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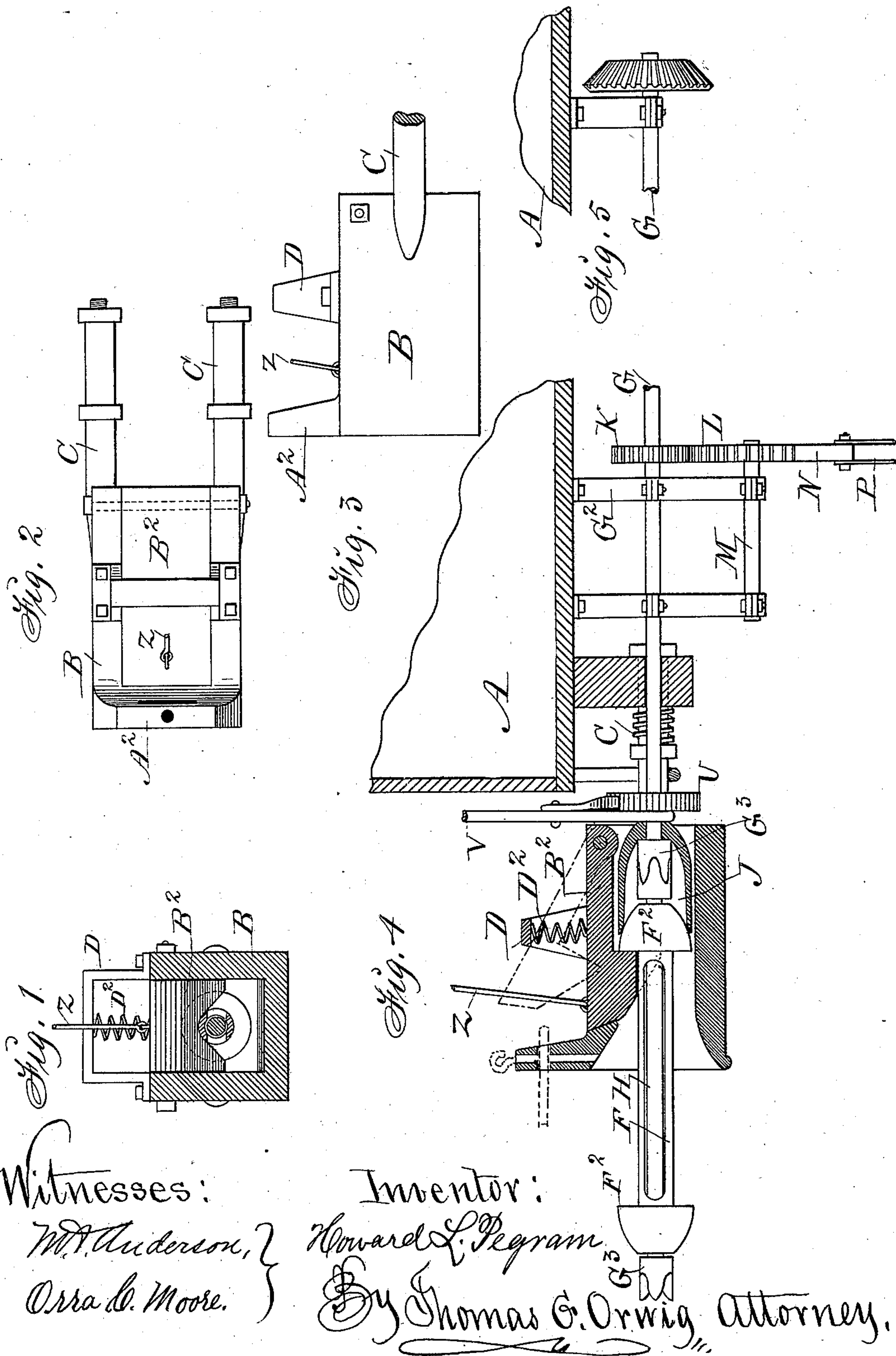
2 Sheets—Sheet 1.

H. L. PEGRAM.

## CAR BRAKE AND COUPLING.

No. 308,695.

Patented Dec. 2, 1884.



