

No. 661,495.

S. E. CLARKSON.
CAR BRAKE.

(Application filed Dec. 1, 1899.)

Patented Nov. 13, 1900.

(No Model.)

2 Sheets—Sheet 1.

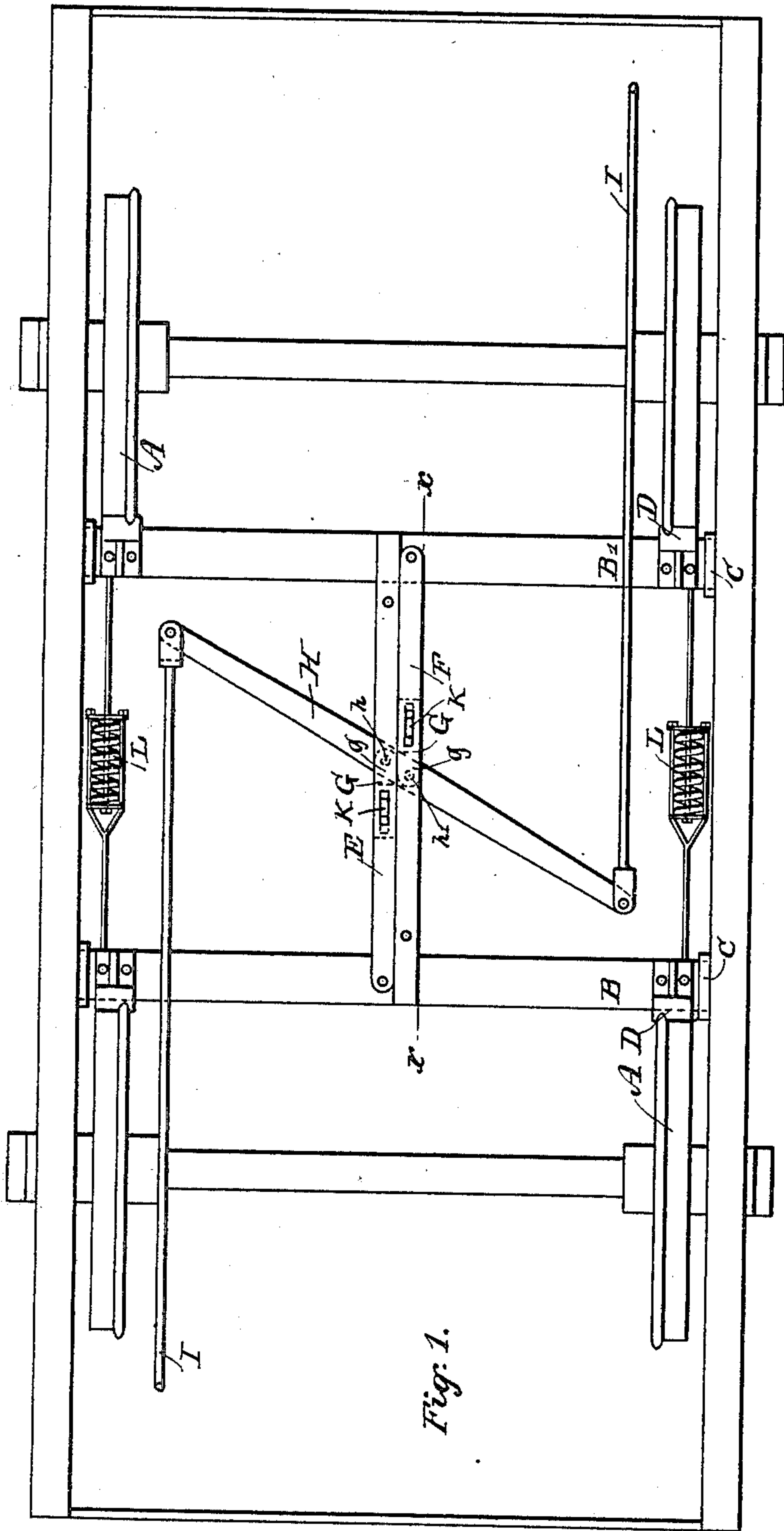


Fig. 1.

