

(No Model.)

G. H. POOR.

GOVERNOR FOR AUTOMATIC BRAKES.

No. 318,021.

Patented May 19, 1885.

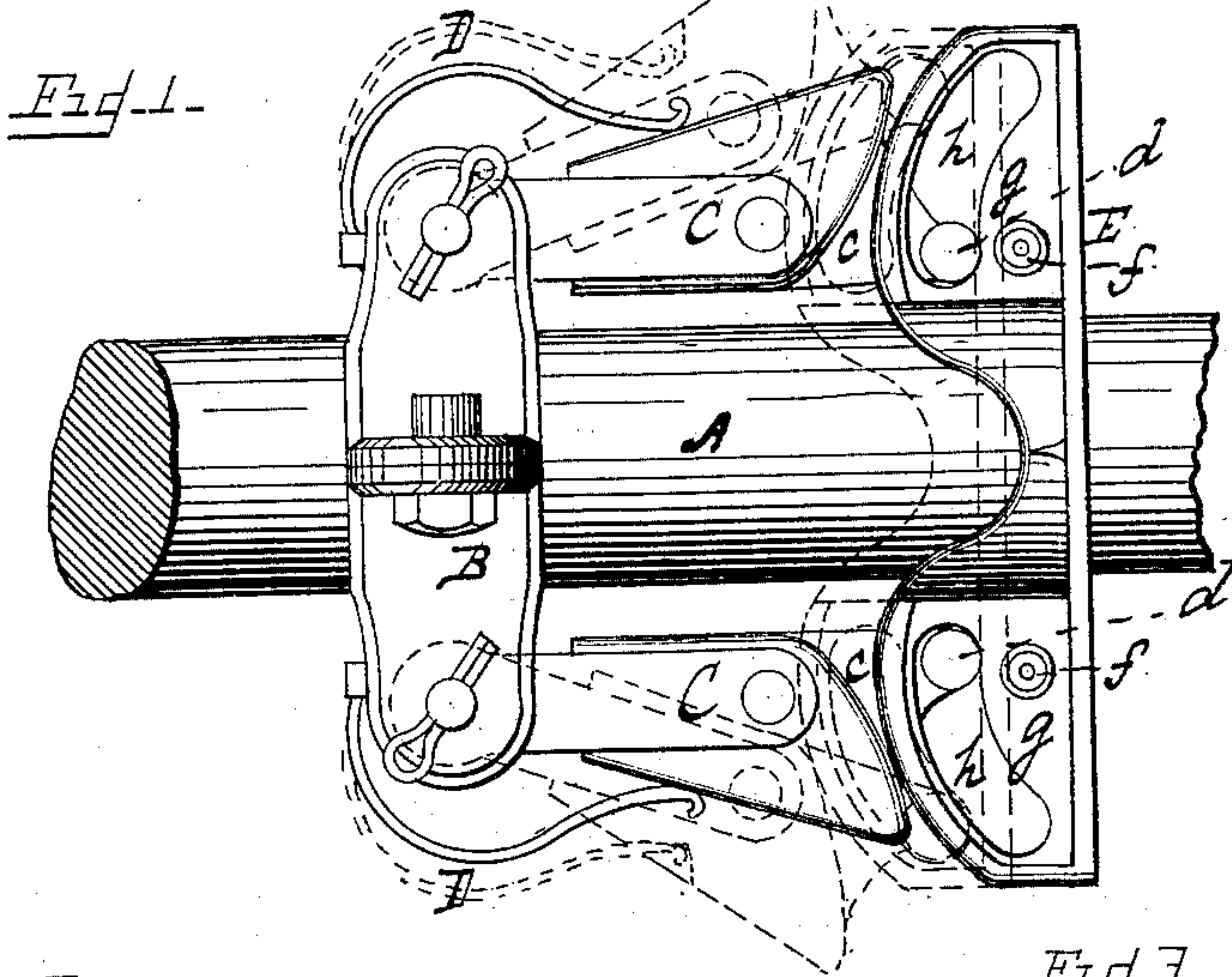


Fig. 2.

