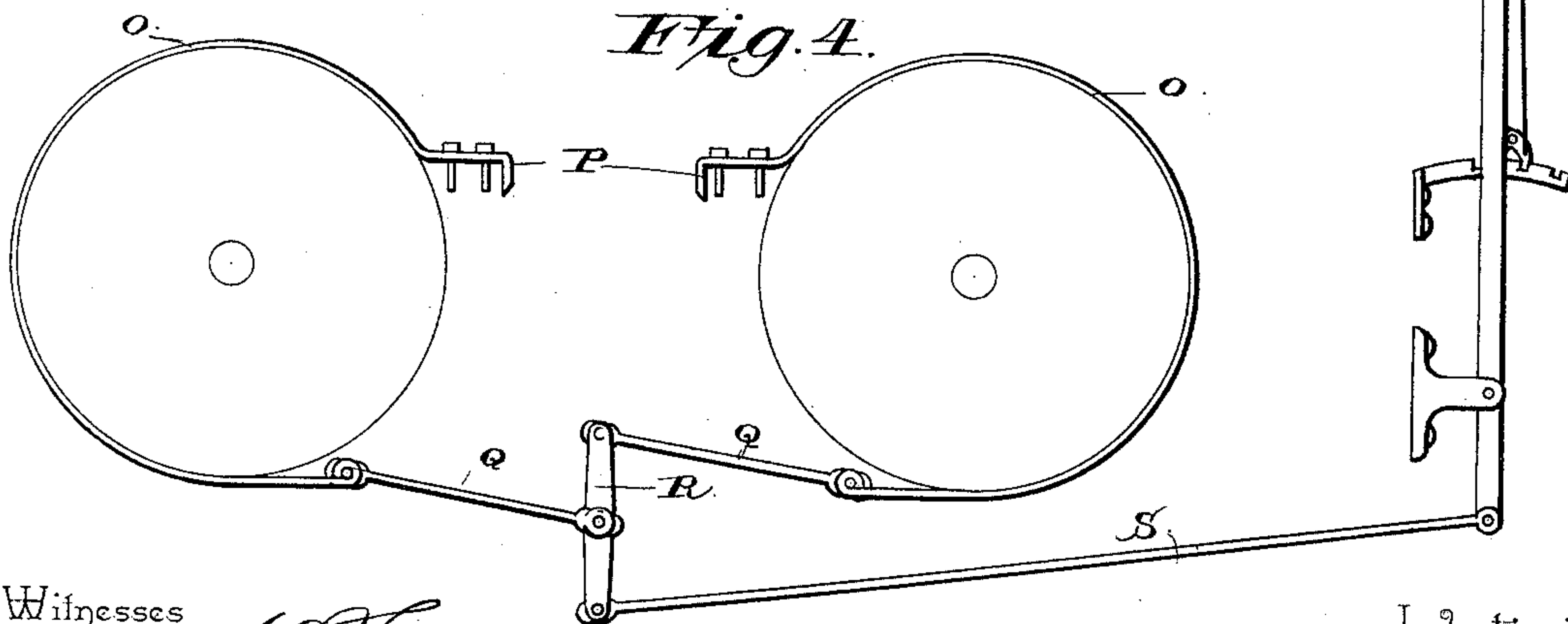
