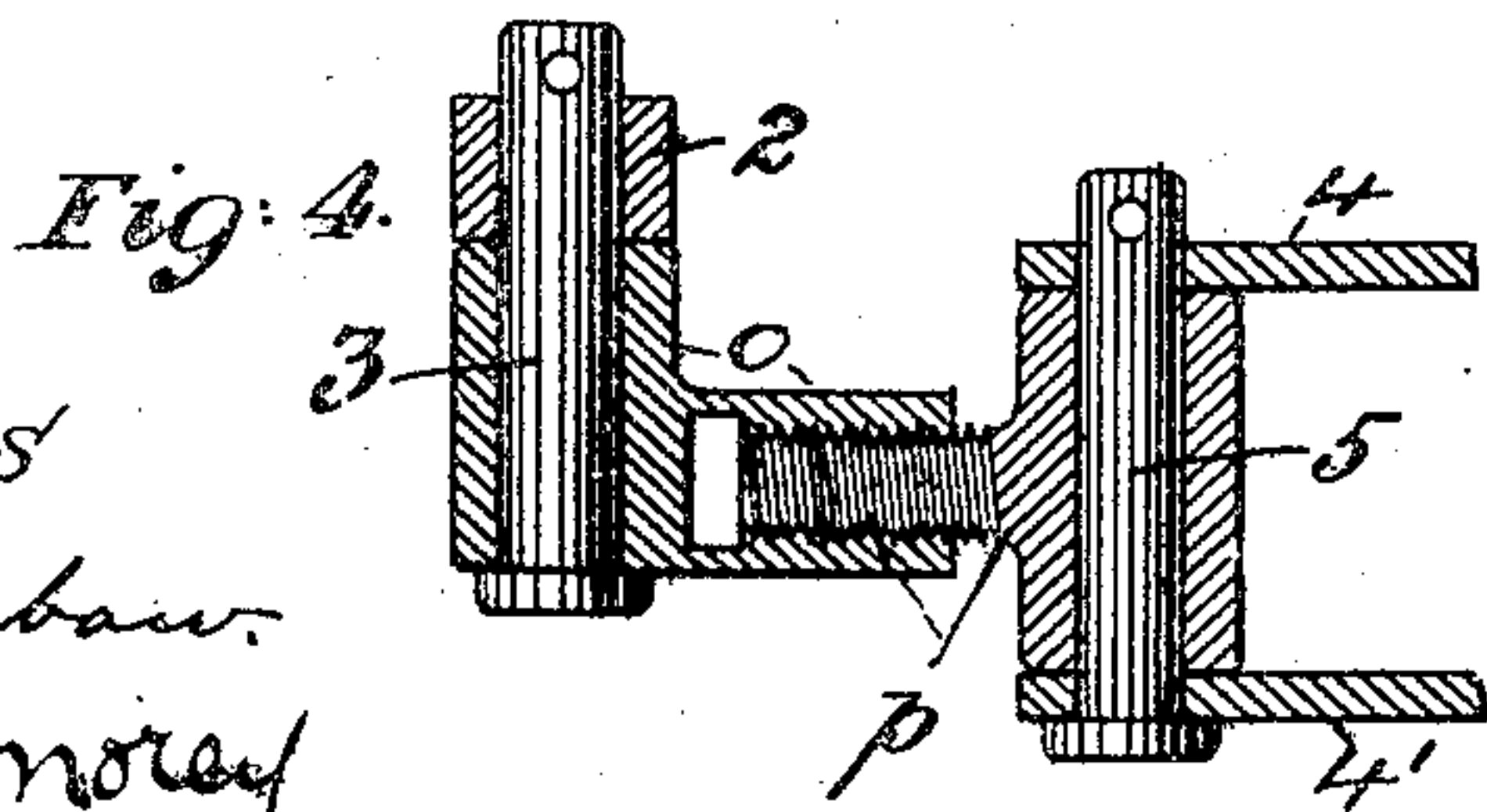