WITNESSES:

M. E. Sharpe
Amie M. Mason.

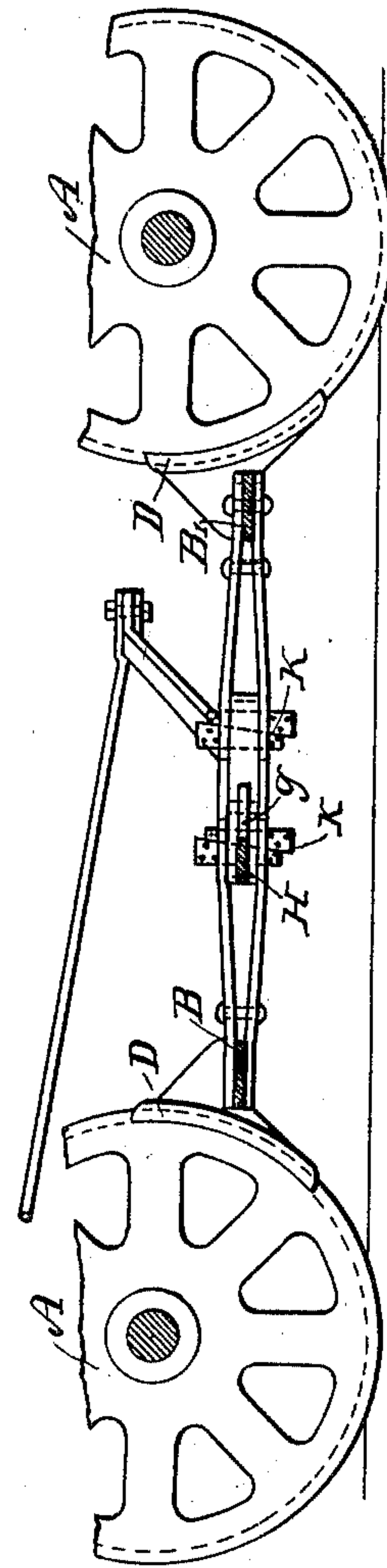


Fig. 2.

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S. E. Clarkson

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No. 661,495.

