

No. 608,429.

Patented Aug. 2, 1898.

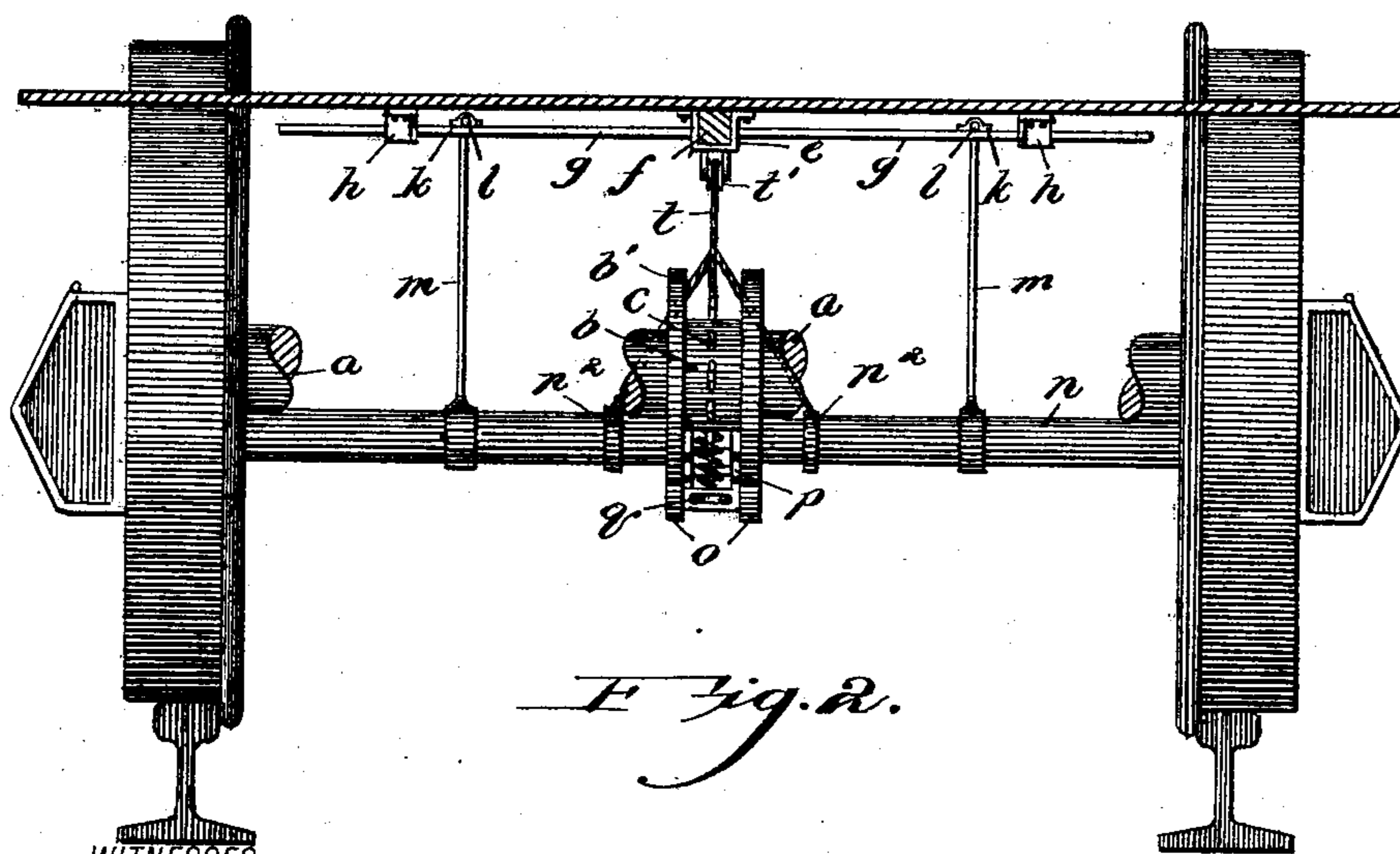