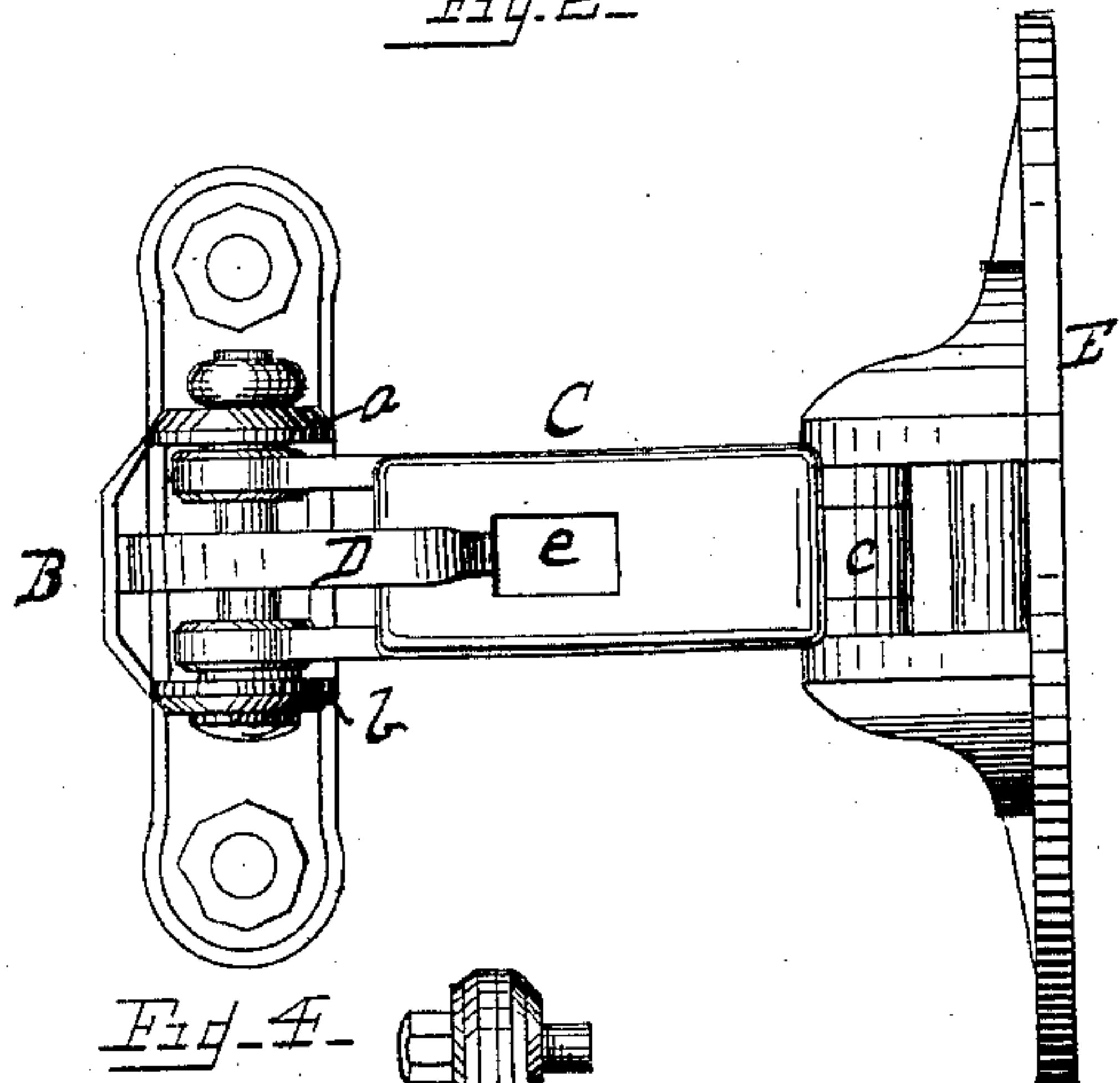


Fig. 3.