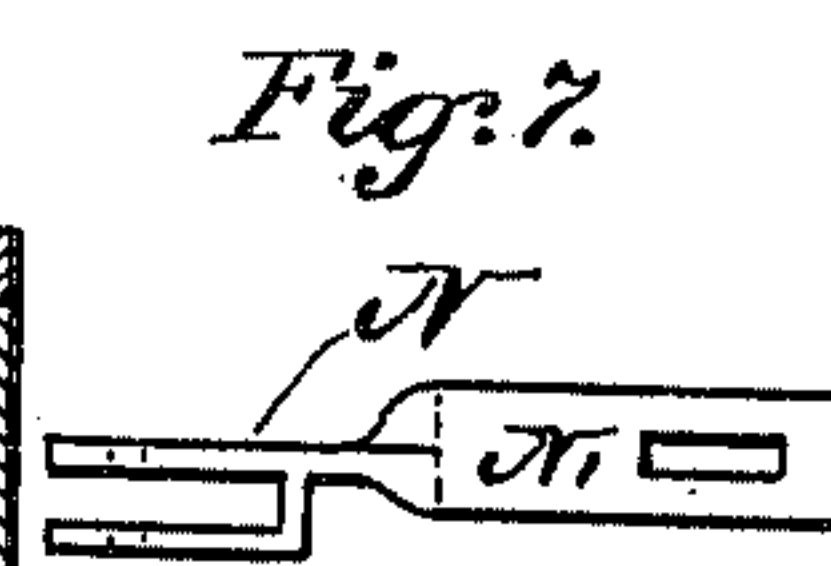
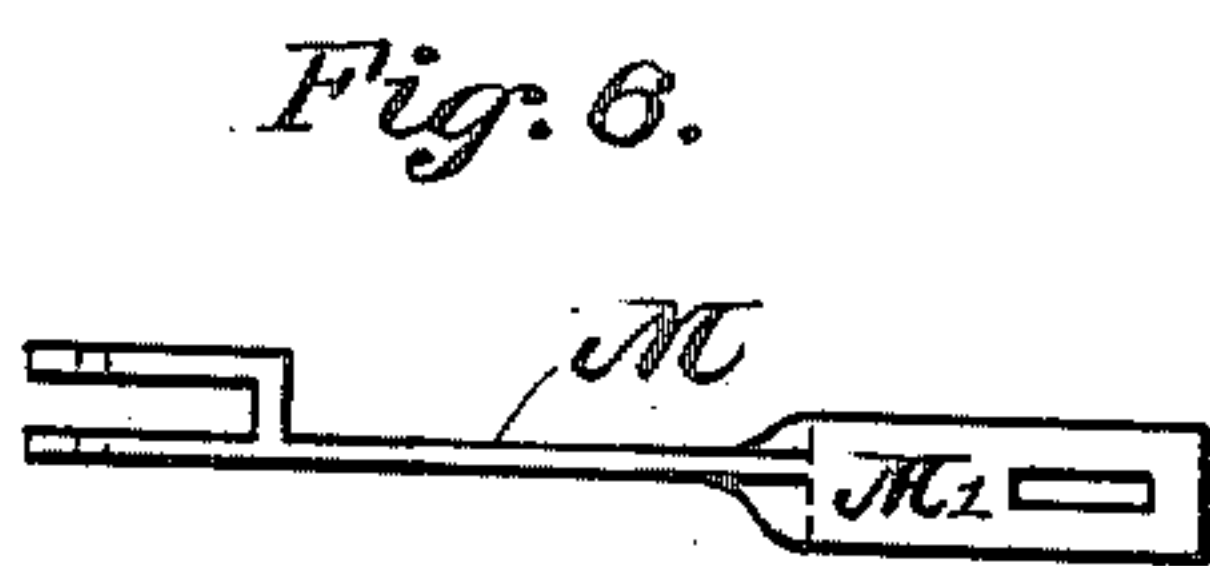