N. PETERS, Photo-Lithographer, Washington, D. C.

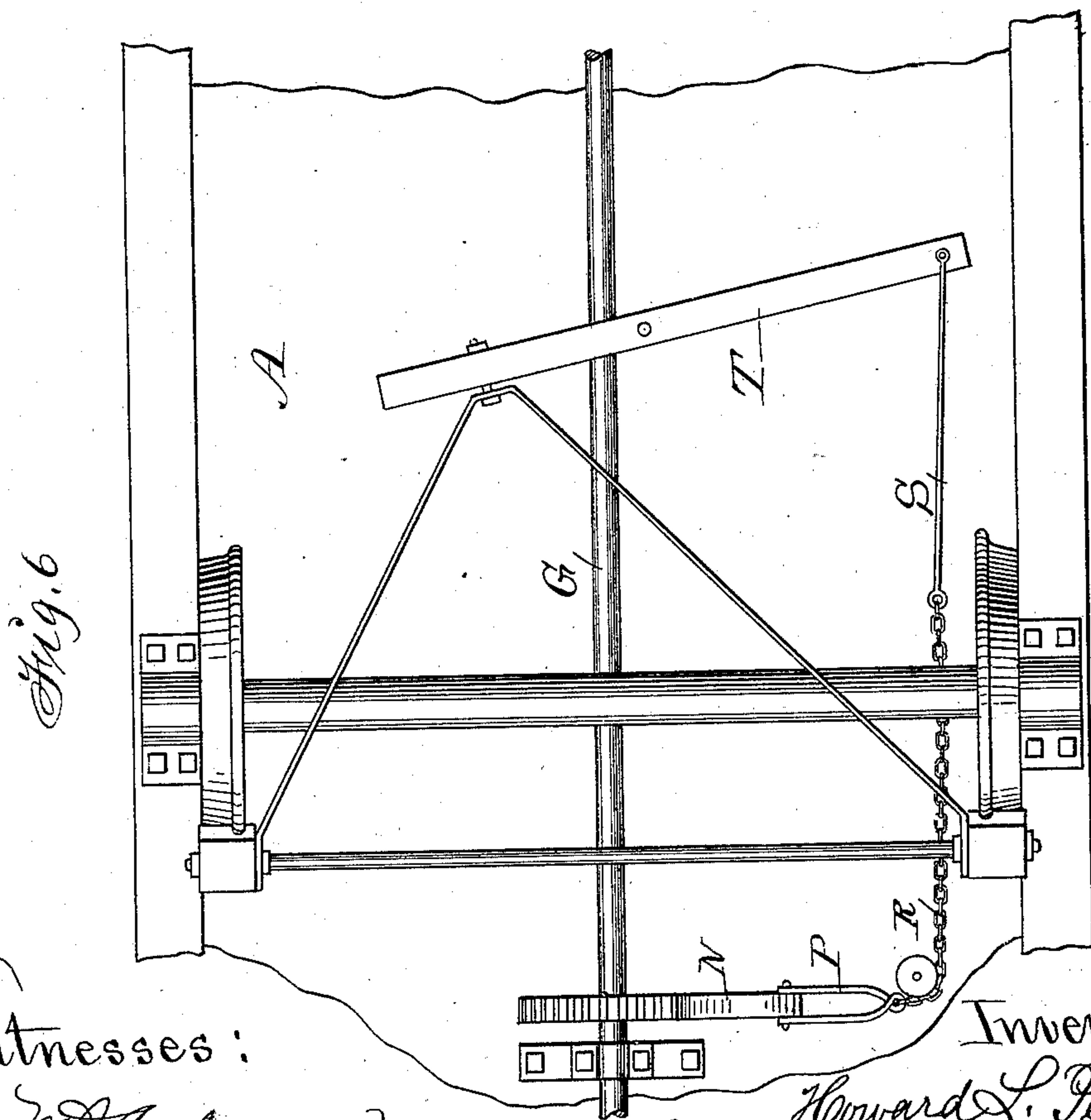
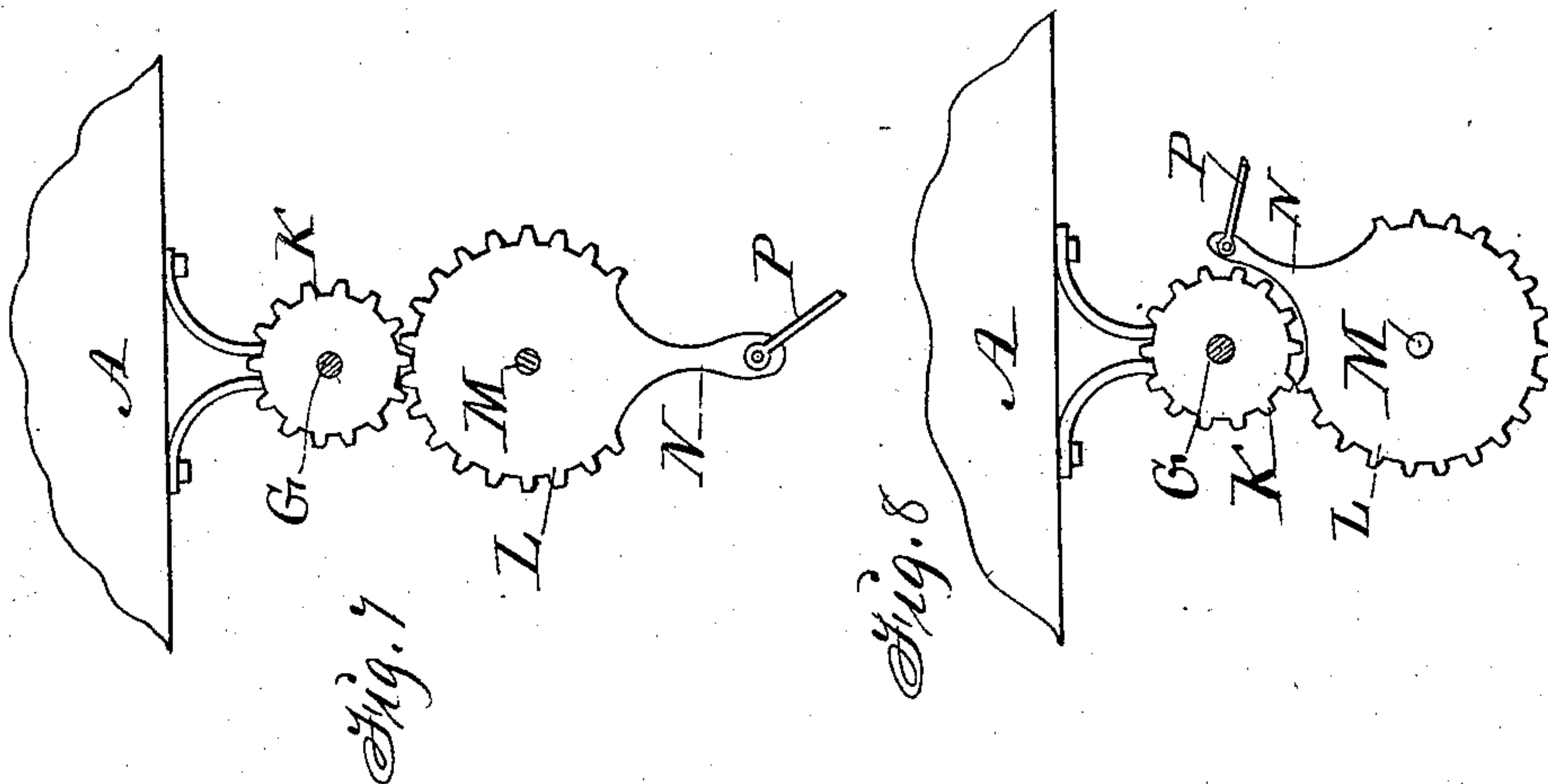
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CAR BRAKE AND COUPLING.

