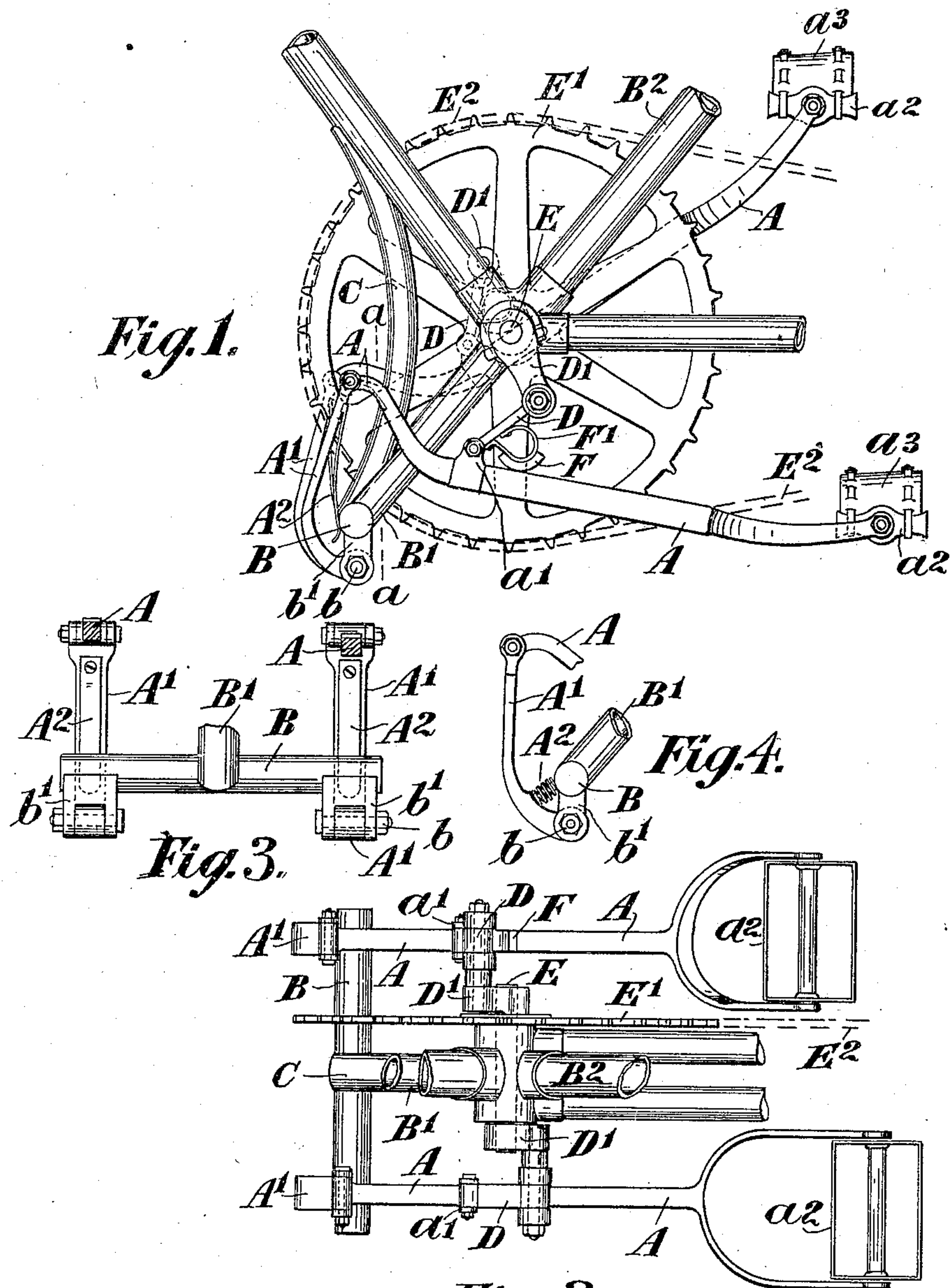


No. 832,497.

PATENTED OCT. 2, 1906.