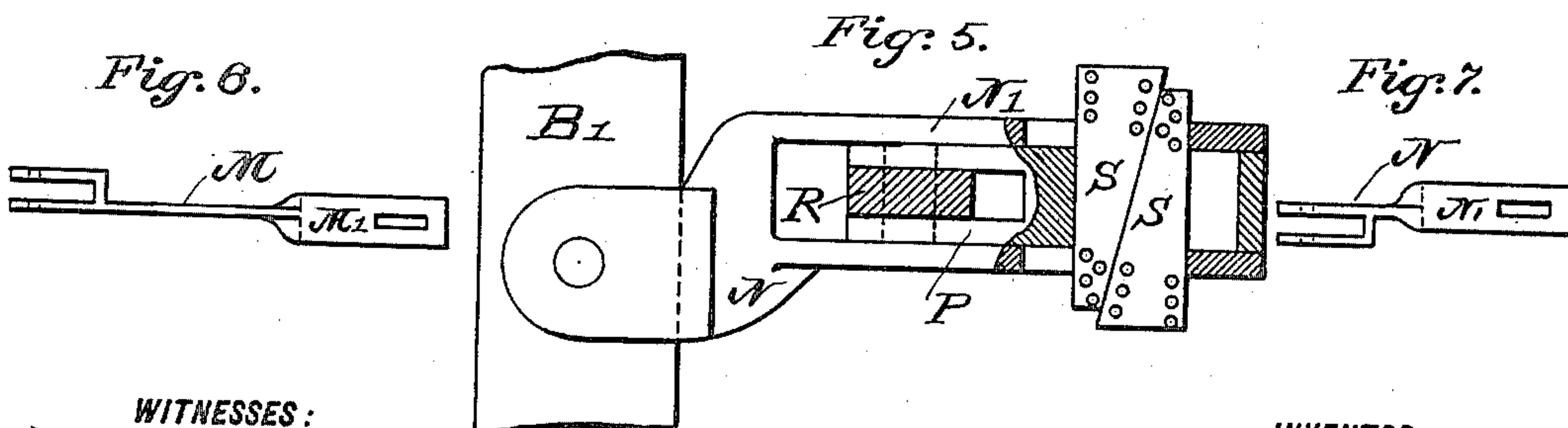
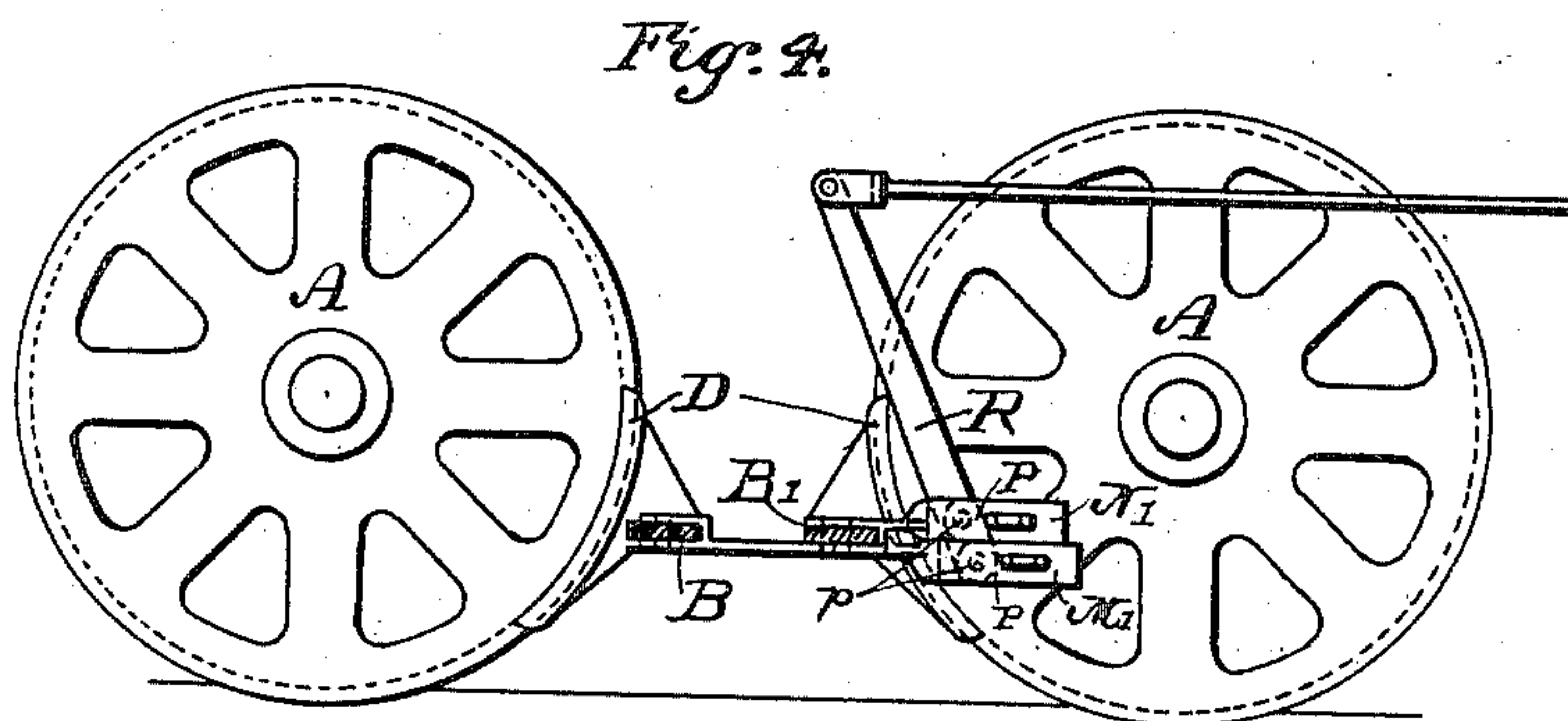
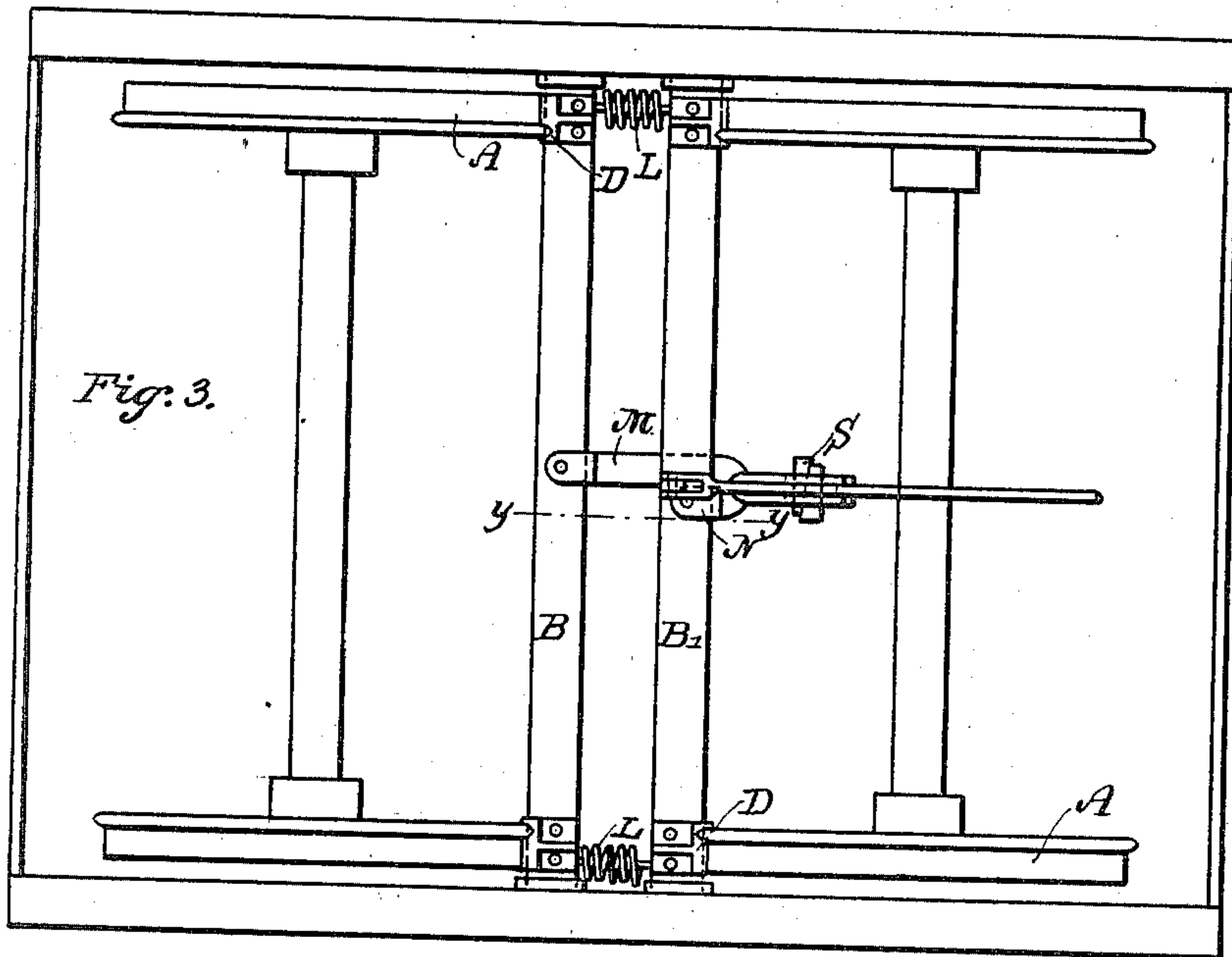
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2 Sheets—Sheet 2.



