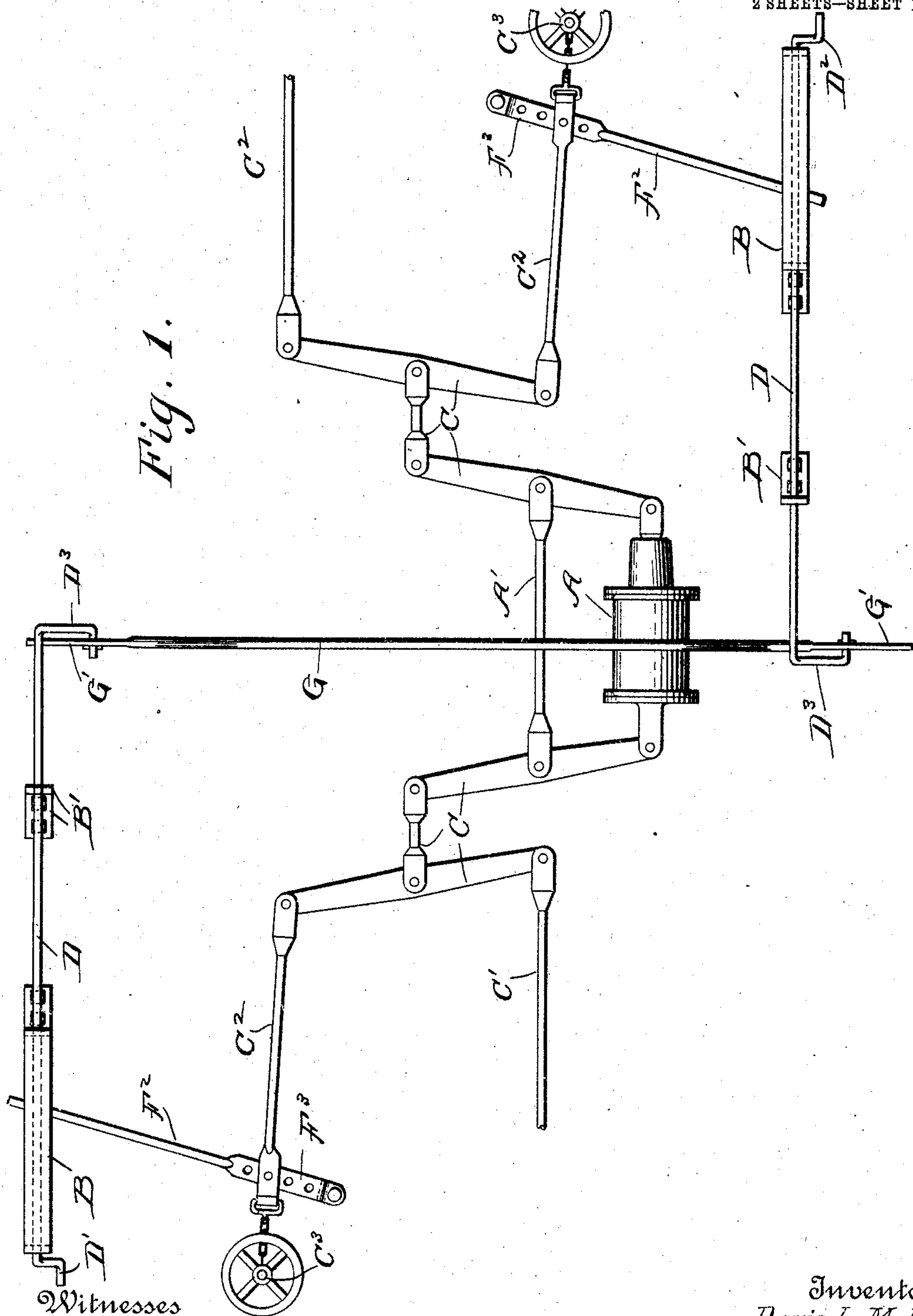


No. 790,144.

PATENTED MAY 16, 1905.