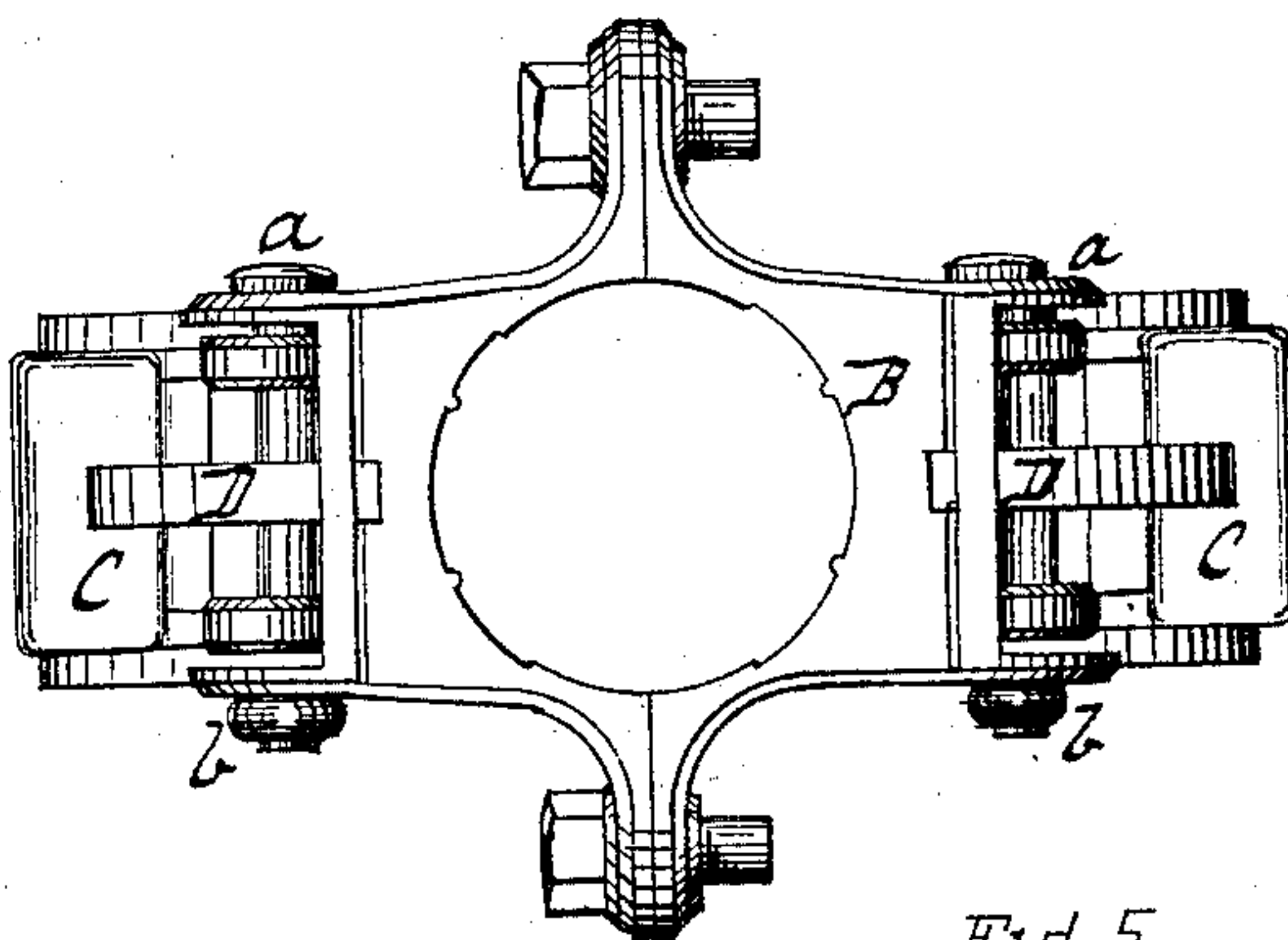