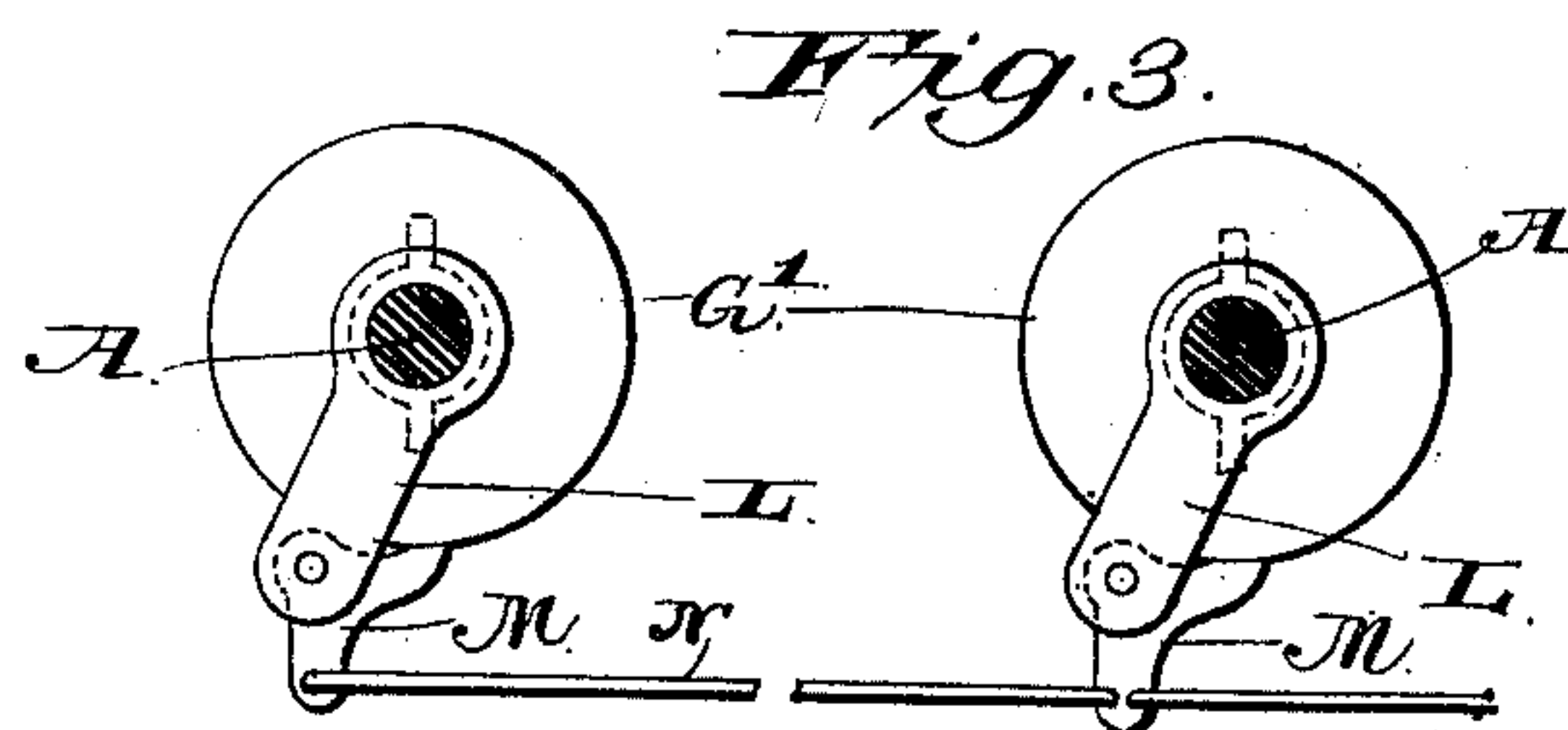
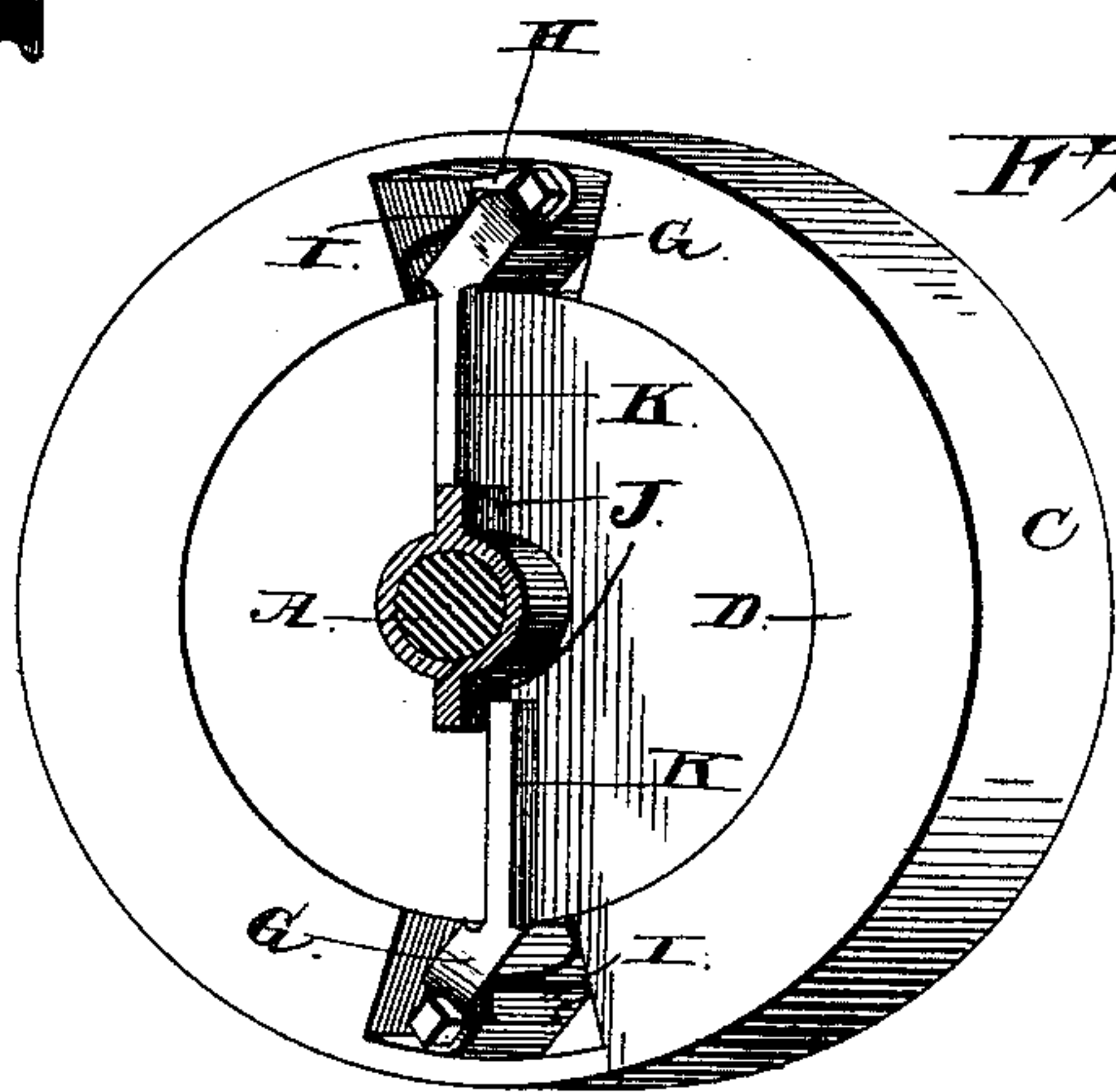
