

No. 804,216.

PATENTED NOV. 14, 1905.

W. H. COCKS.
BRAKE FOR CYCLES.
APPLICATION FILED NOV. 7, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

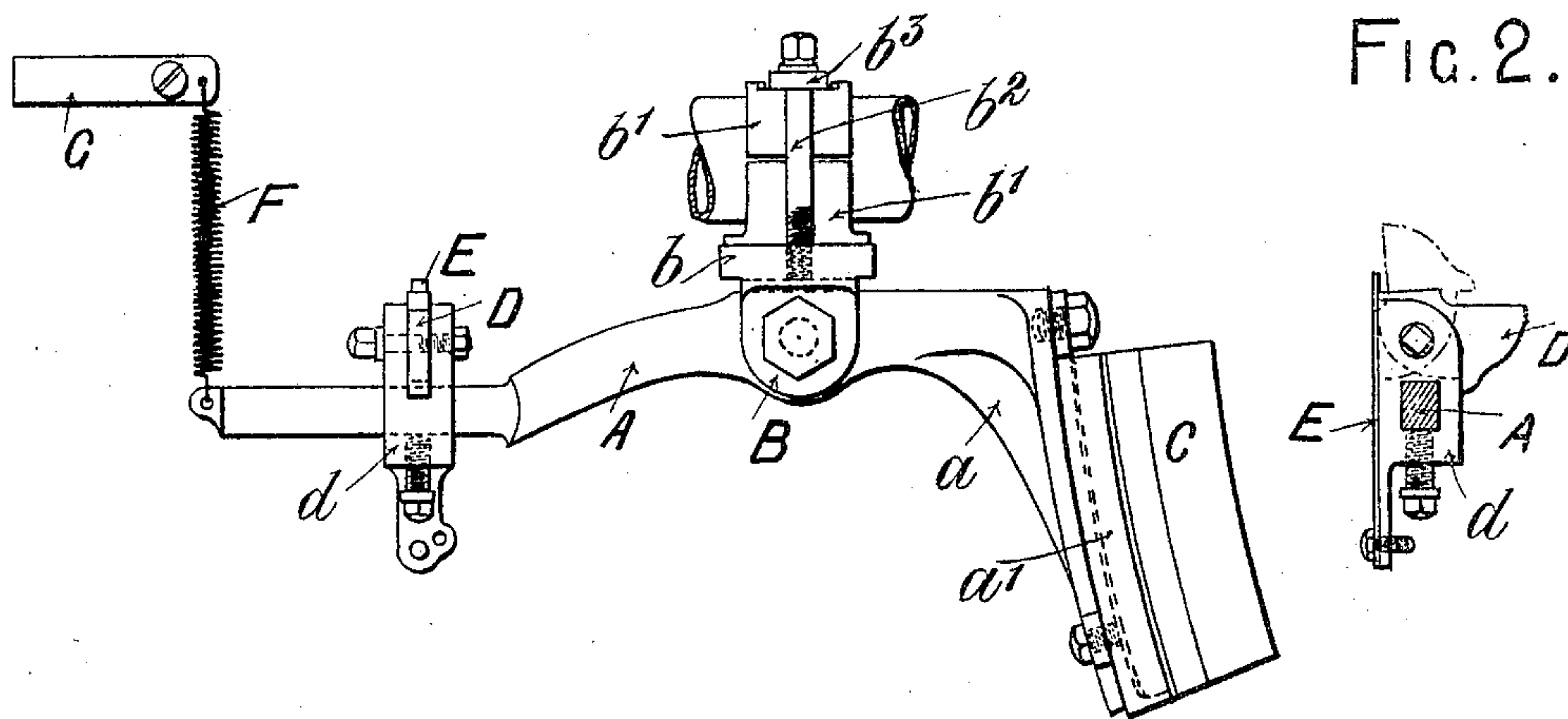
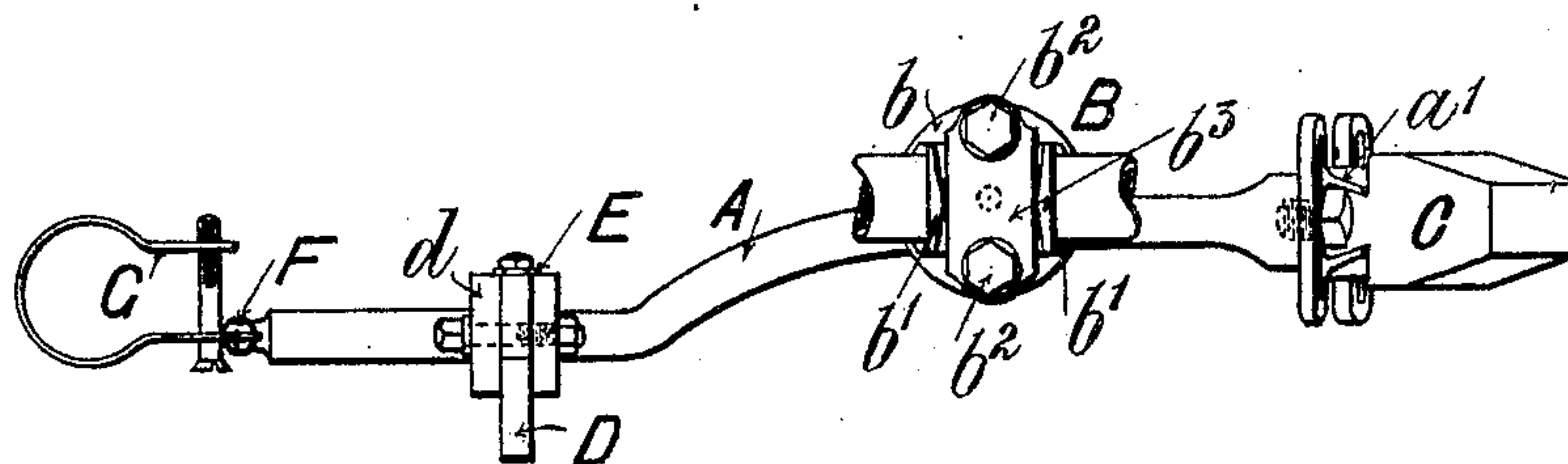


