

No. 623,373.

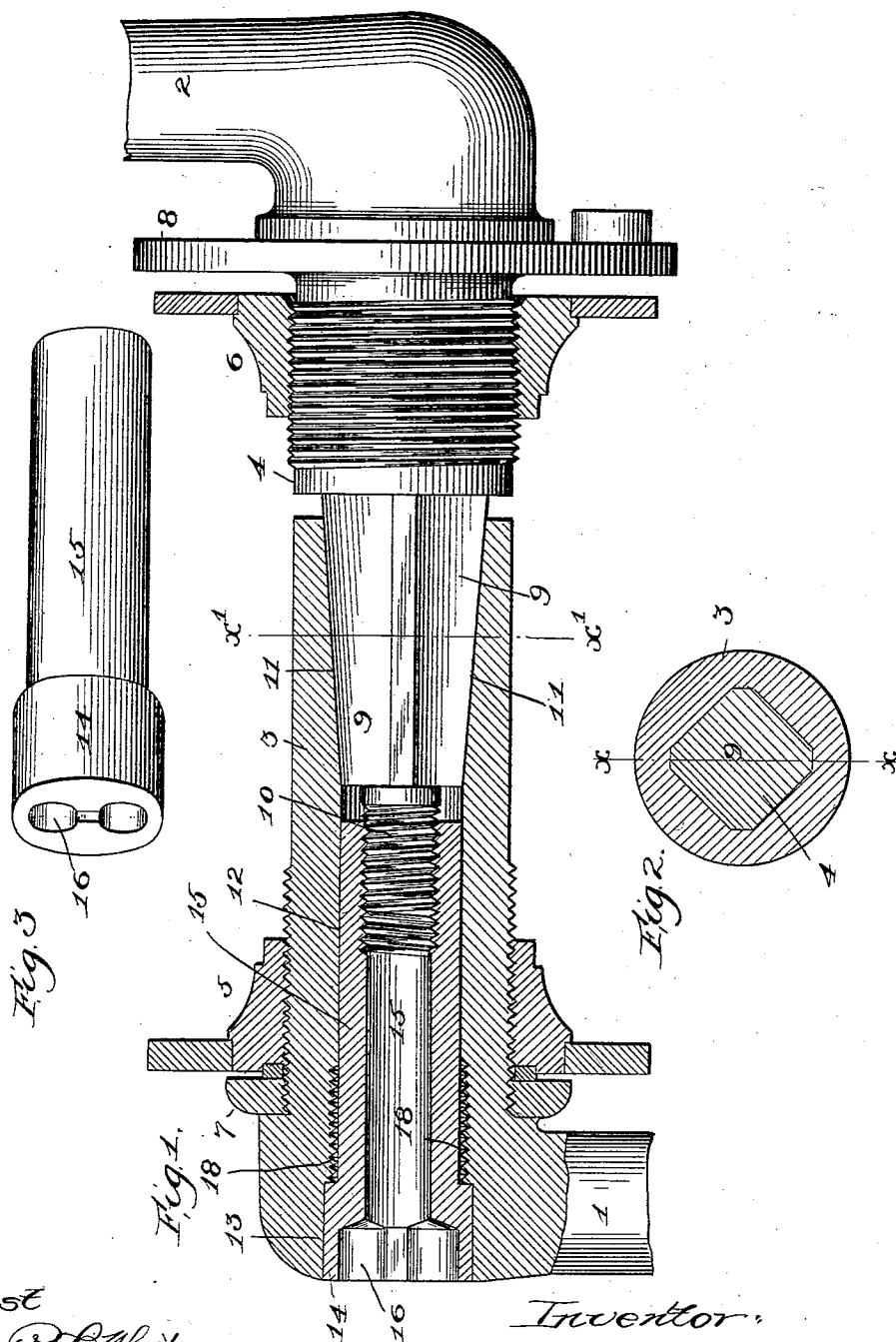
Patented Apr. 18, 1899.

A. JEROME.
CRANK AXLE FOR CYCLES.

(Application filed Nov. 19, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Attest
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Inventor
Anthony Jerome,
By Robert Burns Atty.