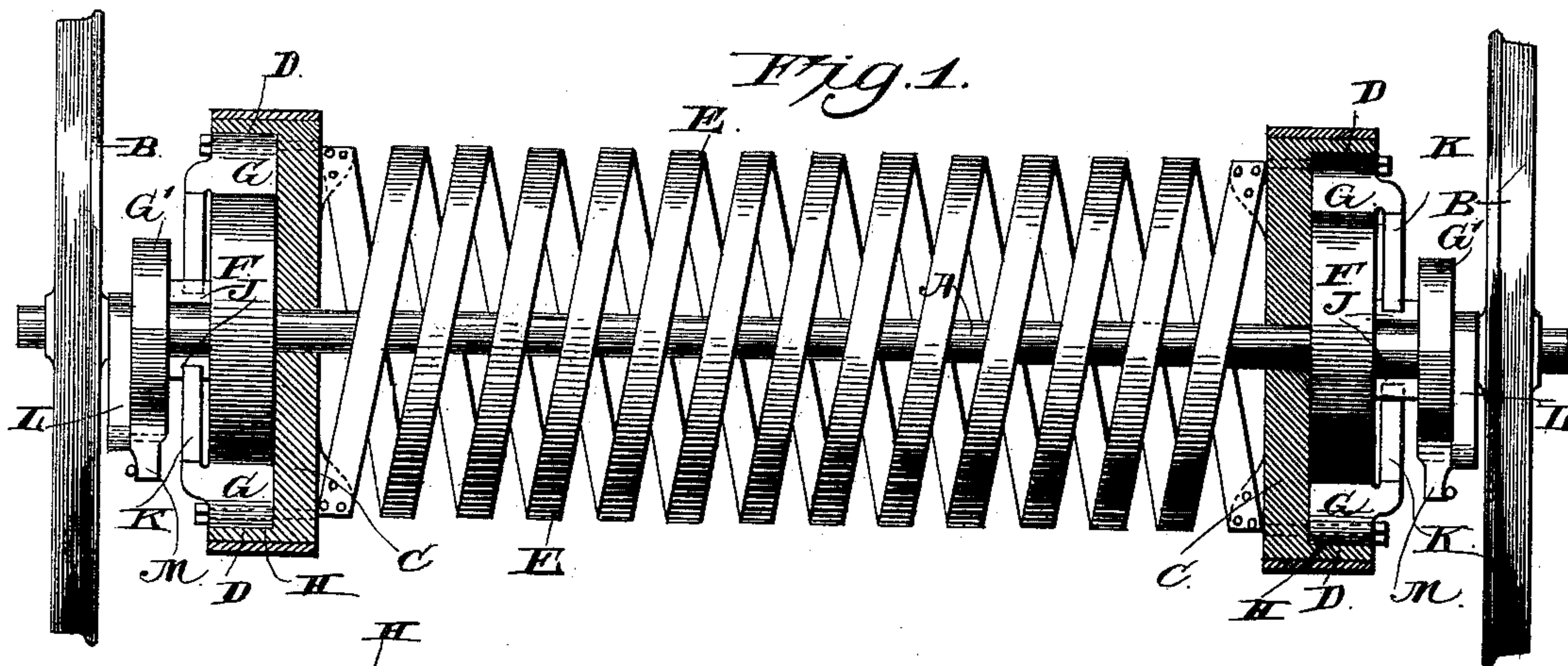