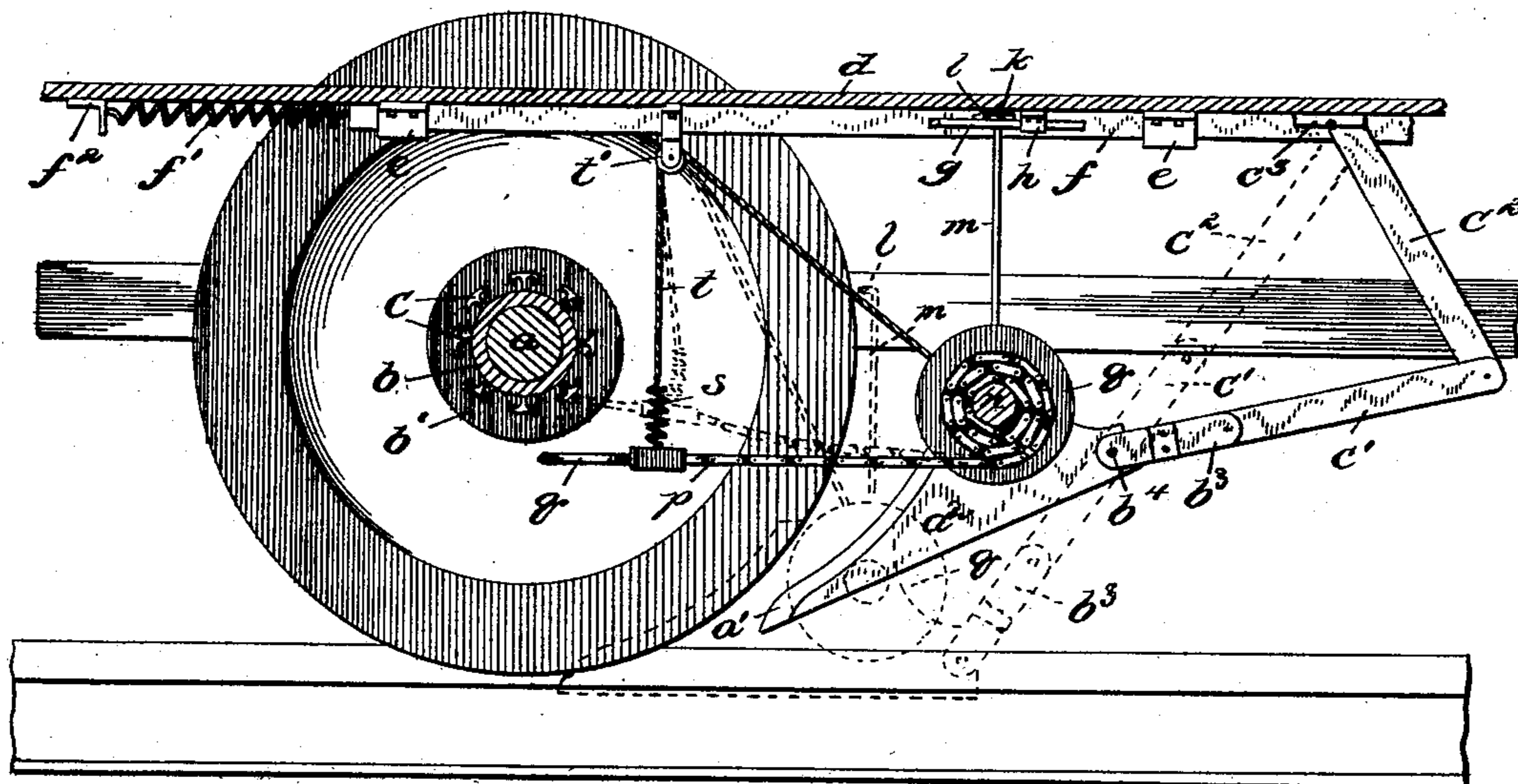
F. A. PERRY.
AUTOMATIC CAR BRAKE.

