

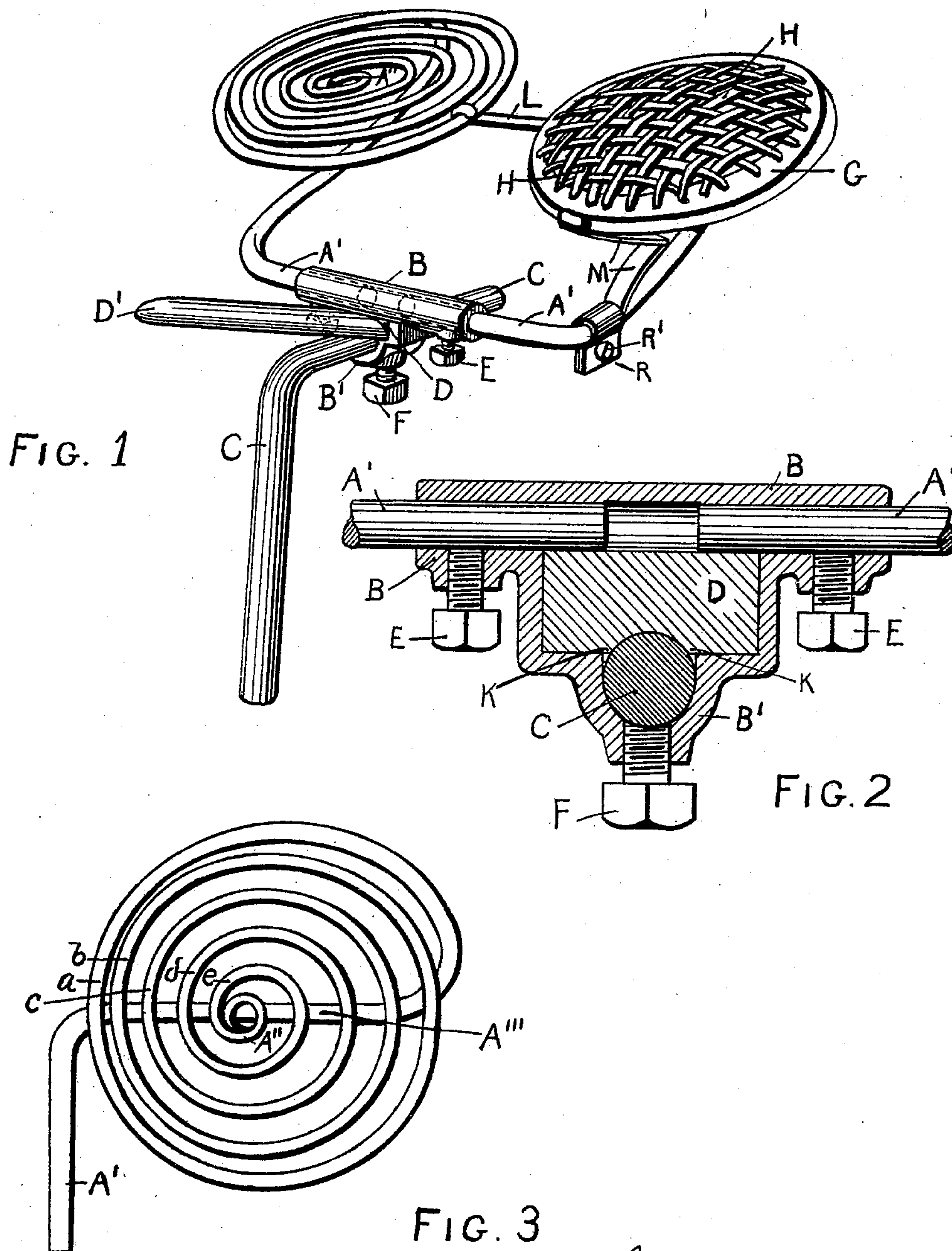
No. 620,284.

Patented Feb. 28, 1899.

A. K. CROSS.  
BICYCLE SEAT.

(Application filed Aug. 16, 1897.)

(No Model.)



WITNESSES:

*Herbert W. Trowbridge*  
*William L. Brown*

FIG. 3  
*Anson K. Cross* INVENTOR

*Charles F. Perkins* BY  
ATTORNEY.



# UNITED STATES PATENT OFFICE.

ANSON K. CROSS, OF BOSTON, MASSACHUSETTS.

## BICYCLE-SEAT.

SPECIFICATION forming part of Letters Patent No. 620,284, dated February 28, 1899.

Application filed August 16, 1897. Serial No. 648,451. (No model.)

*To all whom it may concern:*

Be it known that I, ANSON K. CROSS, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Bicycle-Seats, of which the following is a specification.

