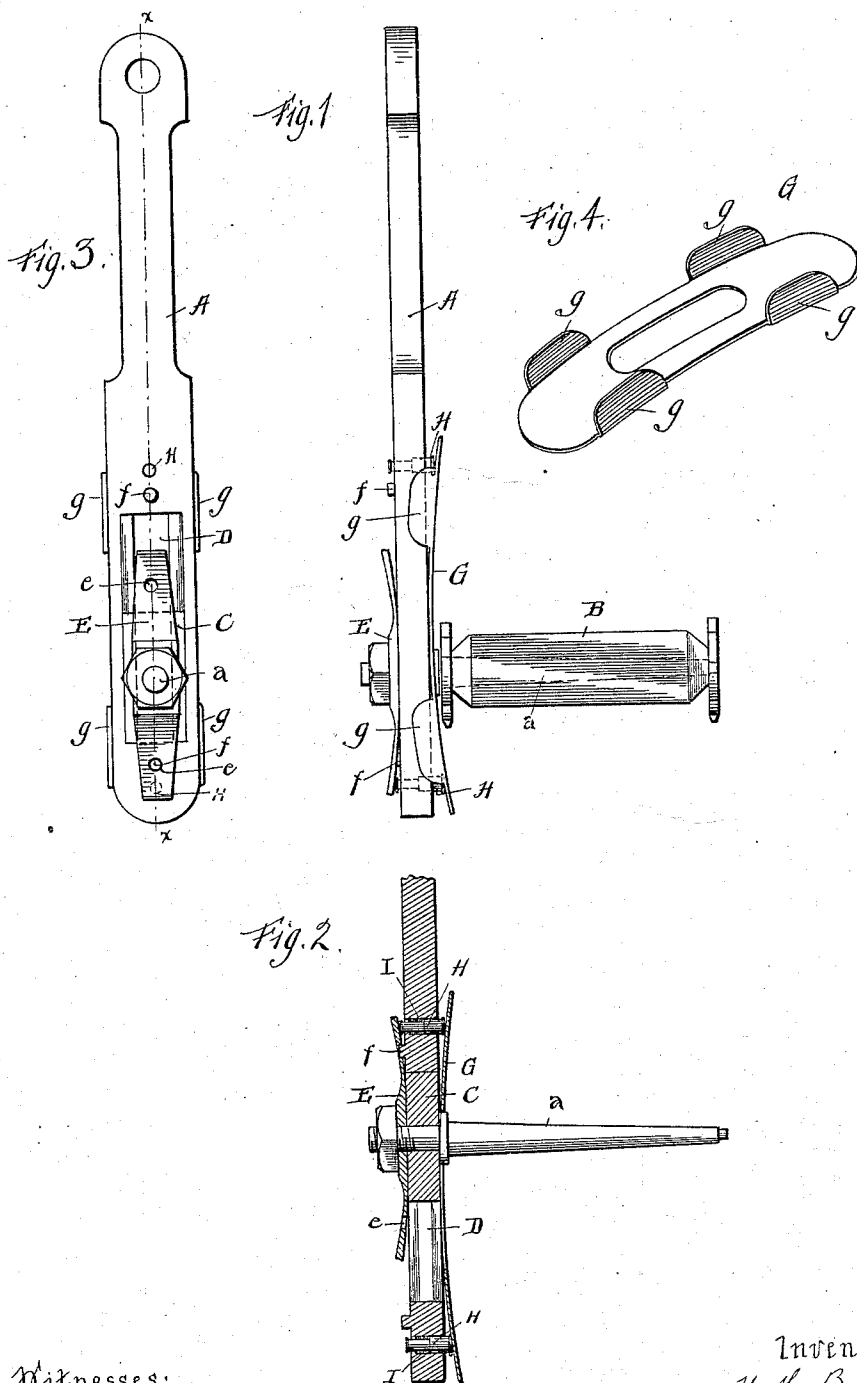


(No Model.)

N. H. BURTON & J. L. BRADLEY.
CRANK FOR BICYCLES.

No. 533,345.

Patented Jan. 29, 1895.



Witnesses:

Geo. M. Anderson
Philip C. Massi.

Inventors:

N. H. Burton
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by E. W. Anderson
their atty.

UNITED STATES PATENT OFFICE.

NELSON H. BURTON AND JAMES L. BRADLEY, OF SULLIVAN, MISSOURI.

CRANK FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 533,345, dated January 29, 1895.

Application filed October 10, 1894. Serial No. 525,494. (No model.)

To all whom it may concern:

Be it known that we, NELSON H. BURTON and JAMES L. BRADLEY, citizens of the United States, and residents of Sullivan, in the county of Franklin and State of Missouri, have invented certain new and useful Improvements in Cranks for Bicycles; and we 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 letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a side elevation of the invention. Fig. 2 is a sectional view taken on the line $x-x$ of Fig. 3, with a part of the crank arm broken off. Fig. 3 is a side view of that part of the crank which is next the bicycle. Fig. 4 is a detail of spring plate G.

The object of this invention is to provide a bicycle crank so constructed and arranged that the rider may change its "throw" or leverage without stopping or dismounting from the wheel, thereby enabling him to vary the stroke at pleasure, according to the character of the road.

With this object in view, the invention consists in the novel construction and combination of parts, all as herein described and pointed out in the appended claims.

Referring to the accompanying drawings, the letter A designates the pedal arm or crank, and B the pedal whose shaft or spindle a is secured in a box C which slides in a slot D in said arm or crank. Secured to the inner face of said box C or to the pedal shaft is a spring plate E, having near each free end a hole e . Said holes e are designed to engage respectively upon proper movement of the box, with pins f, f , one of which projects from the inner face of the crank or arm a short distance from each end of the slot D.

Secured to the outer face of the arm or crank A is a thin plate G slotted to correspond with the slot D, and having lateral flanges or lugs g which are bent to loosely embrace the edges of said arm or crank. This plate is secured at its central portion, its end portions being free and possessed of sufficient inherent spring action to keep them normally out of contact with the arm or crank. Working through the arm or crank underneath each of such end portions is a pin H, arranged

to be thrown in one direction by contact therewith of the plate G, and in the other direction by a spring I. One of these pins is arranged to act upon each end portion of the spring plate E.

The operation is as follows:—The pedal is designed to be adjusted from one end of the slot D to the other, according to the leverage desired. When the box C is at either end of said slot the spring E is in engagement with the pin f at that end, and the box is secured against movement. When the rider desires to make an adjustment he presses his foot against the proper end portion of the plate G, which pushes the pin H against the spring E and forces it out of engagement with the pin f . The pedal is then moved with the foot to bring the box to the opposite end of the slot D, when the spring E will automatically engage the other pin f . The adjustment can be readily made in either direction when the wheel is going at a high rate of speed.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination with a slotted pedal crank, of a box arranged to slide in the slot of said crank, a pedal shaft and pedal carried by said box, a spring plate E carried by said box and pedal shaft, and having a hole in each of its free end portions, pins or projections on said crank arranged to be engaged by said holes, and means arranged to be operated by the foot of the rider for disengaging the said spring plate from said pins or projections, substantially as specified.

2. The combination of a slotted pedal crank, having the pins or projections f, f , the sliding pins H and their springs, the box arranged to slide in the slot of said crank, and carrying the pedal shaft or spindle, the spring plate E movable with said box, and having its free end portions arranged to engage respectively the pins f, f , and the plate G arranged to be operated by the foot of the rider to actuate the pins H, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

NELSON H. BURTON.
JAMES L. BRADLEY.

Witnesses:

A. C. ELLISON,
B. D. THURMOND.