(Application filed Nov. 10, 1897.)

(No Model.)

2 Sheets—Sheet 1.

F. fig. 1.



F *Fig. 2.*

WITNESSES

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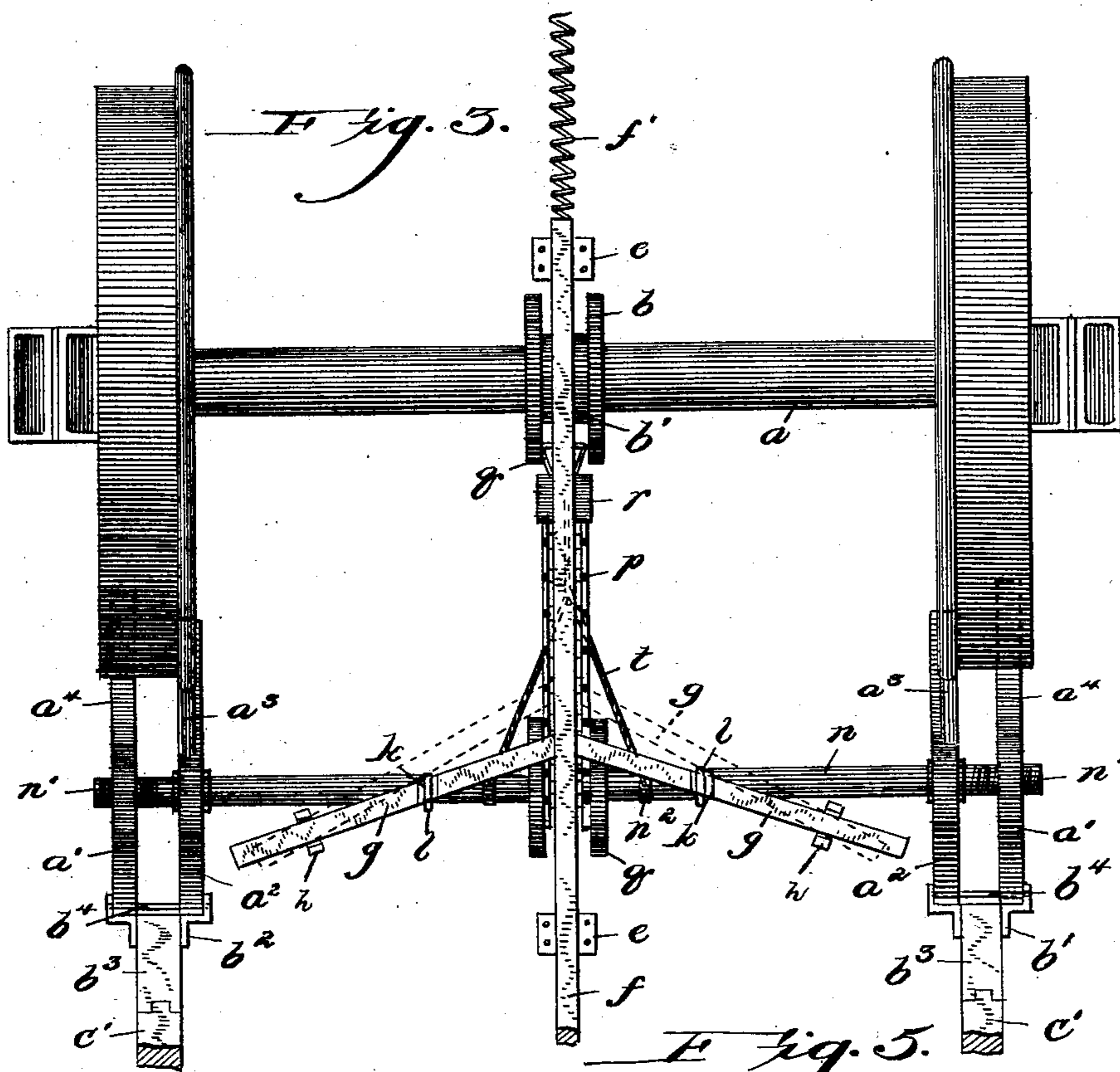


Fig. 4.

