(No Model.)

J. C. RAGE.

SEAT SPRING FOR BICYCLES.

No. 458,113. Patented Aug. 18, 1891.

Fig. 1.

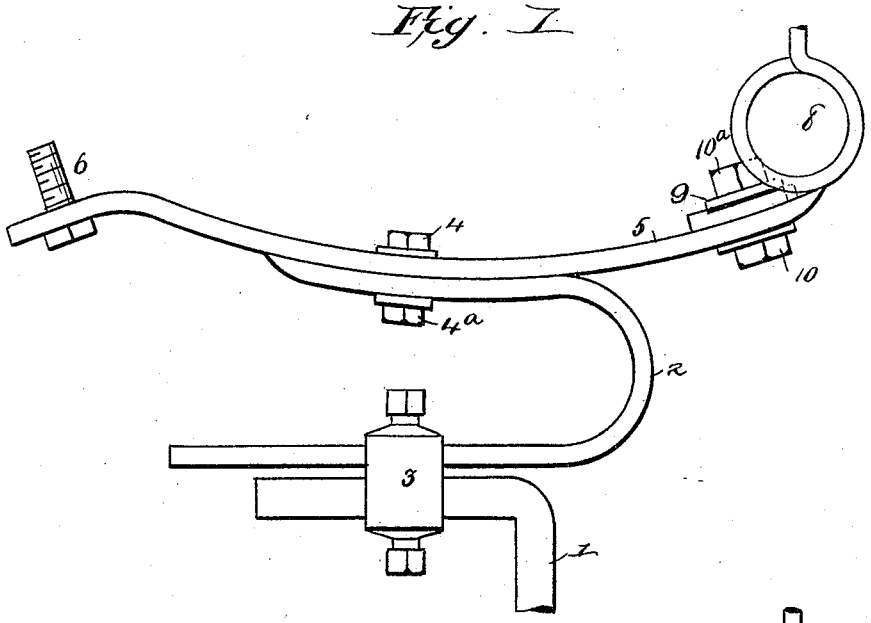
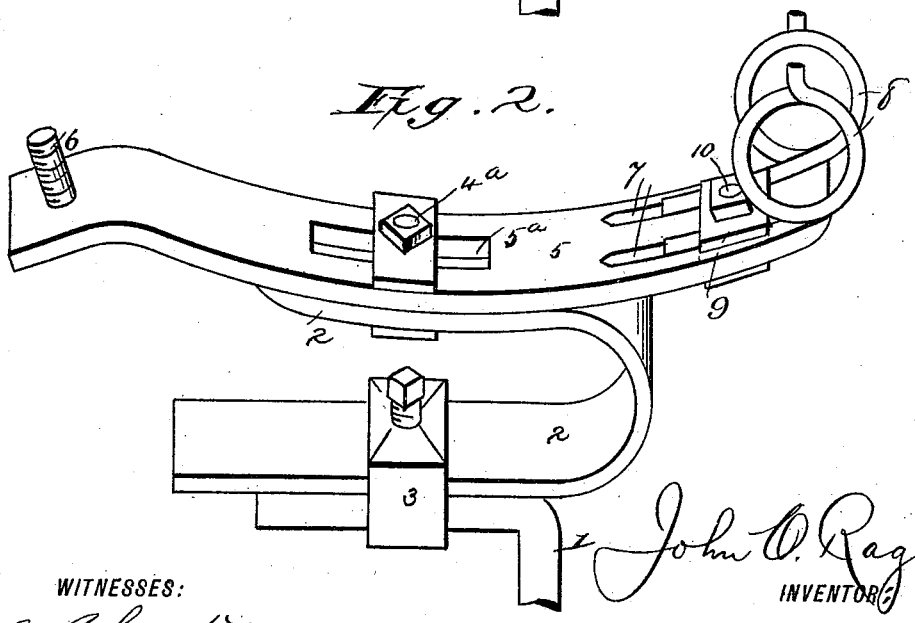


Fig. 2.



WITNESSES:

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SEAT-SPRING FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 458,113, dated August 18, 1891.

Application filed April 28, 1891. Serial No. 390,770. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. RAGE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Seat-Springs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention consists in a new and improved seat-spring for bicycle-saddles, which can be applied to either an upright or Safety machine or to a tricycle, and the invention will be hereinafter fully described and claimed.

Referring to the accompanying drawings, Figure 1 is a side elevation illustrating my invention, and Fig. 2 is a perspective view of the same.

Referring to the several parts by their designating-numerals, 1 indicates the upper end of the frame-support, on which the springs are mounted.

2 indicates the lower curved spring, which is usually one-quarter of an inch thick by one inch in width, the lower end being adjustably secured by a set-screw in the bearing-block 3, which is itself adjustably secured on the straight upper end of the support 1 by means of a suitable set-screw.

Upon the curved upper end of the spring 2 is adjustably secured, by means of the bolt and nut 4 4^a, the upper slightly-curved spring 5, the bolt 4 passing through a longitudinal slot 5^a in the central part of this spring, so that the spring can be moved back and forth to raise or lower either its forward or its rear end. The rear end of the spring 5 is bolted by a threaded bolt 6 to the rear end of the saddle-frame, while the front end of the spring, which is about an inch in width, is formed with the parallel longitudinal depressions or grooves 7 7. In these grooves fit the straight lower ends of two coiled springs 8 8, which are clamped on the forward end of the spring 5 by a clamping-plate 9, a threaded bolt 10, passing through the spring 5 and the plate 9, and a nut 10^a, screwing on the threaded lower end of this bolt. The coiled springs are thus adjustably held in place, as by loosening the nut 10^a they can be moved in or out on the recessed forward end of the spring 5 and can be secured at the point to which they are adjusted by again tightening the nut 10^a. Each spring 8 is coiled twice, and the upper ends of these springs are secured to the forward end of the saddle-frame.

From the foregoing description, taken in connection with the accompanying drawings, it will be seen that by means of my compound springs I obtain an ease of movement in riding superior to anything now afforded by bicycle-saddle springs.

It is obvious that the curved spring 2 can, when preferred, be dispensed with and the spring 5 be secured adjustably or otherwise on the supporting-frame of the machine. The exact curvature or shape of the spring 8 can also be modified or changed without departing from the spirit of my invention.

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

1. In a bicycle-seat spring, the combination of the adjustable curved spring 5, formed with the longitudinal recesses 7 at its forward end, the coiled springs 8, having the straight lower ends adapted to fit in said recesses, the clamping-plate 9, and the threaded clamping-bolt 10, having the binding-nut 10^a, substantially as set forth.

2. The combination of the adjustable curved spring 2, the curved spring 5, formed with the central slot 5^a, and the end longitudinal recesses 7 7, the clamping-bolt 4, having the nut 4^a, the coiled springs 8, having the straight inner ends adapted to fit in the recesses 7, the clamping-plate 9, and the threaded clamping-bolt 10, having the binding-nut 10^a, substantially as set forth.

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

JOHN C. RAGE.

Witnesses:
LOUIS LEWITH,
MARIE SCHEMMEL.