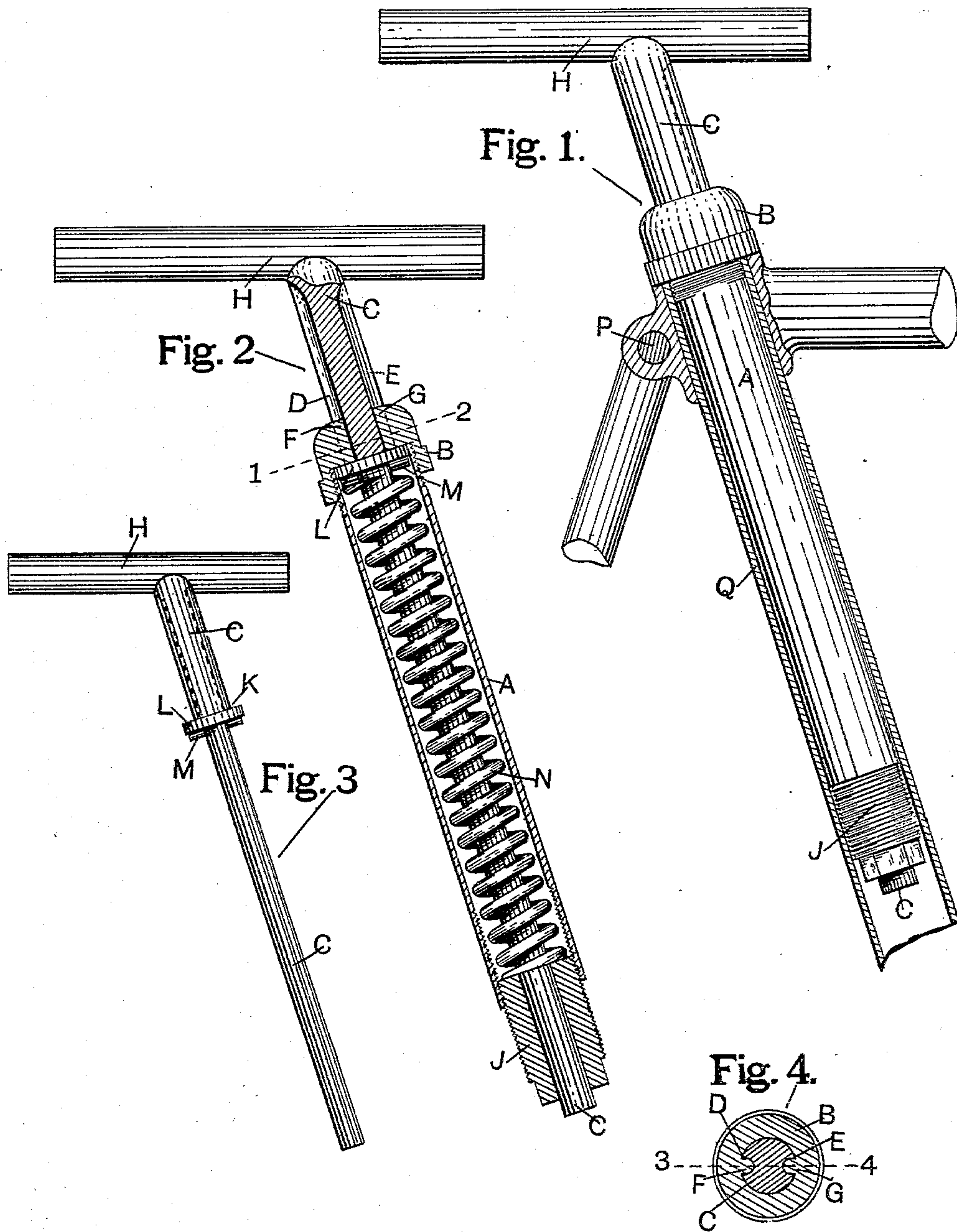


(No Model.)

H. K. BROOKS.
SPRING SEAT POST FOR BICYCLES.

No. 559,841.

Patented May 12, 1896.



WITNESSES:
H. H. Hale.
William O. Ross.

INVENTOR:
Howard K. Brooks
By his atty. Oscar Snell

UNITED STATES PATENT OFFICE.

HOWARD K. BROOKS, OF CHICAGO, ILLINOIS.

SPRING SEAT-POST FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 559,841, dated May 12, 1896.

Application filed November 1, 1895. Serial No. 567,567. (No model.)

To all whom it may concern:

Be it known that I, HOWARD K. BROOKS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Spring Seat-Post for Bicycles, of which the following is a specification.