(No Model.)

W. A. BARKER.
CAR STARTER AND BRAKE.

No. 414,183.

Patented Nov. 5, 1889.



Witnesses

M. Fowler

R. H. Bishop.

By his Attorneys,

Windell A. Barker

Inventor

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UNITED STATES PATENT OFFICE.

WENDELL A. BARKER, OF CHICAGO, ILLINOIS.

CAR STARTER AND BRAKE.

SPECIFICATION forming part of Letters Patent No. 414,183, dated November 5, 1889.

Application filed July 23, 1889. Serial No. 318,354. (No model.)

To all whom it may concern:

Be it known that I, WENDELL A. BARKER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Car Starter and Brake, of which the following is a specification.

My invention relates to improvements in car starters and brakes; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a vertical longitudinal section of my improved device, showing it in position on a car-axle. Fig. 2 is an end elevation of a part of the device. Figs. 3 and 4 are detail views.

The axle A is of the usual construction, and the car-wheels B are secured thereto in the usual manner. Near each end of the axle I loosely mount thereon the caps C, having outwardly-projecting annular flanges D, and around the axles, between the said caps, I arrange the coiled springs E, which have their ends secured to the said caps. Adjacent to the said caps, and fitting within the annular flanges of the same, I rigidly secure to the axle the friction-pulleys F, and these friction-pulleys are engaged by dogs G, which are pivoted in diametrically-opposite recesses H of the said caps, and are held normally in contact with the edges of the said pulleys by the springs I, secured within the said recesses and bearing on the dogs.

Operating-disks G' are loosely mounted on the axle adjacent to the friction-pulleys, and they are provided with lugs or shoulders J, which are adapted to impinge against arms K, formed integral with and extending inward from the dogs G, as shown. These operating-disks are controlled by the levers L, loosely mounted on the axle adjacent to the disks, and the pawls M, pivoted to the lower ends of said levers and adapted to bind against the edges of the disks, the said pawls being connected by a rod N, which extends forward to the brake-lever.

Around the caps C, I arrange the frictional clamping-bands O, which have their inner ends P secured to the supporting-frame of the car and have their outer ends connected by the links Q with a lever R, the said lever

R being connected to the brake-lever by a connecting-rod S. The brake-lever is connected with these frictional clamping-bands at one side of the car and with the pawls M at the opposite side, and a second brake-lever, arranged at the other end of the car, is connected with the remaining clamping-bands and pawls, so that the car may be driven in either direction without being turned completely around.

The brake is applied by throwing the brake-lever in the proper direction to draw on the clamping-bands O and cause them to bind around the caps, as will be readily understood, and the rotation of said caps will thus be stopped, while the friction-pulley will continue to move under the dogs or pawls, which will drag thereon and stop the car. When the cap is stopped, of course the spring secured thereto is held stationary; but the cap and spring at the other side of the car will continue to rotate, and the spring will thus be wound. Upon moving the brake-lever so as to release the clamping-bands from the caps the spring at once unwinds and imparts motion to the cap, which will carry the dogs into engagement with the friction-pulley, so that the motion of the cap will be communicated directly to said pulley and through the pulley to the axle, and the car thereby started.

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

1. The car starter and brake having the caps, the clamping-bands passing around the same, the brake-lever, and connections between the said lever and the bands, as set forth.

2. A car-starter comprising the friction-pulleys rigidly secured to the axle at the ends of the same, the caps loosely mounted on the axle and carrying dogs adapted to bind on the pulleys, and the springs coiled around the axle, extending between the caps, and having their ends secured to the same, as set forth.

3. The car-starter consisting of the pulleys secured rigidly on the axle, the caps mounted loosely on the axle, the springs between the said caps, the dogs pivoted to the said caps and adapted to bind on the pulleys, and having integral inwardly-extending arms, the

disks loosely mounted on the axle and provided with the shoulders engaging said arms, and means for operating said disks, as set forth.

- 5 4. The car-starter consisting of the pulleys secured rigidly on the axle, the caps loosely mounted on the axle, the spring between the said caps, the dogs pivoted to the said caps and adapted to bind on the pulleys and pro-
10 vided with inwardly-extending arms, the disks mounted on the axle and provided with

shoulders adapted to engage the said arms, the levers loosely mounted upon the axle, and the pawls pivoted to said levers and adapted to engage the disks, as set forth. 15

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WENDELL A. BARKER.

Witnesses:

SAMUEL FENTERS,
GEO. W. BARBER.