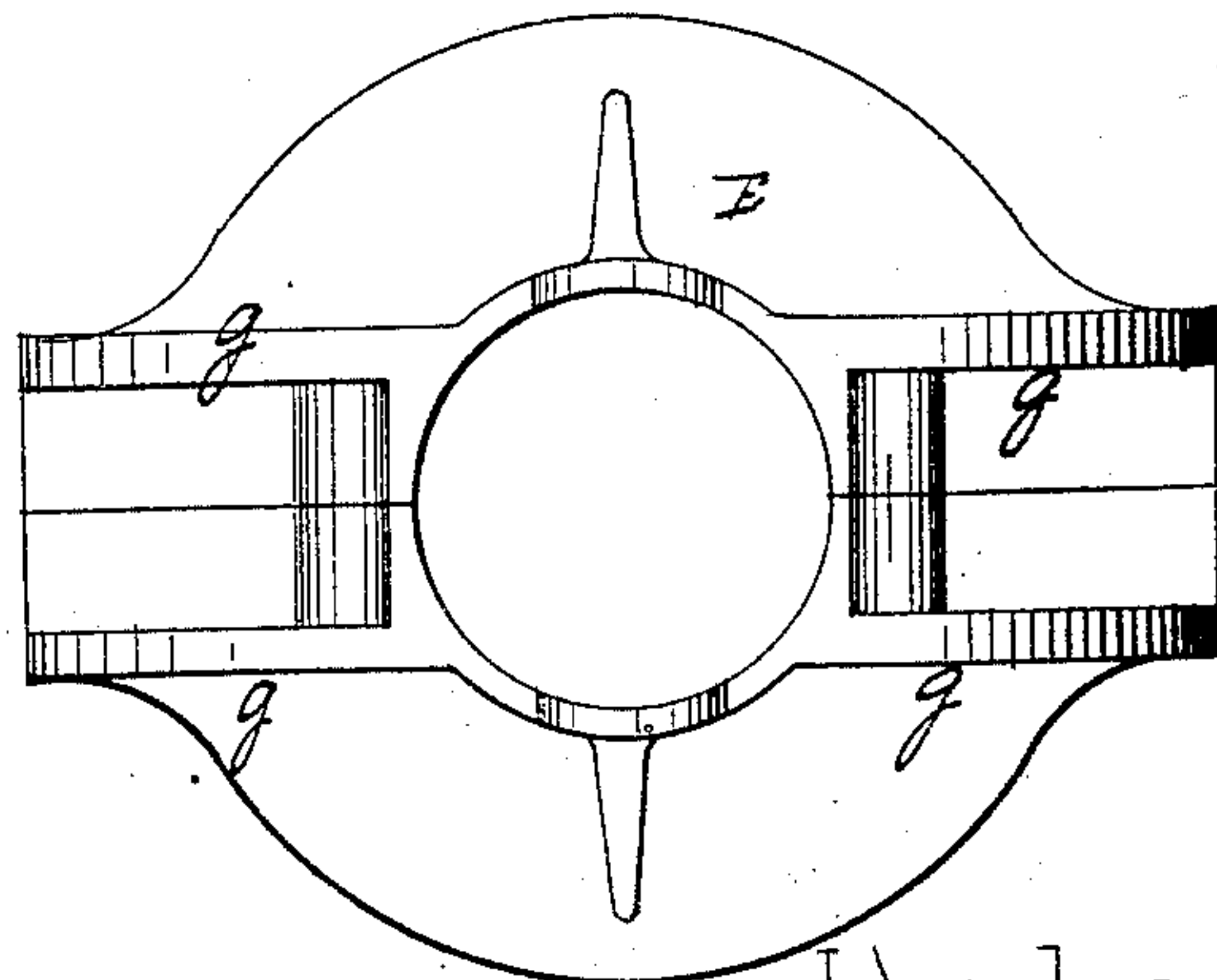