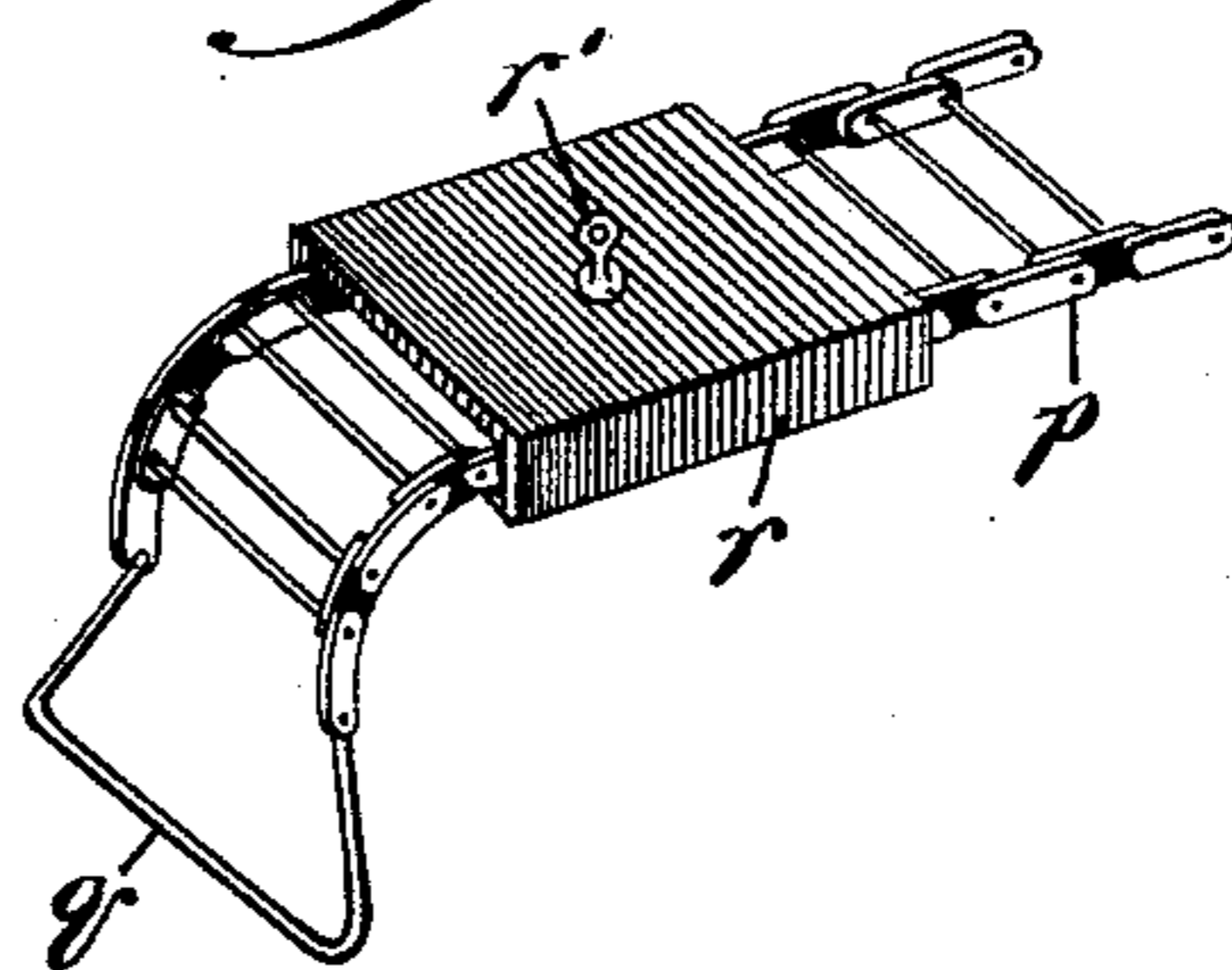
