATERMAN.
HUBERT F. SMITH.