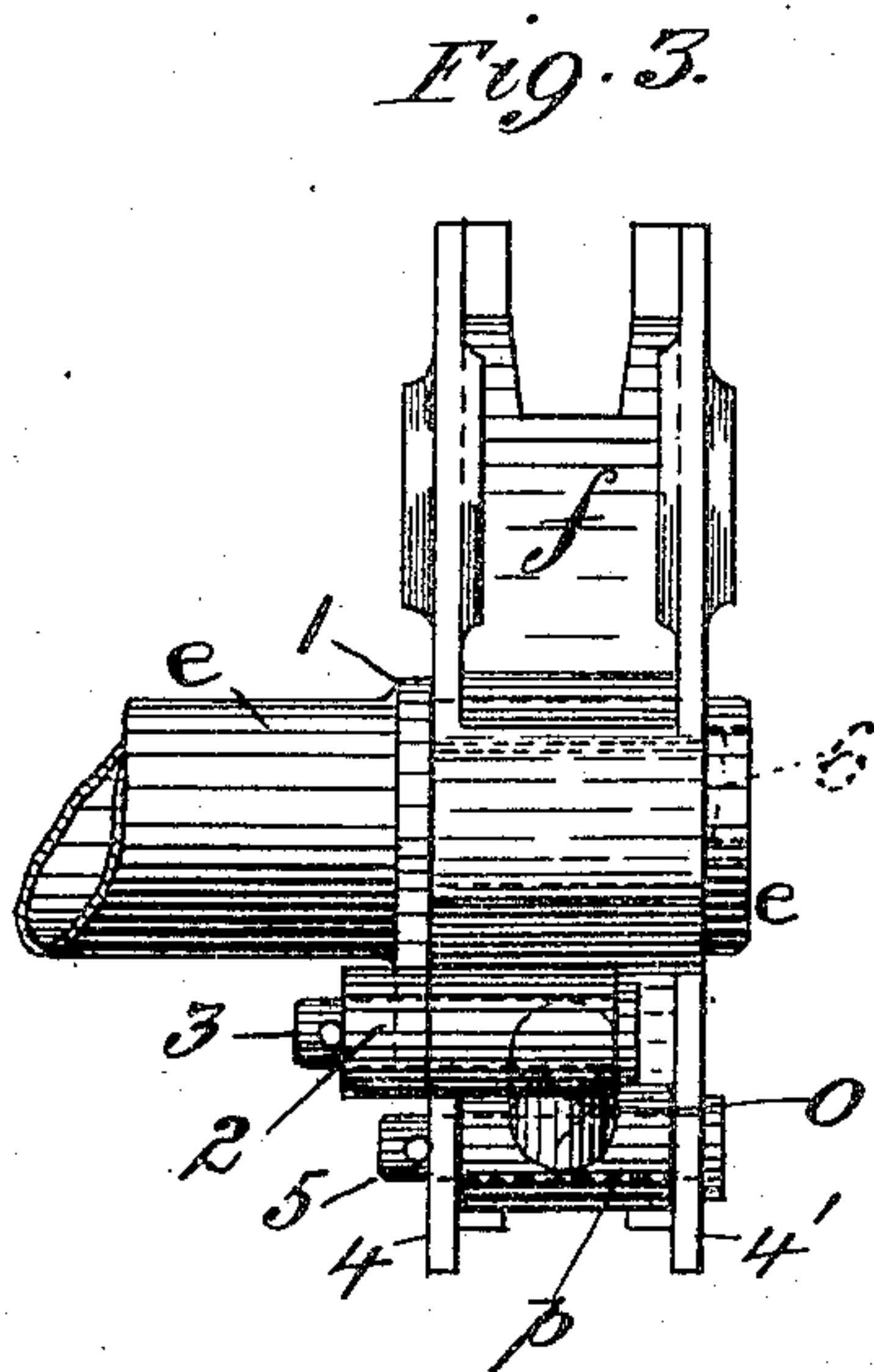
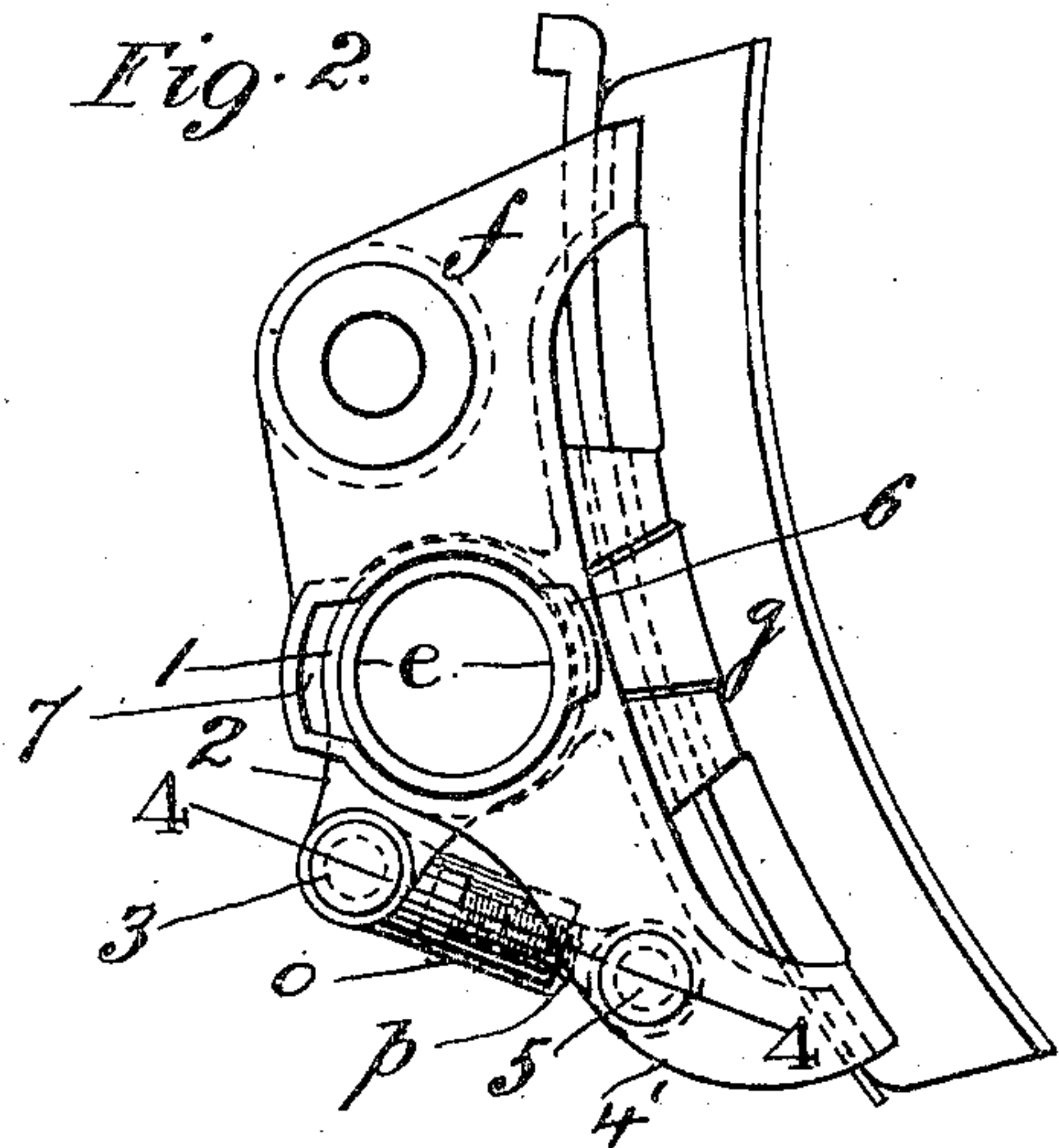