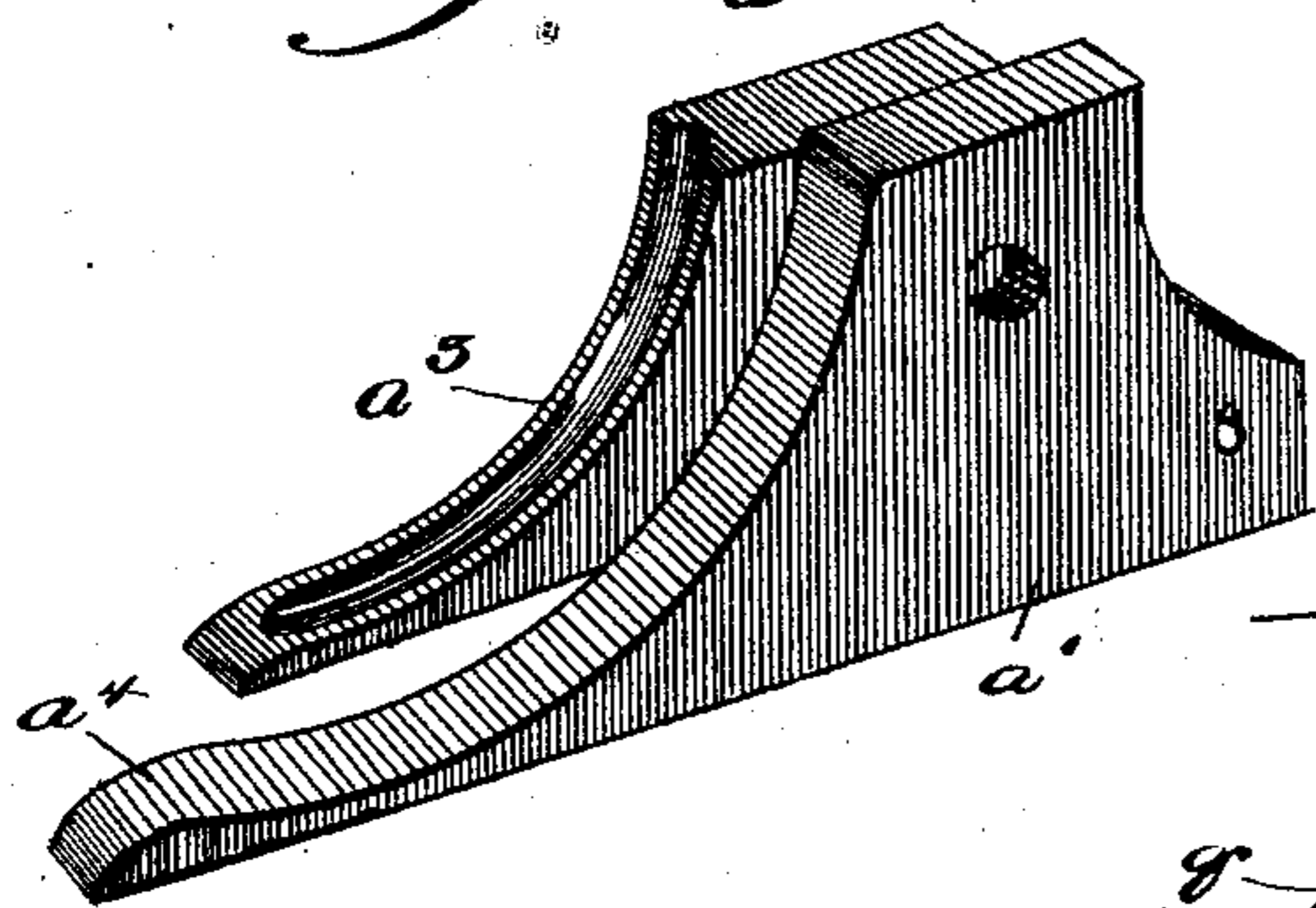