D. L. MABRY.
AIR BRAKE LOCK.
APPLICATION FILED AUG. 26, 1904.

2 SHEETS—SHEET 1.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

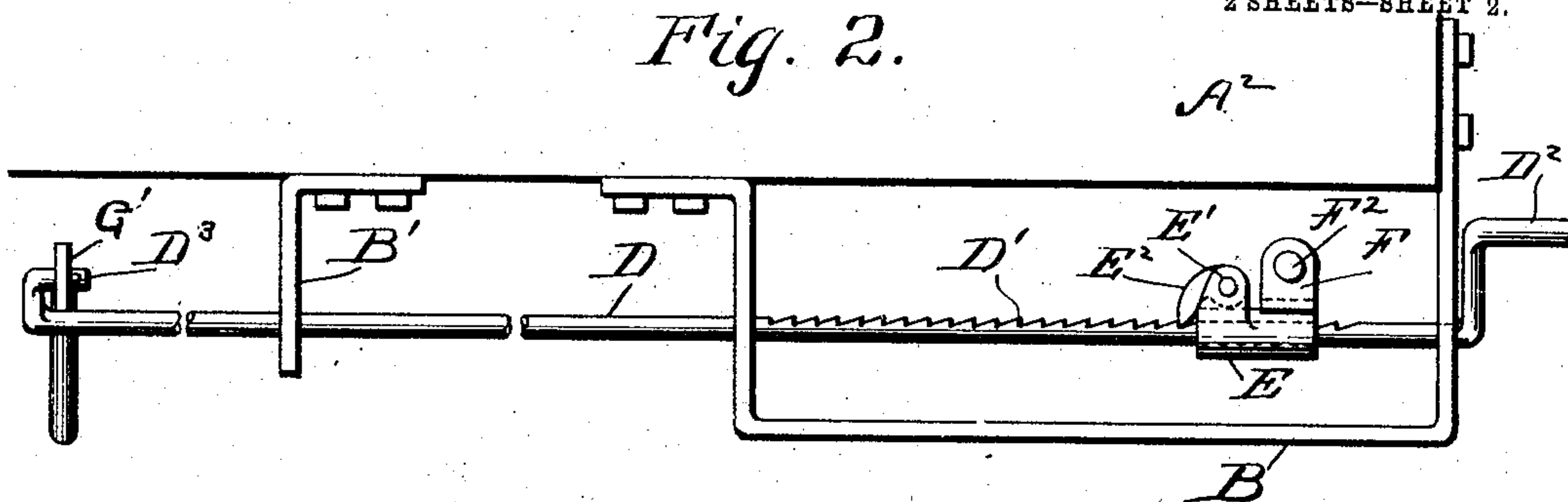


Fig. 3.