My invention is a bicycle-seat consisting of two portions, each of which is composed of a spiral of wire, one end of which spiral is secured to the post or frame of the bicycle and entirely supporting said portion and the other end of which terminates at the center of the portion and is detached and free to move, the supporting end of said spiral being located below the coils and with sufficient space above it to allow a free movement of all the coils in response to the motions of the body.

In the accompanying drawings, illustrating my invention, Figure 1 is a perspective view. Fig. 2 is a cross-section through the saddle-post and the center of the seat-clamp. Fig. 3 is an enlarged plan view of one of the spirals.

Like letters represent like parts in all the figures of the drawings.

C is the saddle-post of a bicycle.

B is the seat-clamp, secured to the post by the binding-screw F. In the upper part of the clamp is formed a sleeve to receive the rods or wires A'. In the base B' of the clamp B is a curved opening to receive the saddle-post, above which is a block D, having a curved recess in its bottom surface to fit the top of the saddle-post. When the ends of the rods A' are inserted in the sleeve, as shown in Fig. 2, and the screw F is turned up against the saddle-post, the parts are confined, so that the ends of the rods A' are gripped firmly between the block D and the inner surface of the sleeve. Two screws E are employed to provide additional security against the rotation of the rods A'. If desired, the rods A' may have polygonal surfaces instead of cylindrical, so that the block D will bind harder on the surface of the rods and hold them more securely.

The opening in the base of the clamp for the saddle-post is deeper than the recess in the block D, leaving a space on each side of the post. The corners K K aid the screw F in preventing the clamp from slipping on the post. The rod A' is made sufficiently large to

withstand the strain to which it is subjected and is tapered gradually to the other end A'' and is wound about into coils a, b, c, d, and e to form a spiral, presenting a slightly-convex surface on the upper side, the coil e being the highest point of the seat. The end A'' is located beneath the coil e, so as to make a smooth finish of the spiral at the center. The spiral is covered with leather or any suitable material to form a comfortable seat, as illustrated in Fig. 1, where G represents a cover having an interlaced center H.

The block D may be provided with an extension D' to form a guard or pommel to prevent the rider from slipping sidewise from the seat.

An auxiliary spring M, secured to the portion A' of the rod by the clip R, and screw R' may be provided for the use of a heavy rider. A link L may be employed, if desired, to connect the spirals together and to maintain them at a given distance apart. The spiral wire should be coiled so closely as to prevent the covering from sagging into the spaces between the coils.

The diameter of the wire forming the spiral may be varied in different parts, and the number of coils may be varied so as to bring them more closely together in some parts than in others, and thereby to attain the desired degree of resistance in a given part according to the pressure to which it is subjected. The object is to construct the spiral so that when the weight of the body is applied to it it will conform to the shape of the body and then yield in all parts to the motions of the rider.

It will be seen that the angle of the seat may be varied by turning the rods A' in the sleeve B and the distance between the spirals adjusted by sliding the rods A' laterally in the sleeve B. The height of the seat is determined by the height of the saddle-post in the usual way.

The portion A' of the wire is carried directly under the coils and is curved downwardly under the center of the spiral. It serves to limit the descent of the coil a, although far enough below to allow it the necessary spring action. The portion A' may be so shaped as to serve as a stop to any portion of the spiral by giving it the requisite bend.



I am aware that seats for bicycles have been made consisting of two supporting portions and each portion composed of a coil of wire. Some parts of such seats are rigid and unyielding. My invention consists of a seat having two portions, each of which is composed of a spiral wire which is yielding in all parts and in which the coils are located in a substantially horizontal plane.

10 What I claim, and desire to secure by Letters Patent, is—

1. A bicycle-seat consisting of two portions, each of which is composed of a spiral of wire one end of which spiral is secured to the post or frame of the bicycle and entirely supports said portion and the other end of which terminates at the center of the portion and is detached and free to move, and the supporting end of said spiral being located below said coils and with sufficient space above it to allow a free movement of all the coils in response to the motions of the body, substantially as described.

2. A bicycle-seat consisting of two substantially circular portions, each of which is composed of a spiral of wire one end of which spiral is secured to the post or frame of the bicycle and entirely supports said portion and the other end of which terminates at the center of the portion and is detached and free to move, all the coils of said spiral being located in a substantially horizontal plane, and the supporting end of said spiral being located below said coils and with sufficient space above it to allow a free movement of all the coils in response to the motion of the body, and the wire composing said spiral tapering from the supporting end to the other, substantially as described.

In witness whereof I hereunto set my hand this 6th day of August, A. D. 1897.

ANSON K. CROSS.

Witnesses:

CHAS. F. PERKINS,  
HERBERT W. TROWBRIDGE.