No. 610,129. Patented Aug. 30, 1898.

E. W. ERICSON.

BICYCLE PROPULSION.

(Application filed Feb. 15, 1898.)

(No Model.)

Fig. 1.

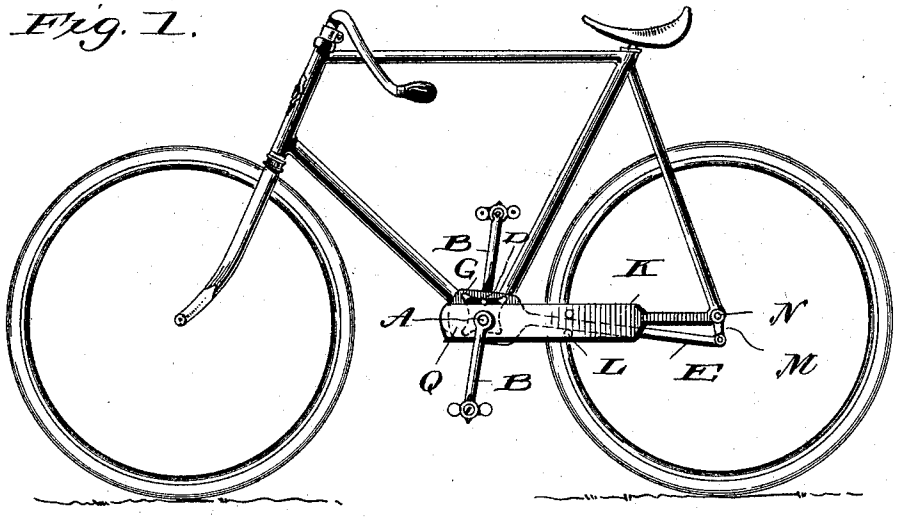
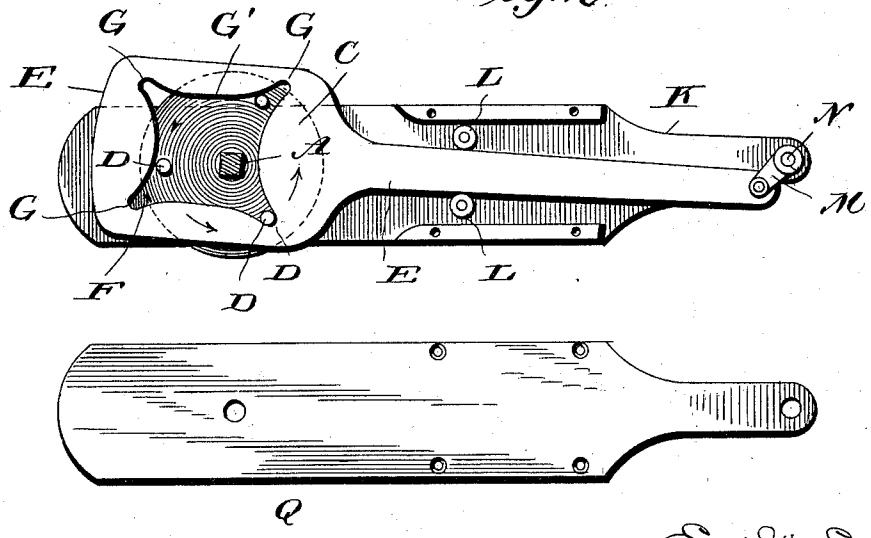


Fig. 2.



Eric W. Ericson

Inventor

Witnesses

L. C. Hills.

A. L. Hough.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ERIC W. ERICSON, OF FLORENCE, WISCONSIN.

BICYCLE PROPULSION.

SPECIFICATION forming part of Letters Patent No. 610,129, dated August 30, 1898.

Application filed February 15, 1898. Serial No. 670,374. (No model.)

To all whom it may concern:

Be it known that I, ERIC W. ERICSON, a citizen of the United States, residing at Florence, in the county of Florence and State of Wisconsin, have invented certain new and useful Improvements in Bicycle Propulsion; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful mechanical improvements which are especially adapted for bicycles, but may be applied to any mechanism wherein it may be found to be adapted for use.

More specifically, the invention resides in the provision of a pitman which is actuated by means of a rotary disk having lugs on the face thereof which travel on the margin of an angular aperture in an enlarged portion of the pitman, which disk is keyed to the pedal-shaft and adapted at each revolution of the disk to impart a multiplied motion to the rear wheel of the bicycle, the pitman having a sliding contact with antifriction-rollers which are mounted in a suitable casing forming a part of the machine.

The invention will be more clearly understood when taken in connection with the drawings which form a part of this application, and in which drawings similar letters of reference indicate like parts throughout both views, in which—

Figure 1 is a side elevation of a bicycle, showing my improved propelling mechanism attached thereto. Fig. 2 is an enlarged detail in elevation of the pitman, showing the manner of its connection with the rotary disk and the antifriction-rollers on the disk and on the casing, between which the pitman reciprocates, the said view showing the side of the casing removed.

Reference now being had to the details of the drawings by letter, A designates the pedal-shaft, to which the pedals B are keyed in the usual manner. This shaft has keyed thereto the disk C, which carries about on one of its faces the lugs D, on which lugs are mounted antifriction-rollers D′. These lugs are arranged, as shown, equidistant on the face of the disk, and E is a pitman which has an enlarged end E′, which is apertured, having the four rounded corners G and the convex sides G′ to the said opening, forming a track upon which the antifriction-rollers on the lugs D travel as the disk is rotated. The said pitman is guided in its reciprocating movement in the casing K, having the antifriction-rollers L, and its contracted forward end is pivoted to a crank M, which is keyed to the shaft N, which forms the axis of the rear wheel of the bicycle.

Q is a covering to the casing, which carries the propelling mechanism and is secured thereto in any suitable manner.

From the foregoing it will be noted that at each revolution of the disk carrying the lugs the driving-wheel will have made several revolutions and the dead-center will be overcome at any position at which the disk, which is actuated by the pedal-shaft, may be disposed.

While I have shown my propelling mechanism as connected to a bicycle, it will be understood that it may be equally well adapted for use in connection with machines of different kinds, and I do not limit myself to any particular use of the same.

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

In a propelling mechanism for bicycles, the combination with the pedal-shaft, the disk mounted thereon, lugs on the face thereof, antifriction-rollers on the said lugs, the pitman, having an opening or aperture in its broadened end, with an irregular margin forming a track on which the said antifriction-rollers are adapted to travel when the disk is rotated, and the antifriction-rollers mounted on the casing carrying the pitman, and between which rollers the pitman is guided in its reciprocating movements, and the crank pivoted to the end of the pitman, as shown and described.

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

ERIC W. ERICSON.

Witnesses:
J. E. PARRY,
JAMES PONTBRIAND.