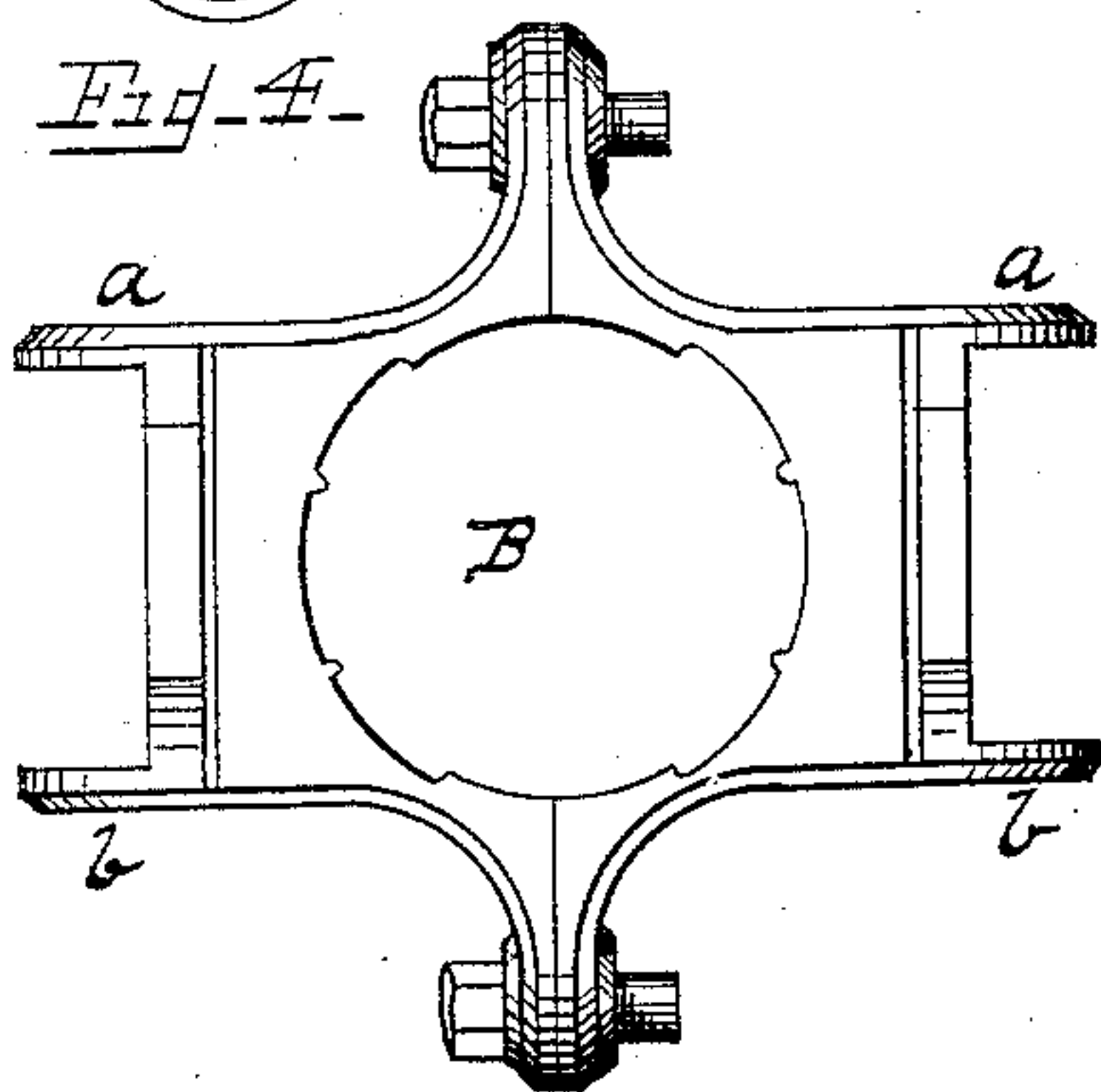