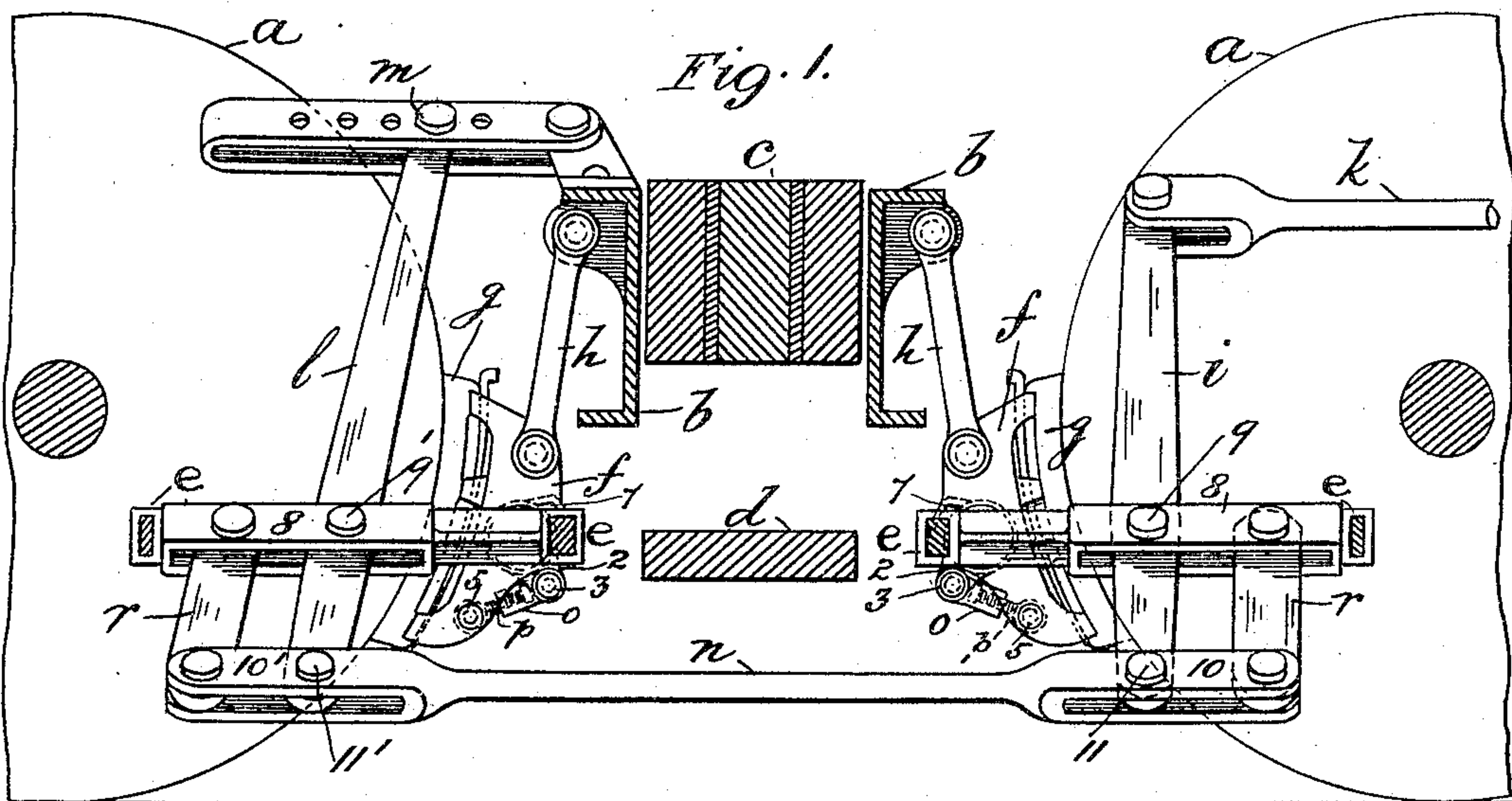