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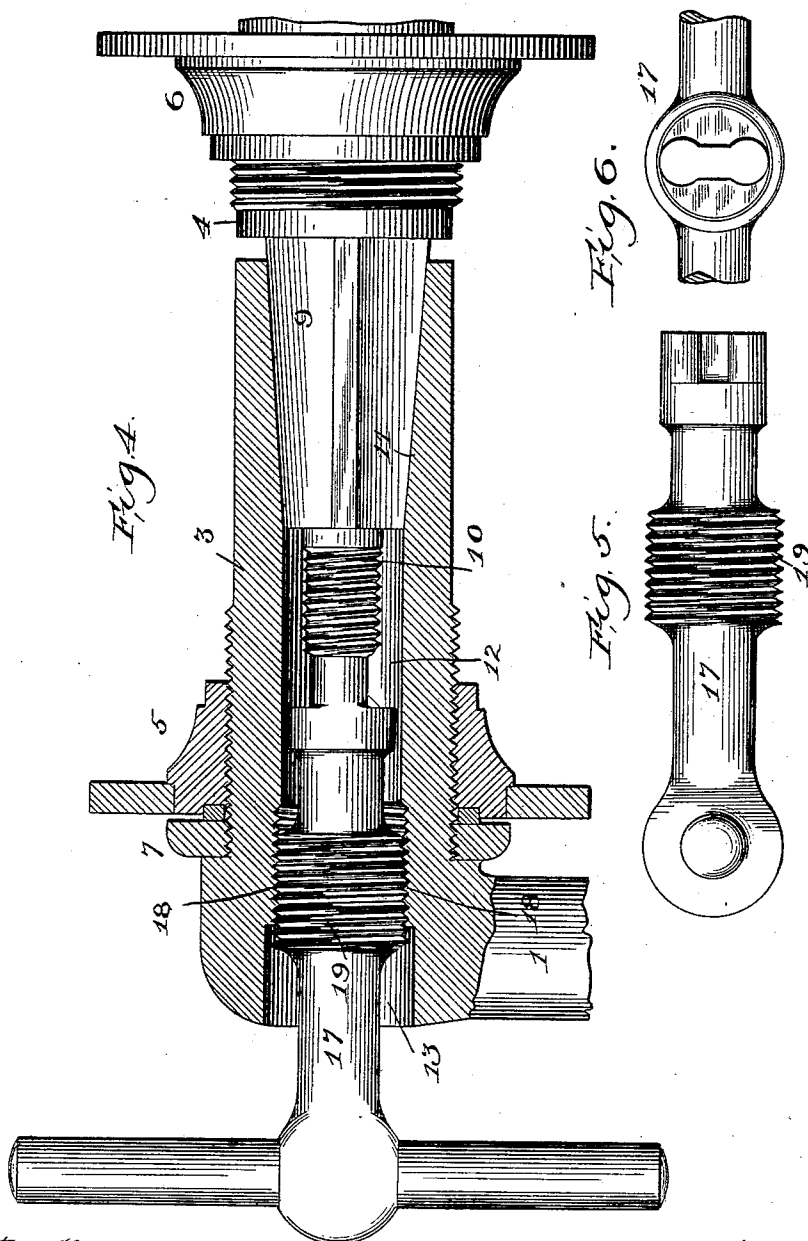
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Attest:
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Inventor:
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UNITED STATES PATENT OFFICE.

ANTHONY JEROME, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE A. FEATHER-STONE & COMPANY, OF SAME PLACE.

CRANK-AXLE FOR CYCLES.

SPECIFICATION forming part of Letters Patent No. 623,373, dated April 18, 1899.

Application filed November 19, 1898. Serial No. 696,905. (No model.)

To all whom it may concern:

Be it known that I, ANTHONY JEROME, 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 Crank-Axles for Cycles; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification.

The present invention relates to that type of crank-axles for bicycles in which the axle portion is formed in sections that are telescoped together in a manner to prevent independent rotation of either section and which are held to their engagement by a tubular screw-threaded connecting sleeve or nut.