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Witnesses:

W. A. Anderson.  
Orra C. Moore.

Inventor:

Howard L. Pegram,  
By Thomas G. Orwig, Attorney.



# UNITED STATES PATENT OFFICE.

HOWARD L. PEGRAM, OF SUMMERSET, IOWA.

## CAR BRAKE AND COUPLING.

SPECIFICATION forming part of Letters Patent No. 308,695, dated December 2, 1884.

Application filed May 5, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, HOWARD L. PEGRAM, of Summerset, in the county of Warren and State of Iowa, have invented a Car-Coupling and Railway-Brake, of which the following is a specification.

My invention consists in the construction and combination of a draw-head, a tubular coupling-link, shaft-sections having clutches on their ends, a clutch-guide, and brake-operating mechanism, as hereinafter fully set forth, in such a manner that the coupling of cars and coupling of a shaft for operating the brakes will be automatically accomplished at the same instant, so that all the brakes on all the cars in a train can be simultaneously operated by means of power applied from the engine or by a person on the engine, and also independently operated upon any car when detached from the train.

Figure 1 of my accompanying drawings is a transverse section, Fig. 2 a top view, and Fig. 3 a side view, of my draw-head. Fig. 4 is a longitudinal vertical section of my draw-head, coupling-link, shaft and clutch, clutch-guiding device, and brake-operating mechanism combined with a section of a car. Fig. 5 represents the end of the continuous shaft for operating the brakes on a train of cars. Fig. 6 is a section of an inverted car, showing the brake-shaft combined with the brake-lever. Fig. 7 shows the position of the gearing when the brake force is relaxed. Fig. 8 shows the position of the same gearing when the brake force is applied.