My invention relates to spring seat-posts for bicycles; and my object is to provide a construction which will add greatly to the comfort of riding over uneven surfaces by a simple and efficient means which may be easily and quickly attached to most any bicycle without the use of any special tools, except those which are ordinarily carried, and which may be readily adjusted to suit the weight of the rider by any one of ordinary skill, the construction thereof being described hereinafter, and is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the seat-post in position, the portion of the bicycle to which it is attached being broken away to an axial section. Fig. 2 is an axial section of the spring-case, adjusting-screw, cap for the spring-case, and a portion of the stem of the seat-post broken away to show construction, the spring, together with the greater part of the stem of the seat-post and the T-bar thereof to which the seat is attached, being shown in side elevation, the above-described section being on broken line 3 4, Fig. 4. Fig. 3 is a side elevation of the stem and T-bar at the top thereof on a scale two-thirds the size of the other drawings. Fig. 4 is a cross-section on line 1 2 of Fig. 2, showing means for preventing a rotary movement of the stem.

Similar letters indicate like parts throughout the several views.

For convenience of description I prefer to term the whole device a "seat-post," of which A is a tube or case, which is screw-threaded at the outside of the top end to receive the cap-nut B, down through which is fitted the stem C to slide longitudinally therein, but is prevented from revolving by the grooves D and E therein, which engage with projections F and G in the cap-nut B. At the top of stem C is secured the usual horizontally-disposed T-bar H, to which the seat is secured. The stem C projects downwardly through the tube

A, and also through adjusting-nut J, which latter is screwed up into the lower end of tube A.

At K in Fig. 3 is shown a shoulder on the stem C, against which bears a washer L, which is held in position by the pin M, passing through stem C.

The helical spring N incloses the portion of stem C within tube A, the upper end of the spring bearing against pin M or washer L, while the lower end of the spring contacts the adjusting-nut J, so that the coils of the spring may be closed or opened by screwing up or unscrewing nut J, as may be required to adjust the tension thereof to suit the weight of different persons.

The outward movement of the stem C is limited by the washer L contacting the cap-nut G when the several parts are in position for duty, as is shown in Fig. 2, the nuts B and J serving as abutments to limit, respectively, the upper and lower movements of spring N.

This seat-post has the same position as the ordinary rigid kind and is held in place by the usual clamp-bolt (shown in section at P, Fig. 1) or by any other well-known means.

In riding over rough roads the force from the upward thrusts of the standard Q cannot be transmitted to the body of the rider except through the spring N, which will effectually reduce all vibrations arising from this source to a very small amount.

This seat-post as a whole may be drawn out from the standard Q and secured at any desired height from that shown in the drawings to suit persons of different lengths of limbs, as is done with seat-posts of the ordinary kind.

It will be seen that by having the two grooves on opposite sides of the stem instead of a single groove on one side only there will be little or no tendency of a binding of the surface of the connected tube upon the frame in which it is held during the swaying or movements of the rider while operating the machine. If a single stop were used, it would serve as a fulcrum and the surface of the tube would bind against its support, thus preventing a free action of the same.

This invention may be employed to reduce the effects of upward shocks upon the han-

dles of a bicycle by substituting this construction in the place of the ordinary solid handle-post.

I claim as my invention—

5 1. A spring seat-post for bicycles consisting of a tube having on one end a detachable cap, and on its other end a nut, in combination with a stem having a cross-bar thereon, and a spring between said nut and an attachment on said stem, said stem having grooves in its opposite sides and said cap having projections fitting in said grooves, substantially as described.

15 2. A spring seat-post for bicycles consisting of a tube, a detachable cap on one end of said tube, having an opening therein, a nut adjustably secured to the other end of said tube, a stem freely passing through said cap and nut, and a spring in said tube bearing against said nut and an attachment in said stem, said nut being adjustable from with-

out and below said tube, said parts being combined substantially as described.

3. A spring-seat post for bicycles consisting of a tube, a cap on one end having an opening therein with the projecting edges F and G, the adjustable nut J engaging a screw-threaded lower end of said tube, the stem C having a cross-bar H thereon and provided with the longitudinal grooves D and E in which the edges F and G engage, the pin M in said stem and the helical spring N within said tube and bearing against the said nut and pin, said parts being combined substantially as described. 35

In testimony that I claim the foregoing I have hereunto set my hand, this 29th day of October, 1895, in the presence of witnesses.

HOWARD K. BROOKS.

Witnesses:

OSCAR SNELL,

WM. UPTON.