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

GEORGE H. POOR, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE AMERICAN BRAKE COMPANY, OF SAME PLACE.

GOVERNOR FOR AUTOMATIC BRAKES.

SPECIFICATION forming part of Letters Patent No. 318,021, dated May 19, 1885.

Application filed October 13, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. POOR, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Centrifugal Governors for Automatic Brakes; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the construction of governors for that class of brake mechanism embraced by the Lefevre and Dorre Patents, No. 101,280, March 29, 1870; Randolph, No. 241,156, May 10, 1881; Poor, No. 300,122, June 10, 1884, and many others of like character. In this class the brake is operated by the movement of a sliding draw-bar, which transmits motion through a series of connected levers to the brake-rod, the position of these levers in relation to the draw-bar being controlled by a centrifugal governor mounted upon the car-axle and operated by its revolution at a certain speed.

The present invention consists in improvements on this class of governors, and has no special reference to the connections between such governors and the brake-operating mechanism, which may be of the kind described in the patents referred to, or any other suitable mechanisms.

In the accompanying drawings, Figure 1 represents a side elevation of the axle and governor, dotted lines indicating the change in position caused by an increase of speed. Fig. 2 is a similar view at right angles to Fig. 1. Fig. 3 is an end view of the sectional collar which clamps the axle and the weighted arms. Fig. 4 is a detail view of the collar. Fig. 5 is a plan view of the sectional sliding collar or disk.

A represents the axle of a pair of car-wheels.

B is a sectional collar regularly clamped upon the axle by lateral bolts. Upon opposite sides of the collar are projecting ears *a b*, between each pair of which is pivoted a weighted arm, C, having an extension, *c*, in which is secured a pin, *d*. Each of the pivoted arms is forced against the axle (to which it is parallel) by a strong bow or leaf spring, D, with a tension regulated according to the weight of the arms and the degree of speed necessary to operate them. The free ends of

the springs D bear upon the arms at the edge of a slot or recess, *e*. This slot has a regularly-curved bottom, so that as the arms are thrown out the ends of the springs enter the slot, a regular and uniform tension being thereby maintained, instead of an increasing spring-pressure, as would be the case should the springs bear upon plane surfaces.

A sectional collar-disk, E, is secured on the axle by bolts *f f*, which pass through projecting flanges *g g* of the sections of the disk. The disk turns with the axle, but is free to slide longitudinally thereon. These flanges *g g* project vertically from the face of the disk and parallel to each other, and in each is formed a pair of inclined and curved slots, *h h*. The end of the extension *c* of the weighted arms D enters the space between these flanges at each side of the axle, and the pins *d* engage with the curved slots in the flanges *g g*. The result is that when the axle revolves at a certain speed the arms C C fly outward, causing the pins *d* to bear upon the edge of the inclined slots and the disk E to move inward toward the collar. The disk is of course arranged with relation to suitable mechanism, which, when in proper position, will be operated by the draw-bar, thus moving the brake-lever; but, as before stated, any improved arrangement of mechanism for operating the brakes through the medium of the draw-bar may be employed, such as that shown in the patents before mentioned.

The construction of this governor, and in particular that of the pressure-springs, is far simpler than in devices of this class previously used, while equally or more effective.

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

1. In a governor for an automatic brake, the combination of a collar fixed to the axle, a collar movable along the axle and having radial flanges, and weighted arms pivoted at one end on the fixed collar and to the movable collar by a pin or pins movable in guide-ways in the radial flanges, substantially as and for the purposes specified.

2. In a governor, the combination, with a collar fixed to the axle, and centrifugal arms pivoted on the fixed collar and provided at

the opposite ends with projecting pins, of a sliding disk composed of two or more sections, each section having radial slotted flanges for the reception of the pins on the centrifugal arms, substantially as and for the purposes specified.

3. The combination, with the pivoted governor-arms having the slots for the reception of the free ends of the springs, of the leaf or

bow springs bearing upon such arms, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 29th day of September, 1884.

GEORGE H. POOR.

Witnesses:

E. B. LEIGH,

ALBERT BLAIR.