No. 789,879.

PATENTED MAY 16, 1905.

E. POSSON.  
BRAKE GEAR FOR RAILROAD CARS.  
APPLICATION FILED JAN. 7, 1905.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

EDWARD POSSON, OF AUSTIN, ILLINOIS.

## BRAKE-GEAR FOR RAILROAD-CARS.

SPECIFICATION forming part of Letters Patent No. 789,879, dated May 16, 1905.

Application filed January 7, 1905. Serial No. 240,055.

*To all whom it may concern:*

Be it known that I, EDWARD POSSON, a citizen of the United States, residing at Austin, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Brake-Gear for Railroad-Cars, of which the following is a specification.

My invention relates to the brake-gear of a railroad-car, and has for its object to insure a positive adjustment and uniform bearing of the brake-shoes on the wheels and to prevent the canting of the brake-beams and consequent bearing and frictional wear of the shoes at their upper part against the wheels produced by the overhanging weight of the brake-beams and their appendages when the brakes are released.

The invention consists in features of novelty, as hereinafter described and claimed, reference being had to the accompanying drawings, forming part of this specification, whereon—

Figure 1 is a longitudinal vertical section through so much of a four-wheel car-truck as is necessary for illustrating my invention and through the middle portion of the brake-beams thereof adjacent to their struts, showing my improved brake-gear in side elevation; Fig. 2, a side view, to enlarged scale, of one of the brake-heads with its shoe, seen to the right in Fig. 1, showing its attachment to the end of the corresponding brake-beam; Fig. 3, a rear view thereof, omitting the shoe; and Fig. 4 a longitudinal section, to enlarged scale, through the attachment of the brake beam and head on line 4 4' in Fig. 2.

Like letters and numerals of reference denote like parts in all the figures.

*a* represents two adjacent wheels, (broken away,) *b* the transoms, *c* the bolster, and *d* the spring-plank, of an ordinary four-wheel car-truck equipped with the air-brake gear known as the "Westinghouse," "New York," or analogous system, and comprising in the present case the trussed brake-beams *e*, with their brake-heads *f*, shoes *g*, and hangers *h*, the truck live-lever *i*, with the upper brake-lever connecting-rod *k* to the brake-cylinder, (not shown,) the truck dead-lever *l*, with the dead-lever fulcrum *m*, and the lower-lever

connecting-rod *n*, all of which parts, except as otherwise hereinafter specified, being similar in general construction and arrangement to the ordinary brake-gear of this class.