J. H. MoFARLANE.
SIDE LEVER PEDAL GEAR FOR CYCLES.
APPLICATION FILED MAR. 15, 1905.



Witnesses:
James L. Norris, Jr.
C. H. Hester

Fig. 2.

Inventor
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By James L. Norris

Atty

UNITED STATES PATENT OFFICE.

JAMES HUSBAND McFARLANE, OF EAST DEVONPORT, TASMANIA,
AUSTRALIA.

SIDE-LEVER PEDAL-GEAR FOR CYCLES.

No. 832,497.

Specification of Letters Patent.

Patented Oct. 2, 1906.

Application filed March 15, 1905. Serial No. 250,275.

To all whom it may concern:

Be it known that I, JAMES HUSBAND McFARLANE, architect, a subject of the King of Great Britain and Ireland, residing at East Devonport, in the British State of Tasmania, Commonwealth of Australia, have invented a new and useful Improved Side-Lever Pedal-Gear for Cycles, of which the following is a specification.

10 This invention consists of improved side-lever pedal-gear for cycles in which the hinged end of each side lever is carried by a spring-post and the link connection between the crank and side lever is furnished
15 with a buffer or tappet which at certain positions of the revolution of the crank bear on the pedal-lever and assist in carrying the crank over its dead-centers.

20 The invention will now be described, aided by a reference to the accompanying sheet of drawings, in which it is illustrated in Figure 1 by a side view, and in Fig. 2 by a plan, while Fig. 3 is a detail view taken on line a a , Fig. 1, and Fig. 4 a detail side view of a modified spring-post.

25 Each side pedal-lever A is centered and supported at its fore end on the upper part of a spring-post A' , the lower end of each spring-post being carried on a hinge-pin b in a lug b' , one at each end of a transverse bar B , which is secured at its center to the lower end of a downward extension B' of the diagonal bar B^2 of the diamond-frame, and said downward extension is further stayed by a curved
35 front bar C . Said spring-buffer A' bears against either a flat or a coiled spring buffer A^2 , arranged between it and the said lug or carrier b , a flat spring being shown in Figs. 1 and 3 and a coiled spring in Fig. 4.

40 The top part of each lever A has a holed lug a' on it at a point about a fourth of its length from its fore end for connection by a link D with the end of a crank D' , secured on the sprocket-wheel spindle E , there being a crank D' at each end of said spindle E , and said sprocket-wheel E' is geared, as usual, by a chain belt E^2 with a pinion on the back or

driving-wheel spindle. Secured to the back of each link connection between the crank D' and pedal-lever A is a rubber buffer or tappet-piece F , the rubber being carried on a circular support F' , secured to the link, the purpose of said buffer being to enable the stroke of the pedal-lever to be exerted on the link D to assist in carrying the cranks over their dead-centers. 50

The back free end of each side or pedal lever A is forked, and said forked part is furnished with a pedal-piece a^2 , which is provided with an adjustable leather toe-socket a^3 . 60

By the rider working the pedal-levers A up and down a rotary motion is imparted to the cranks D' through the medium of the connecting-links D , while the buffers F retain the links D at a proper angle to carry the
65 cranks over their dead-centers.

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

1. In a side-lever pedal-gear cycle, the combination with the crank, a pedal-lever, means for movably connecting the pedal-lever to the crank, and a buffer or tappet-piece disposed between the pedal-lever and said means and adapted to engage the lever. 75

2. In a side-lever pedal-gear cycle, the combination of the crank, a pedal-lever, a link connecting the pedal-lever and crank, and a buffer or tappet-piece carried by the link and adapted to engage the pedal-lever. 80

3. In a side-lever pedal-gear cycle, the combination of side levers A , posts A' , springs A^2 engaging the posts, pedal-levers movably attached to the posts, cranks, links D' movably connecting the cranks and pedal-levers, and buffers F connected to the links and adapted to engage the pedal-levers. 85

In witness whereof I have hereunto set my hand in presence of two witnesses.

JAMES HUSBAND McFARLANE.

Witnesses:

BEDLINGTON BODYCOMB,
N. J. S. THOMPSON.