The object of the present improvement is to provide a simple, convenient, and effective means for separating the sections of such type of crank-axles when it is desired to disconnect the same from the frame of the bicycle for the purpose of repair and the like.

A further object of the present improvement is to provide a simple and effective construction and arrangement of parts by which a fastening of the parts is effected in a ready and substantial manner, as will hereinafter more fully appear, and be more particularly pointed out in the claim.

I attain such objects by the construction and formation of parts illustrated in the accompanying drawings, in which—

Figure 1 is an enlarged longitudinal sectional elevation at line xx , Fig. 2, of a crank-axle embodying the present improvements; Fig. 2, an enlarged detail transverse section at line $x'x'$, Fig. 1; Fig. 3, an enlarged perspective view of the connecting-sleeve detached; Fig. 4, an enlarged detail longitudinal sectional elevation illustrating the means for detaching the axle-sections; Fig. 5, an enlarged elevation of the key or wrench for effecting a fastening or unfastening of the parts; Fig. 6, an enlarged detail end view of the same.

Similar numerals of reference indicate like parts in the several views.

Referring to the drawings, 1 and 2 represent the usual crank-arms, usually formed integral with the respective sections 3 and 4

of the axle, and said sections are formed with usual screw-threaded enlargements for the reception of the ball-bearing cones 5 and 6, lock-nut 7 for the adjustable cone 5, and attaching collar or disk 8 for the sprocket or driving wheel. One of said sections is formed with a square or other non-circular extension 9, that is made tapering, and a reduced cylindrical extension 10 at its extreme end, that is screw-threaded, as shown. The other axle-section is formed with a counterpart square or other non-circular socket 11, that is also made with a counterpart taper to that of the extension 9. The above-described extension 9 and socket 11 are formed on the adjacent ends of the axle-sections, respectively, and are adapted to engage together to hold the said axle-sections against independent rotation with relation to each other, as usual in the present type of crank-axles.

12 is a cylindrical bore forming a continuation of the non-circular socket 11 and extending to the outer end of the crank-section, as shown.

13 is a counterbore at the outer end of the bore 12, that forms a bearing or abutment for the circular head 14 of the cylindrical attaching-nut 15, that screws upon the screw-threaded extension 10 of the other crank-section to fasten the two sections together against longitudinal disengagement.

The head 14 of the attaching-nut 15 is formed with the usual non-circular recess 16 for engagement with the operating wrench or key 17, by which it is turned.

In the present invention the cylindrical bore 12 is formed with a screw-thread 18 for more or less of its length, as shown in Figs. 1 and 4, and which in the operation of effecting a disengagement of the crank-sections and after the attaching-nut 15 is removed such screw-threaded portion 18 is engaged by the screw-threaded portion or enlargement 19 of the wrench or key 17, so that by the continual rotation of such key the inner end thereof will contact with the end of the screw-threaded extension 10 of the opposite axle-section to force the same in a positive manner from its engagement, as illustrated in Fig. 4 of the drawings.

Having thus fully described my said inven-

tion, what I claim as new, and desire to secure by Letters Patent, is—

In a crank-axle for cycles the combination of two interlocking axle-sections, one of which
5 is formed with a tapering non-circular extension and a screw-threaded cylindrical extension, and the other with a cylindrical bore and a tapering non-circular extension of said
10 bore with the outer end of the cylindrical bore offsetted to form an abutment, a headed cylindrical nut, fitting said offsetted bore and
engaging the screw-threaded extension of the
15 opposite crank-section to secure the parts together, said cylindrical bore provided with screw-threads back of said offset or abutment,

and a wrench having a screw-threaded shank that engages said screw-threads of the cylindrical bore, the end of which shank is adapted to abut against the end of the screw-threaded extension of the opposite axle-section, to force the parts asunder, when the headed cylindrical holding-nut is removed, substantially as set forth.

In testimony whereof witness my hand this 15th day of November, 1898.

ANTHONY JEROME.

In presence of—

ROBERT BURNS,
JAMES LAVALLIN.