WITNESSES:

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INVENTOR

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UNITED STATES PATENT OFFICE.

SAMUEL E. CLARKSON, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR TO THE
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CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 661,495, dated November 13, 1900.

Application filed December 1, 1899. Serial No. 738,764. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL E. CLARKSON, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Car-Brakes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention has relation to car-brakes, and is designed to provide a simple and powerful brake mechanism for both single and double trucks in which the number of fulcrum-points and links is reduced to a minimum, thereby also reducing greatly the waste of energy applied and the danger of breakage, as well as the cost of construction.

With this object in view my invention consists in the novel construction, arrangement, and combination of parts, as hereinafter described, and pointed out in the appended claims.

In the accompanying drawings, to which reference is had, Figure 1 is a plan view showing my invention as applied to a single truck. Fig. 2 is a section on the line X X of Fig. 1. Fig. 3 is a plan view; and Fig. 4, a section on the line Y Y of Fig. 3, showing the application to a double truck. Fig. 5 is a detail view showing on a larger scale the means for taking up the wear of the brake-shoes, and Figs. 6 and 7 are detail views of the straps shown in Figs. 3 and 4.

The letter A indicates the truck-wheels, B B' the brake-beams, mounted in any usual or suitable manner in guides C on the truck-frame, and D the brake-shoes, carried by the said beams.

Referring specifically to Figs. 1 and 2, E and F designate two straps or bars composed each of upper and lower members. The strap E is rigidly secured at one end to the brake-beams B and at its other end loosely embraces the beam B'. The strap F is rigidly secured at one end to the beam B' and at its opposite end loosely embraces the beam B, the two straps lying side by side at the center of the truck.

Seated in the central portion of each strap between its upper and lower members is a fulcrum-piece G, having a horizontal slot g

at one end. The two fulcrum-pieces are seated reversely, as indicated in Fig. 1, so that the slots g will partially aline with each other.

H is a floating lever whose central portion passes through the slots g of both pieces G and is fulcrumed in each slot by a pin h or h'. These pins do not extend into the straps, but simply fulcrum the levers in the pieces G. To the upwardly-bent end portions of said lever are connected the oppositely-extending brake-rods I. The pieces G are adjustably secured in the straps by means of oppositely-driven wedges K, which pass through slots in the said pieces and straps.

L represents double-acting release-springs connected between the brake-beams.

It will be readily seen that a pull on either rod I will actuate the lever H to impart opposite thrusts to the straps E and F, and thereby separate the beams and set the shoes against the wheels.

When it becomes necessary to take up the wear of the brake-shoes, the wedges K are driven upon each other to spread the beams.

The application of the invention to a double truck, as shown in Figs. 3, 4, 5, 6, and 7, requires a somewhat different construction and arrangement of parts, owing to the short wheel-base and lack of space, but is precisely the same in character and operation.

A strap M or N is secured to each brake-beam. These straps are formed each with a jaw portion M' or N', and the two jaw portions are placed one above the other. In each jaw portion is placed a fulcrum-piece P, which is similar to the pieces G above described.

R is the operating-lever, placed vertically instead of horizontally, with its lower end portion fulcrumed in the slots of both pieces P on the pins p.

S represents the adjusting-wedges, which are the same as the wedges K, except that they are driven horizontally instead of vertically.

The invention, it will be seen, obviates the use of counter levers and connections, reduces by one-half the number of release-springs usually required, and provides a brake mechanism simple and powerful in its action.

I do not wish to limit myself to the particular construction and arrangement which I

have herein shown and described, as various changes in detail may be made without departing from the spirit and scope of my invention.

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

10 1. In a car-brake, the combination with the brake - beams, of the forked or bifurcated straps secured thereto, the slidable fulcrum-pieces adjustably secured in said straps, and the lever fulcrumed to both the said pieces at adjacent points.

15 2. In a car-brake, the combination with the brake - beams, of the forked or bifurcated straps secured thereto, the fulcrum - pieces seated to slide longitudinally in said straps, the lever fulcrumed to both said pieces at adjacent points, and means for sliding said fulcrum-pieces in said straps to compensate for wear of the brake-shoes.

20 3. In a car-brake, the combination with the brake-beams, of a strap connected to each of the said beams, a slotted fulcrum-piece arranged to slide longitudinally in each of said straps, a lever engaging the slots of both said

fulcrum-pieces and fulcrumed therein, and wedge devices for adjusting said pieces to compensate for wear of the brake-shoes.

4. In a car-brake, the combination with the 30 brake-beams, of a strap secured to each of said beams, a slotted fulcrum-piece carried by each strap, a lever engaging the slots of the said pieces and pivoted therein, and the oppositely-driven adjusting-wedges engaging the 35 said fulcrum-pieces.

5. In a car-brake, the combination with the inside-hung brake-beams, and the straps connected thereto and extending side by side, of the fulcrum-pieces seated to move longitudi- 40 nally in the said straps, the lever extending through said fulcrum - pieces and pivoted therein, means for adjusting said pieces and oppositely-extending brake-rods connected to the arms of the said lever, substantially as 45 described.

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

SAMUEL E. CLARKSON.

Witnesses:

MYRTLE E. SHARPE,
H. W. SMITH.