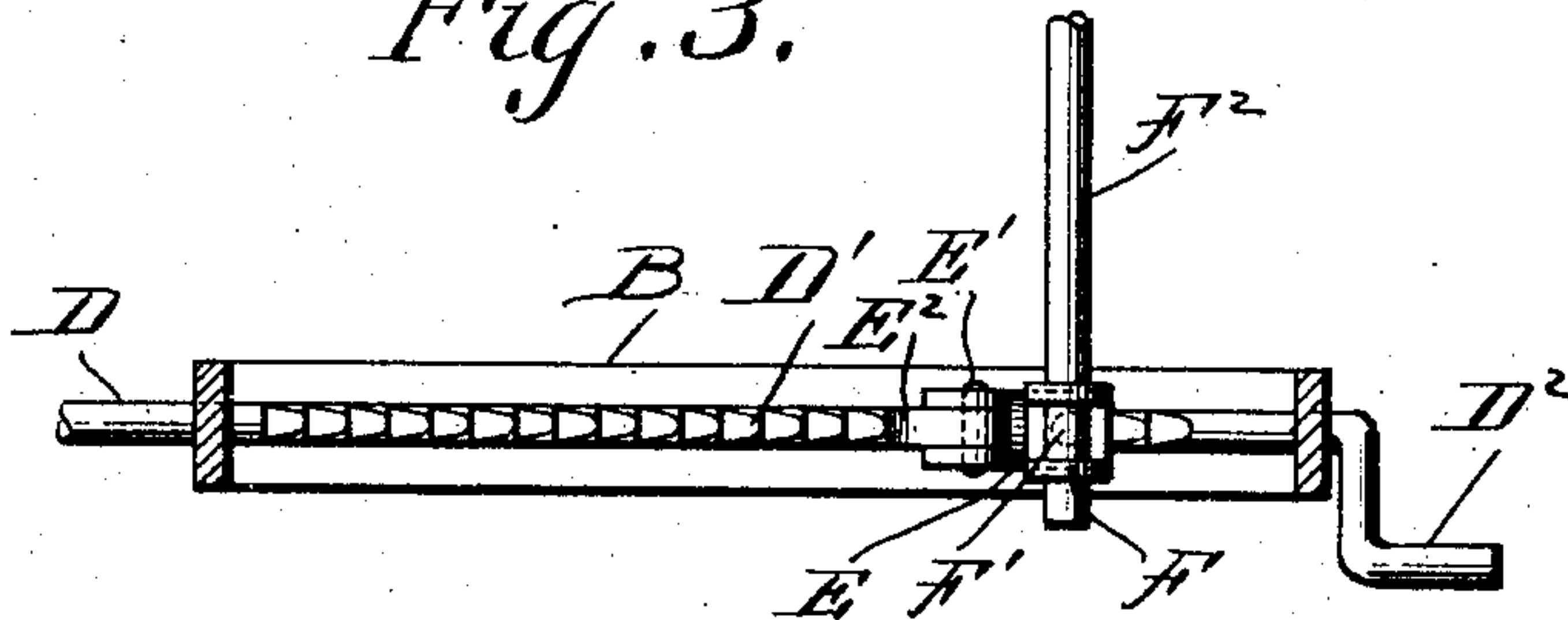
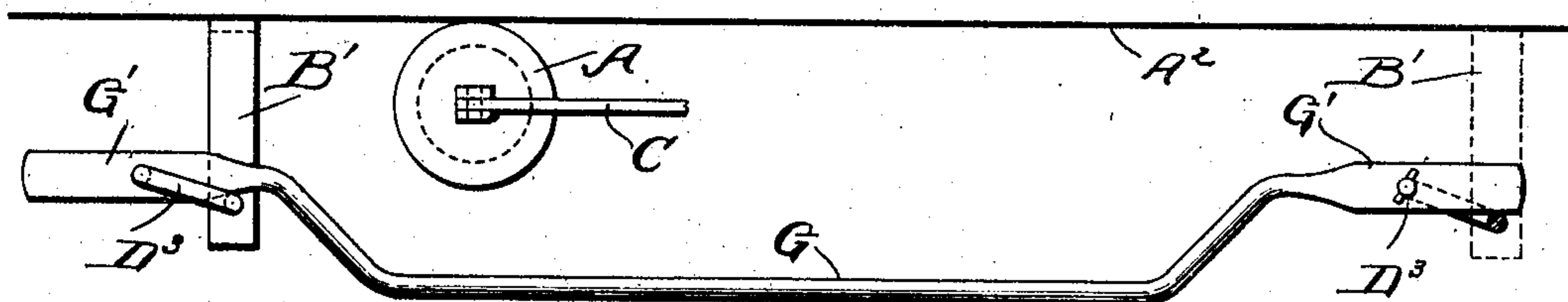


Fig. 4.



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UNITED STATES PATENT OFFICE.

DAVIS L. MABRY, OF BLOSSOM, TEXAS.

AIR-BRAKE LOCK.

SPECIFICATION forming part of Letters Patent No. 790,144, dated May 16, 1905.

Application filed August 26, 1904. Serial No. 222,246.

To all whom it may concern:

Be it known that I, DAVIS L. MABRY, a citizen of the United States, residing at Blossom, in the county of Lamar and State of Texas, have invented a new and useful Improvement in Air-Brake Locks, of which the following is a specification.

This invention relates to a device to be employed with the form of air-brakes now in use and is intended to lock, either by hand or automatically, the brake when applied by air-pressure.

The object of the invention is to avoid the necessity of resetting the brakes by a brakeman, an operation at present necessary when shifting a car to a side track, as the leakage of air would finally result in the unbraking of the car, and it is obvious that a car left standing upon a siding, especially where there was a slight grade, would be a source of great possible danger by reason of the brakes becoming unset due to leakage of air. It is therefore customary for a brakeman to go with a car shifted upon a siding and reset the brakes from the top of the car by means of the usual hand-wheel brakes with which freight-cars are equipped. My device obviates this additional labor on the part of the brakeman and also does away with the necessity of his going upon the top of the car at any time during switching operations.

My invention consists of the novel features of construction and combination of parts hereinafter set forth, particularly shown in the drawings, and pointed out in the claims.