In carrying out my invention each brake-beam *e* is formed at a suitable distance from each end around the usual circular bearing thereat for the brake-head *f* with a collar 1, which forms a shoulder to the brake-head *f* at its inner side, and from the beam *e*, preferably at the collar 1, projects a fixed radial arm 2. To the face of the arm 2, at its outer free end, is hinged by a pin 3 one end or eye of a socket *o*, which is screw-threaded longitudinally around the inside for a suitable distance from its open free end, and between the inner and outer sides or flanges 4 4' of the brake-head *f* at its lower part is hinged by a pin 5 one end or eye of a bolt *p*, which is screw-threaded for a suitable distance from its free end, corresponding to the threaded socket *o*, with which it is engaged in the assembled position of the parts, as shown.

The end of the beam *e* where it projects beyond the outside of the brake-head *f* is formed on its periphery with a radially-projecting lug 6, which in the normal position of the beam *e* overlaps the outside face of the brake-head *f* at the front portion thereof adjacent to the shoe *g*, and thereby holds the brake-head *f* in position laterally on the end portion of the beam *e* between the collar 1 and the lug 6. Transversely through the sides or flanges 4 4' of the brake-head *f* at their rear edges is formed an opening 7, which is adapted to register with the lug 6, as hereinafter particularly referred to.

In operation for placing the brake-head *f* in position on the brake-beam *e* its opening 7 is brought so as to register with the lug 6, when the brake-head *f* is slid past the latter onto the end portion of the beam *e* and is then partly turned on its bearing into the normal position for engagement by the shoe *g* with the wheel *a*, the opening 7 being at the same time moved away from the lug 6.

For adjusting the brake-head *f* to its proper position relatively to the brake-beam *e* and wheel *a* when the shoe *g* becomes irregularly worn, or, in other words, for insuring in



such case the uniform bearing of the face of the shoe *g* against the wheel *a*, the screw-threaded bolt *p* is disconnected from the brake-head *f* by removing its hinge-pin 5 and the bolt *p*, with the socket *o* then lowered about the hinge-pin 3 of the latter away from the brake-head *f*, when by turning the bolt *p* in either direction the distance between the hinge centers of the socket *o* and bolt *p* can be increased or diminished according to the degree of adjustment required on the face of the shoe *g* relatively to the wheel *a*, which being effected the bolt *p* is again connected by its pin 5 to the brake-head *f*, or, if preferred, the adjustment may be effected by disconnecting the socket *o* in lieu of the bolt *p*, the advantage of this device being that the parts when adjusted and assembled are positively locked without the use of springs and ratchets, which are liable to break or shift by any sudden jar or vibration when running at high speed or sudden stoppage.

For preventing the canting of the brake-beams *e* with their heads *f* and the consequent throwing of the faces of the shoes *g* at their upper parts against the wheels *a* when the brakes are released a link *r* is coupled at one end to the strut 8 of each brake-beam *e* at a suitable distance from and in horizontal alinement with the connections 9 9' therewith of the truck live-lever *i* and the truck dead-lever *l*, respectively, and at its other end to the extended jaws 10 10' of the lower-lever connecting-rod *n* at an equal distance from and in horizontal alinement with the connections 11 11' therewith of the lower end of the said levers—that is to say, the links *r* are parallel to the levers *i* and *l*, respectively, whereby on the release of the brakes the brake-beams *e* are moved backward horizontally or in parallel movement to the lower-

lever connecting-rod *n* and the faces of the shoes *g* thereby held at an uniform distance or clearance throughout their entire length from the wheels *a* without the use of brake-beam adjusting-hangers and their carriers.

I am aware that various devices have been used for adjusting the brake-heads relatively to the brake-beams and for suspending the latter at their overhanging parts, and I make no claim thereto broadly; but

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a car brake-gear of the class described, the combination with a brake-beam having a radially-projecting arm, of a brake-head perforated for the brake-beam and mounted on the circular part thereof adjacent to the said arm, a shoe fixed to the brake-head, a socket removably hinged to the said arm and screw-threaded internally, a screw-threaded bolt hinged to the brake-head and adapted to engage in the said socket, and means for holding the brake-head laterally on the brake-beam, substantially as shown and for the purpose set forth.

2. In a car brake-gear of the class described, the combination with a truck-lever coupled between its ends to a brake-beam, and at its lower end to the lower-lever connecting-rod, of a link parallel to the said lever and coupled to the said beam and rod at points equal in distance apart to that between the connections of the said lever thereto, substantially as shown and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD POSSON.

Witnesses:

HOWARD W. ADAMS,  
R. HOWARD DODSON.