Fig. 3.



WITNESSES:

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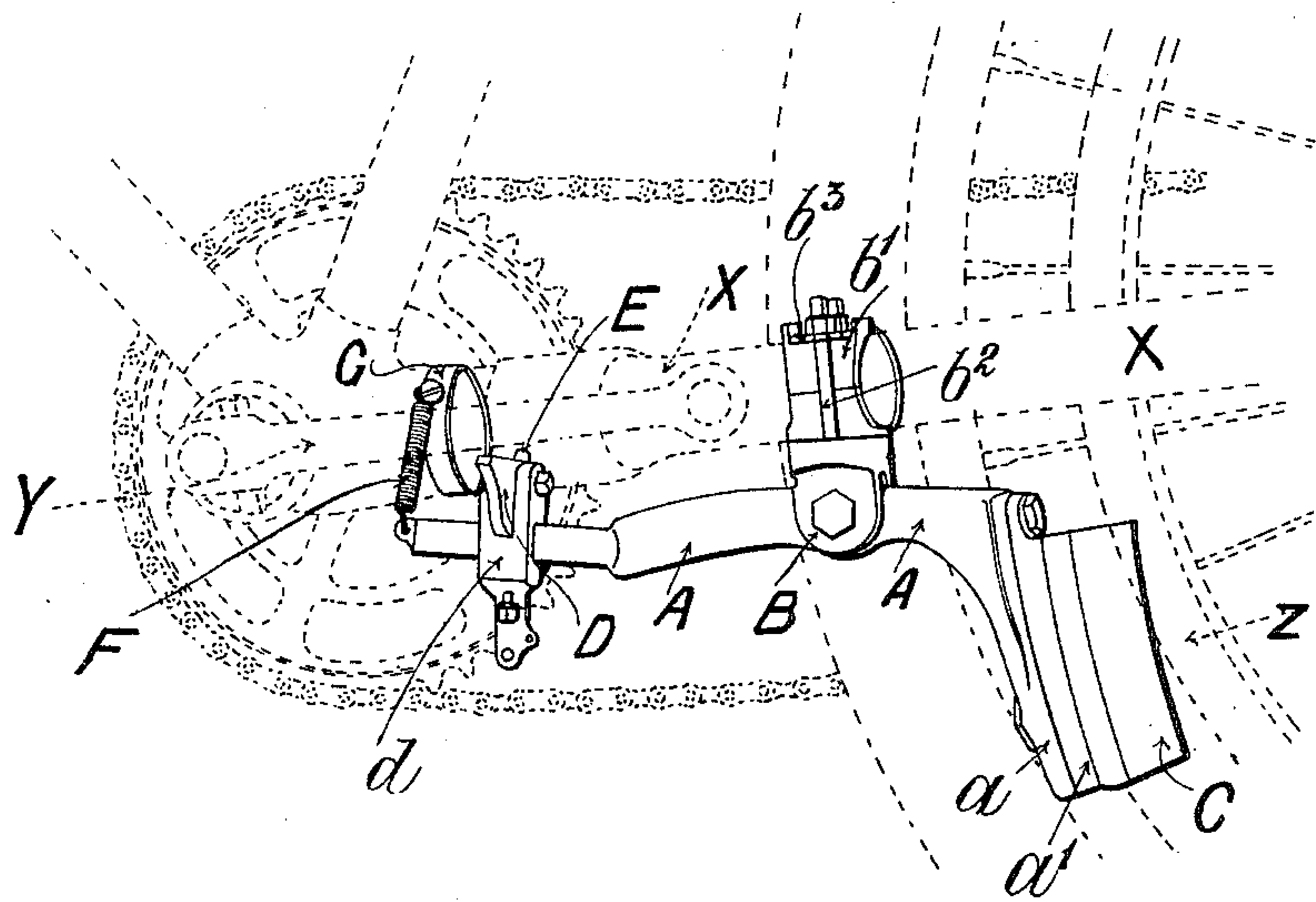
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2 SHEETS—SHEET 2.

FIG. 4.



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UNITED STATES PATENT OFFICE.

WALTER H. COCKS, OF EALING, ENGLAND.

BRAKE FOR CYCLES.

No. 804,216.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed November 7, 1904. Serial No. 231,728.

To all whom it may concern:

Be it known that I, WALTER HENRY COCKS, a subject of the King of Great Britain and Ireland, and a resident of 38 Ranelagh road, Ealing, in the county of Middlesex, England, have invented a certain new and useful Improvement in Brakes for Mechanically-Propelled Cycles, (for which I have obtained Letters Patent in Great Britain, No. 24,475, dated November 11, 1903,) of which the following is a specification.

This invention relates to an improved brake particularly adapted for mechanically-propelled bicycles and other velocipedes.

In the accompanying drawings, which illustrate this invention, Figure 1 is a view in side elevation. Fig. 2 is a part view in front elevation. Fig. 3 is a view in plan. Fig. 4 is a view in perspective showing the application of the brake to a cycle.

Throughout the views similar parts are marked with like letters of reference.

The brake consists essentially of an L-shaped lever A, pivoted to a bracket B, adapted to be clamped to one of the members X of the lower back fork of a cycle, of a brake-block C, carried by one end of the lever A, and of a trip device D, mounted on the other end of the lever A and by which the lever A is operated through the back action of one of the pedal-cranks Y.