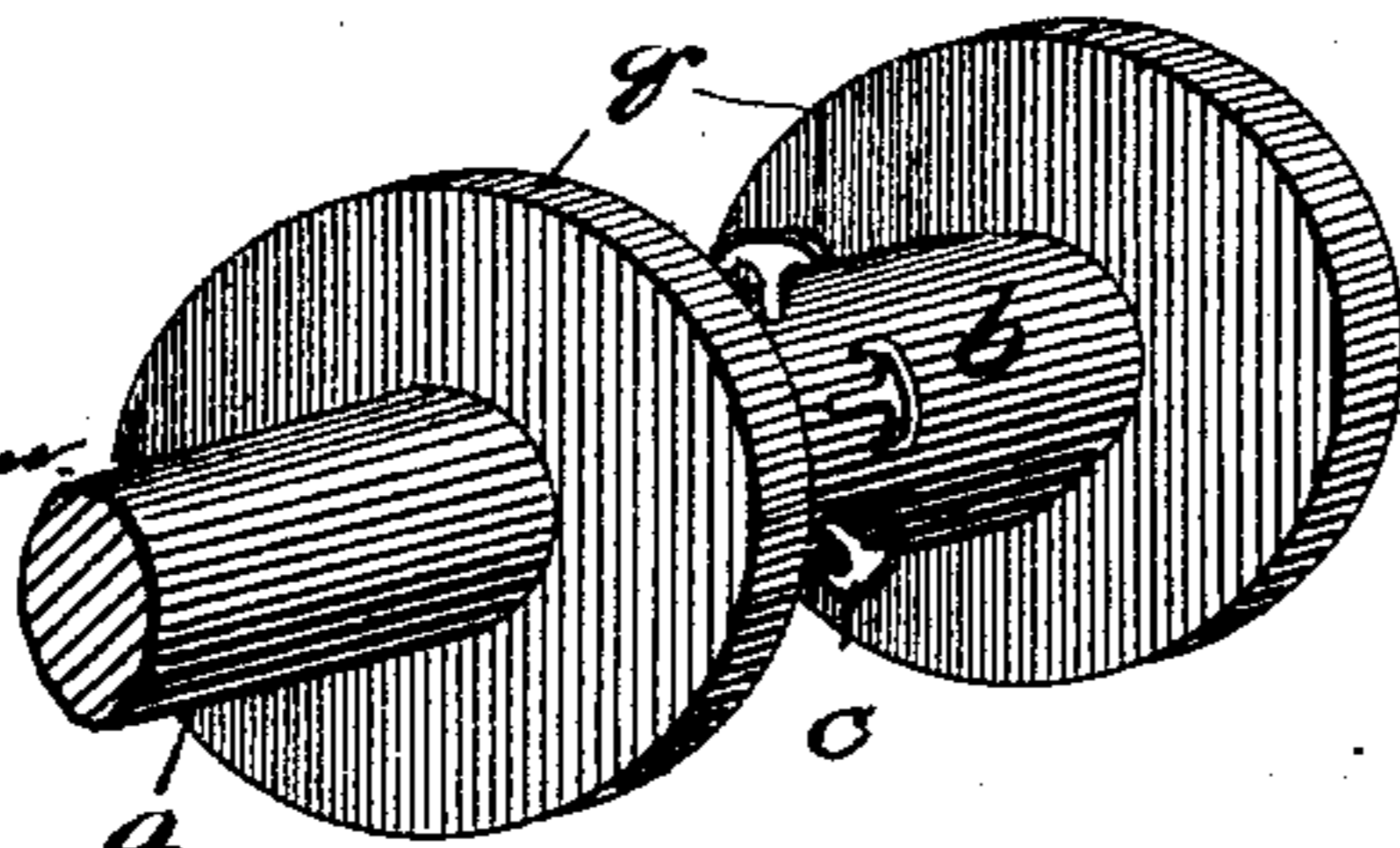