Jointly considered, these figures clearly illustrate the construction, application, and operation of my complete invention.

A represents a car.

B is my draw-head. It has a flaring mouth, and a large cavity that is open at the top and extends to the rear end.

C C are draw-bars formed on or fixed to the opposite sides and rear end of the head. They are attached to the car in a common way, and have collars and springs applied in the manner car-buffers are usually formed.

A<sup>2</sup> is an upward extension on the front end of the draw-head adapted to receive a common link and pin, as indicated by dotted lines in Fig. 4.

B<sup>2</sup> is a hook hinged in the rear end of the

cavity of the draw-head, and extends forward to the extension A<sup>2</sup>.

D is a frame fixed on top of the draw-head in such a manner that the hook B<sup>2</sup> can move vertically within the frame.

D' is a spring fixed to the frame in such a manner that it will, in its normal condition, press the hook down into the cavity.

F is a tubular coupling-link that has conical heads F<sup>2</sup>, adapted to enter the mouth of the draw-head to engage and lift the hook B<sup>2</sup>, which hook will descend and engage the head, as clearly shown in Fig. 4, and as required to couple two cars together.

G is a shaft suspended under each car by means of hangers or shaft-bearers G<sup>2</sup>, that are fixed to the bottom of the car by means of screw-bolts, or in any suitable way.

G<sup>3</sup> represents a clutch device on the end of the shaft.

H is a shaft-section that extends through the tubular link F, and that has counterpart clutch devices to engage the clutches G<sup>3</sup> on the ends of shafts G.

J is a cup-shaped clutch-guide, fixed to the end of the shaft G, to inclose the clutch G<sup>3</sup> in such a manner that when the head F<sup>2</sup> of the coupling-link enters the draw-head it will also enter the open end of the guide J, to be thereby brought into a concentric position with the shaft G as required to guide the clutch on the end of the shaft-section H into contact with the clutch G<sup>3</sup> on the end of the shaft G, to thereby produce a continuous rotating shaft under two or more cars that may be coupled together by means of my invention.

K is a gear-wheel fixed to the shaft G.

L is a toothed sector fixed to a shaft, M, that has its bearings in the hangers G<sup>2</sup>. This sector engages the wheel K, and has an arm, N, extending downward, as shown in Fig. 7.

P is a clevis pivoted to the end of the arm N.

R is a chain fixed to the end of the clevis to extend over a directing-pulley to be connected with the end of a rod, S, that is attached to the long arm of a brake-lever, T, as clearly shown in Fig. 6. When the shaft G is rotated to the right or left, the gear-wheel K will actuate the sector L and its arm N as required to transmit power to the brake-lever T through the chain R and rod S.

Power may be applied from the engine by



means of gearing connected with a wheel on the end of the continuous shaft G in such a manner that all the brakes in a train of cars will be operated simultaneously.

5 U represents a ratchet-wheel, and V a brake-lever fixed to the shaft G in such a manner that the shaft G can be thereby rotated to apply the brakes by a person on the platform of a car or at the end of the car by simply  
10 pulling the lever to rotate the ratchet-wheel by means of a pawl in a common way.

Z represents a rod connected with the coupling-hook B<sup>2</sup> in such a manner that a person on the car can readily uncouple by simply  
15 applying a lifting force to the rod.

I claim as my invention—

1. The draw-head B, having an opening extending through and a gravitating hook, B<sup>2</sup>, pivoted in the opening, the draw-bars C C, a  
20 rotating rod, G, having a clutch device on its end, a tubular coupling-link, F F<sup>2</sup>, and a shaft-section, H, arranged and combined to operate in the manner set forth, for the purposes specified.

2. The guide J, in combination with the shaft 25 G, having a clutch device, G<sup>3</sup>, for the purposes specified.

3. The shaft G, having a fixed gear-wheel, K, the sector L, having an arm, N, the clevis P, and a chain, in combination with a brake- 30 lever on a car or truck, to operate in the manner set forth, for the purposes specified.

4. A car-coupling and car-brake combined, consisting of a draw-head having a gravitating hook, a tubular coupling-link having tapering heads, a rotating shaft having clutch 35 devices on its ends, a shaft-section having clutch devices on its ends extended through the tubular coupling-link, a gear-wheel fixed to the shaft, a sector having an arm flexibly 40 connected with a brake-lever, substantially as described, to operate in the manner set forth.

HOWARD L. PEGRAM.

Witnesses:

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Z. I. BROWN.