The arms *a* of the lever A is shaped to receive a shoe *a'*, on which is mounted a block C of leather, rubber, or other suitable material, the said block being shaped to adapt it to fit in the groove of the pulley Z on the driving-wheel of the cycle, by which motion is imparted to said wheel by means of a driving-band of leather or other suitable material. The shoe *a'* is preferably attached to the arm *a* of the lever A, so that its lateral position with respect to the lever can be adjusted within certain limits, as shown in the drawings. The block C is preferably shaped to coincide with the section of the groove of the said pulley so as to obtain the greatest effective area of frictional contact. Onto the other end of the lever A is pivoted a transversely-arranged trip-piece D, so constructed and arranged that while it will give way to the crank Y when it is rotating in a forward direction it will not give way when the crank Y is rotating in a backward direction, with the result that back pressure exerted on the said crank is transmitted, through the trip-piece D, to the lever A in such a manner as to bring the brake-

block C into contact with the driving-pulley Z, and thus produce a breaking effect.

The trip-piece D may be restored to its active position after displacement either by gravity or by a spring E, as shown in the drawing. The trip-piece D is preferably pivoted to a bracket *d*, so mounted on the forward end of the lever A as to enable its longitudinal position to be varied.

To enable the cycle to be wheeled backward, the trip-piece D is so constructed that it can be normally held out of action. This can be conveniently effected by causing the spring E to operate not only to retain the trip-piece in its operative position, but also to keep it normally out of said position by suitably shaping the engaging faces of the trip-piece, as shown in the drawings.

The lever A is normally retained in such a position that the block C is out of frictional contact with the groove of the driving-pulley Z by means of a spring, such as F, operating between the forward end of the lever A and a clip, such as G, adapted to be attached to the frame of the cycle.

When this brake is intended to be sold as a complete component ready for application to any cycle, the bracket B is so constructed that it can be attached to any frame. This is effected by making the bracket in two essential parts, the one a plate *b*, adapted to be pivoted to the lever A, and the other a two-part block *b'*, shaped to adapt them to encircle and embrace the particular section of tubular member X of the lower back fork of the cycle to which the brake is to be fitted. This block *b'* is clamped to the plate *b* by means of two bolts *b²* and a plate *b³*, which enable the two parts of the block *b'* to be clamped both to the member X of the frame and to the plate *b* by one operation. As the members of the lower back forks of cycles lie at varying angles, the two-part block *b'* is so arranged that it can swivel on the plate *b* within certain limits, to which end the lower part of the block engages the plate *b* by means of a stud and hole, and the top of the block is cut away, as shown, to clear the plate *b³*.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. A brake for motor-cycles comprising a bracket adapted to be clamped to one of the members of the lower back fork of the cycle, an L-shaped lever pivoted to said bracket, a shoe transversely adjustable on said lever, a grooved driving-pulley on the driving-wheel

of the cycle, a friction-block carried by said shoe and adapted to engage the groove in the driving-pulley, and a transversely-arranged trip-piece carried by said lever and arranged 5 to be engaged by one of the pedal-cranks of the cycle when the said crank is given a backward rotation.

2. A brake for motor-cycles, comprising an L-shaped lever, a laterally-adjustable shoe 10 mounted on one end of said lever, a friction-block carried by said shoe, a bracket to which said lever is pivoted, and which is adapted to be clamped to the frame of the cycle, a bracket adjustably mounted on the other end of said 15 lever, a transversely-arranged trip-piece pivoted to said bracket, and a spring fixed to said bracket and operating to retain said trip-piece both in its operative and inoperative positions, as set forth.

20 3. A brake for motor-cycles, comprising an L-shaped lever, a laterally-adjustable shoe

mounted on one end of said lever, a friction-block carried by said shoe, a swiveling bracket adapted to be clamped to the frame of the cycle to which said lever is pivoted, a bracket 25 adjustably mounted on the other end of said lever, a transversely-arranged trip-piece pivoted to said bracket, a spring fixed to said bracket and operating to retain the said trip-piece both in its operative and inoperative po- 30 sitions, a clip adapted to be attached to one of the members of the frame of the cycle, and a spring connecting the forward end of the lever with said clip so that it operates to keep the brake in its inoperative position, as set forth. 35

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

WALTER H. COCKS.

Witnesses:

A. MILLWARD FLACK,
G. V. SYMES.