Fig. 6.

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FREDERICK A. PERRY, OF EAST LIVERPOOL, OHIO.

AUTOMATIC CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 608,429, dated August 2, 1898.

Application filed November 10, 1897. Serial No. 658,006. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK A. PERRY, a citizen of the United States of America, residing at East Liverpool, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Automatic Car-Brakes, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in car-brakes, and relates more particularly to that class known as "emergency-brakes," having for their object to suddenly check the speed of the car
15 when the same is beyond the control of the ordinary braking mechanism. The principal features of my invention consist of a shaft which carries upon its ends the brake-shoes and is supported from the car-body by a novel
20 mechanism which when released allows the brake-shoes to fall into engagement with the rail. The descending of this shaft draws a clevis or hook into engagement with T-shaped catches which are secured in a collar rigidly
25 mounted to the car-axle, and through this means drawing the brake-shoes firmly under the wheels, so as to be engaged by the same, all of which will be hereinafter more particularly described, and specifically pointed out
30 in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like letters of reference indicate similar parts
35 throughout the several views, in which—

Figure 1 is a longitudinal sectional view of a portion of the car, showing my improved brake in position thereon. Fig. 2 is a cross-sectional view of the car with the brake in
40 position. Fig. 3 is a top plan view of the brake in position on the car. Fig. 4 is a perspective view of the double brake-shoe. Fig. 5 is a perspective view of a portion of the chain and its supporting-casing. Fig. 6 is a
45 perspective view of a portion of the car-axle with the guide-collars mounted thereon.

Referring now to the drawings by reference-letters, *a* represents the car-axle, which has centrally affixed thereto a sleeve *b*, which
50 carries a series of T-shaped hooks *c*, arranged entirely around the same, the purpose of

which will be hereinafter more fully described.

Arranged underneath the car-body *d* and operating in keepers *e*, supported by said
55 body, is a bar *f*, having affixed thereto arms *g*, extending at an angle and operating in keepers *h*, which are also attached to the underneath side of the car-body. On the upper face of these arms *g* are secured keepers *k*,
60 which are adapted to receive the hook ends *l* of the hangers *m*, which support the shaft *n*, carrying the brake-shoes. These brake-shoes are formed in two sections *a'* and *a''*, the latter of which is provided on its inclined face
65 with a groove *a'''*, which is adapted to receive the flange of the car-wheel, the said shoe *a''* being loosely mounted on the shaft *n*. The shoe *a'* is supported on the screw-threaded end *n'* of the shaft and is provided with a
70 projecting tongue *a''''*, adapted to receive the car-wheel and permit the same to ride forward onto the shoe. The shaft *n* has rigidly mounted thereon two collars *o* and has attached thereto between these collars a double
75 chain *p*, which has attached to its free end a clevis or hook *q*, which is adapted to engage the T-shaped hook *c* when brought into engagement therewith. This chain *p* passes
80 through the sleeve or casing *r*, carrying a wire *r'*, to which is attached a spring *s*, having a cord *t* attached thereto, which passes over a pulley *t'*, supported from the car-body, and having its other end divided into branches
85 connecting both to the shaft between the collars and to collars *n''*, mounted on the shaft outside of the collars *o*. The chain winds upon the sleeve *b* between two collars or disks
90 *b'*, rigidly affixed either on the axle or on the said collar *b* at the ends thereof. As the chain *p* is wound on the sleeve *b* it turns the shaft *n*, and the screw-threads formed on the end *n* cause the shoes *a'* to move toward the shoes *a''*. The brake-shoes *a'* and *a''* are further supported by means of the clamps *b'* and
95 *b''*, attached to an arm *b'''* and having a pin *b''''*, which passes through both shoes, the said arm *b'''* being pivotally connected to a lever *c'*, which is in turn pivotally connected to the lever *c''*, the upper end of which is secured
100 by a hinge *c'''* to the car-body. The bar *f* is adapted to be fastened at one end of the car

by any suitable mechanism which can be readily released, and at the other end of the bar is attached a stiff coil-spring f' , the other end of which is secured to a stop f^2 , attached to the car-body.