In the accompanying drawings, Figure 1 is an inverted diagrammatic plan showing the relative relation between the parts of my device and the usual brake-setting devices. Fig. 2 is a detail view of my device in side elevation. Fig. 3 is a plan view of a portion of my device, parts being in section. Fig. 4 is a side elevation of a connecting-bar arranged below and transverse to a car.

In the drawings, A represents a brake-cylinder, and A' a tie-rod, and a plurality of pivoted links C transmit motion to the brake-rods C', and links C² connect the brake-rods C' through the medium of a portion of the links

C, with the brake-wheel shaft C³, the usual chain forming the actual connection between the shaft C³ and the link C². These parts are not claimed by me as a part of my invention and are shown in order that the purpose and operation of my locking device may be more clearly understood.

That portion of my device shown in Figs. 2 and 3 is designed to be duplicated at diagonally opposite corners of the car, as indicated by the diagrammatic view in Fig. 1, and Fig. 4 illustrates the manner of connecting the duplicate parts. It will be sufficient then to describe in detail but one set of the locking devices.

Brackets B and B' are secured to the under side of the car, the bracket B being arranged at a corner of the car, and in suitable perforations in the brackets a horizontal bar D is revolvably and loosely held. At its outer end the bar is cranked, as shown at D², and at its inner end the bar D is angled and bent back upon itself, as shown at D³. That portion of the bar D between the vertical members of the bracket B is serrated on one side, whereby the ratchet-teeth D' are formed, and on this portion slides a sleeve E. The sleeve adjacent one end has a pair of upwardly-extending ears E', between which is pivoted a pawl E², which is adapted to engage the teeth D' when the bar D is rotated into the proper position. Adjacent the opposite end of the sleeve E it carries a U-shaped bracket F, pivoted to the sleeve at F', so as to turn on the sleeve, and in the upright members of the bracket is secured the end of a rod F². Adjacent its inner end the rod F² has a flattened perforated portion F³, adapted to be coupled by a pivot-pin to one of the links C² or to any other similarly-acting link or moving part, according to the air-brake system used.

To connect the rods D on opposite sides of the car, so that the locking device may be actuated from either side or end, I employ a connecting-rod G, arranged under and transverse to the car and upwardly angled adjacent its ends. The end portions G' are flattened and perforated, and the bent-back portions D³ of the rods D are pivotally held in

the said perforations of the flattened portions G', whereby the rotation of one of the rods rotates the other rod D in the same manner.

5 It is obvious that movement of the rod F² will slide the sleeve on the rod D in either direction, provided the crank D² is so turned that the teeth D' are not in position to be engaged by the pawl; but when the crank D² is
10 turned upwardly, as shown in Fig. 2, the sleeve can move only when the brakes are being set, the setting of the brakes actuating the rod F², sliding the sleeve E toward the end of the car, and the pawl E² engaging the teeth
15 D' and locking the brake in position. When a car is to be thrown upon a switch, it is obvious that the rod D can be set in the proper position by the brakeman when uncoupling the car from the train, and the brake will not
20 only be set by the engineer in the usual manner, but will be automatically locked in its set position without the brakeman accompanying the car and setting it by hand from the top of the car in order to lock it in position.
25

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

30 1. In combination with an air-brake system, a notched rod, a sleeve sliding thereon, a pawl carried by the sleeve and adapted to engage the teeth formed on the rod, a pivoted rod connecting the sleeve with movable

parts of the air-brake system, and means for rotating the first-mentioned rod and disengaging the pawl. 35

2. The combination with an air-brake system, a rod toothed on one side, means for rotating the rod, a sleeve sliding on the rod, a pawl carried thereby adapted to engage the
40 teeth of the rod, and a rod adapted to be actuated by the setting of the brake, said last-mentioned rod being pivotally connected to the sleeve.

3. A device of the kind described comprising a rod rotatably suspended below a car
45 and having teeth on one side, a sleeve adapted to slide thereon, a pawl carried by the sleeve adapted to engage the teeth of the rod, said rod being cranked at its outer end, and
50 means adapted to slide the sleeve when the brake is set or unset.

4. A device of the kind described comprising rotatable, toothed rods carried at diagonally opposite corners of a car, sleeves sliding
55 on said rods, pawls adapted to engage the teeth of the rods, rods adapted to be actuated by the brake-setting mechanism and pivoted to the sleeves, means for rotating the rods, and a connecting-rod, angled and
60 pivotally connected to each of the toothed rods, for the purpose set forth.

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