The operation is as follows: Assuming that it is desired to employ the emergency-brake, the operator releases the mechanism which holds the bar f , allowing the spring f' , which in the normal position of the brake has been extended, to draw the bar f toward itself and moving the arms g in the same direction, and thus withdrawing the supports for the hangers m , which support the shaft n and the brake-shoes. This allows the brake-shoes to fall into engagement with the rail, and through the shaft n , descending therewith, also pulls the cord l , so as to cause the same to lift upwardly on the casing r and draw the hook or clevis q into engagement with the T-shaped hooks c , one of which it engages, and as the axle continues to revolve the chain p is unwound from the axle n and wound upon the sleeve b , that is mounted on the axle a . As these brake-shoes descend they also cause the pivoted levers c' and c^2 to move to the inclined position that is shown in dotted lines in Fig. 1, thus holding down the rear of the brake-shoe and retaining the brake, so as to permit the car to ride upward onto the same. As the shaft n is turned by the chain unwinding from the same it draws the outer shoe a' toward the car-wheel and causes the same to bind firmly against the head of the rail, also producing a uniform wear of the shoe a' against the entire face of the tread of the car-wheel. This gripping of the rail, together with the insertion of the projecting tongue a^4 under the car-wheel, so as to permit the same to ride up onto the brake-shoe, will serve to instantly check the speed of the car and bring the same almost to a sudden stop.

It will of course be understood that this brake is to be used only when the car is beyond the control of the ordinary braking mechanism employed therefor, and is adapted to be attached to the car in a manner so as to not in any wise interfere with the same.

When the emergency-brake has been used, it will be necessary to move the car backward, so as to permit the elevating of the shoes and the unwinding of the chain from the shaft a and the shaft n and for engaging the hangers in their keepers on the supports g , as heretofore described.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

1. An emergency-brake, comprising a shaft supported from the car-body, a movable brake-shoe, and a brake-shoe loosely mounted upon said shaft, and means for drawing the brake-shoes into engagement with the wheels when the same are lowered to the rails, substantially as shown and described.

2. In an emergency-brake, a shaft supported from the car-body, brake-shoes mounted on said shaft, a chain attached centrally to the shaft, and a cord connected to said chain and shaft, in combination with the car-axle having a series of hooks mounted thereon to engage said chain and wind the same on the car-axle when the brake-shoes are lowered into engagement with the rails, substantially as shown and described.

3. In combination with a car-axle having a sleeve mounted thereon, which carries a series of hooks, a shaft carrying near each end a movable brake-shoe, and a brake-shoe loosely mounted thereon, means for supporting said shaft, a chain attached thereto, said chain carrying a clevis, means for drawing the same into contact with the hooks on the car-axle when the shaft is lowered, and an operating-bar to release the brake-shoes and permit the same to fall into engagement with the track, substantially as shown and described.

4. An emergency-brake, comprising a shaft having a movable shoe and a shoe loosely mounted thereon near each end, supporting means for suspending said shaft and shoes from the car-body, means for releasing said support to permit the shoes to engage the rails, and means whereby the movable shoes are drawn toward the shoe loosely mounted on the shaft when in engagement with the rails, substantially as shown and described.

5. In an emergency-brake, a shaft supported from the car-body, a movable shoe and a shoe loosely mounted on said shaft near each end; a chain secured to said shaft and carrying a clevis, hooks secured to the car-axle, means for drawing said chain into contact with the hooks, connections between the brake-shoes and the car-body, screw-threads formed on the ends of the shaft whereby the movable shoe is drawn toward the shoe loosely mounted on said shaft, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK A. PERRY.

Witnesses:

A. M. WILSON,

THOS. M. BOYD, Jr.