

No. 771,522.

W. S. ADAMS.
CAR BRAKE.

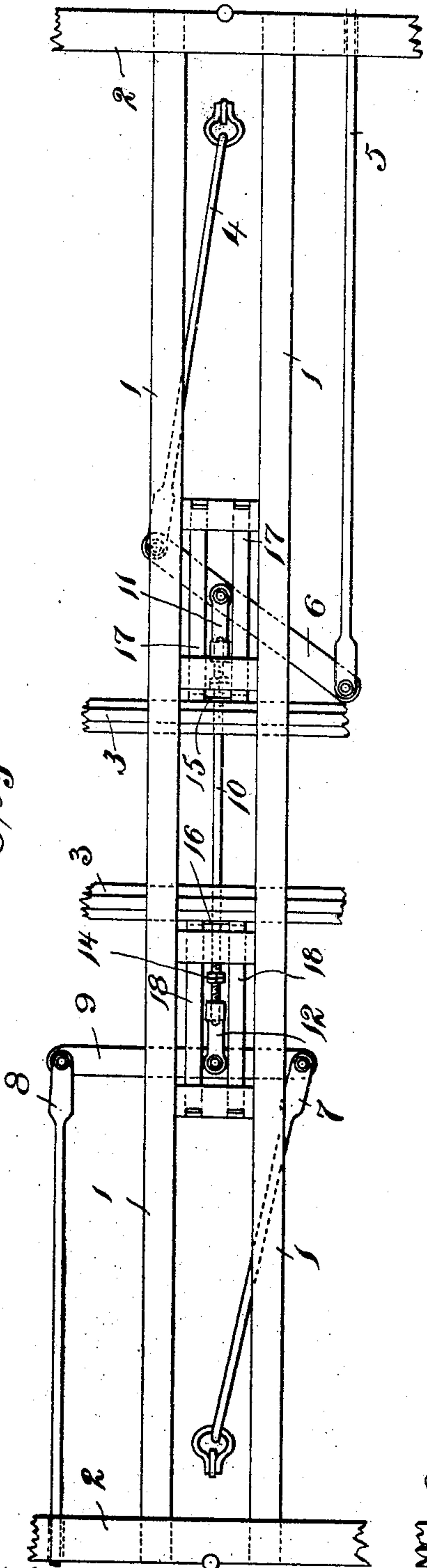
PATENTED OCT. 4, 1904.

APPLICATION FILED NOV. 24, 1903.

NO MODEL.

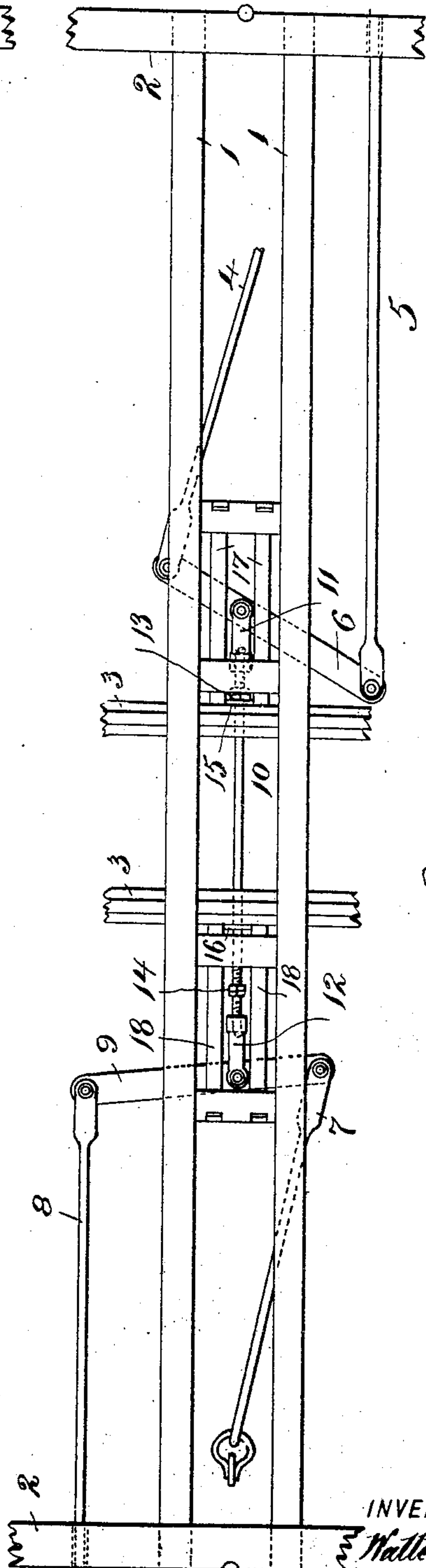
2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:
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Fig. 2.



INVENTOR

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2 SHEETS—SHEET 2.

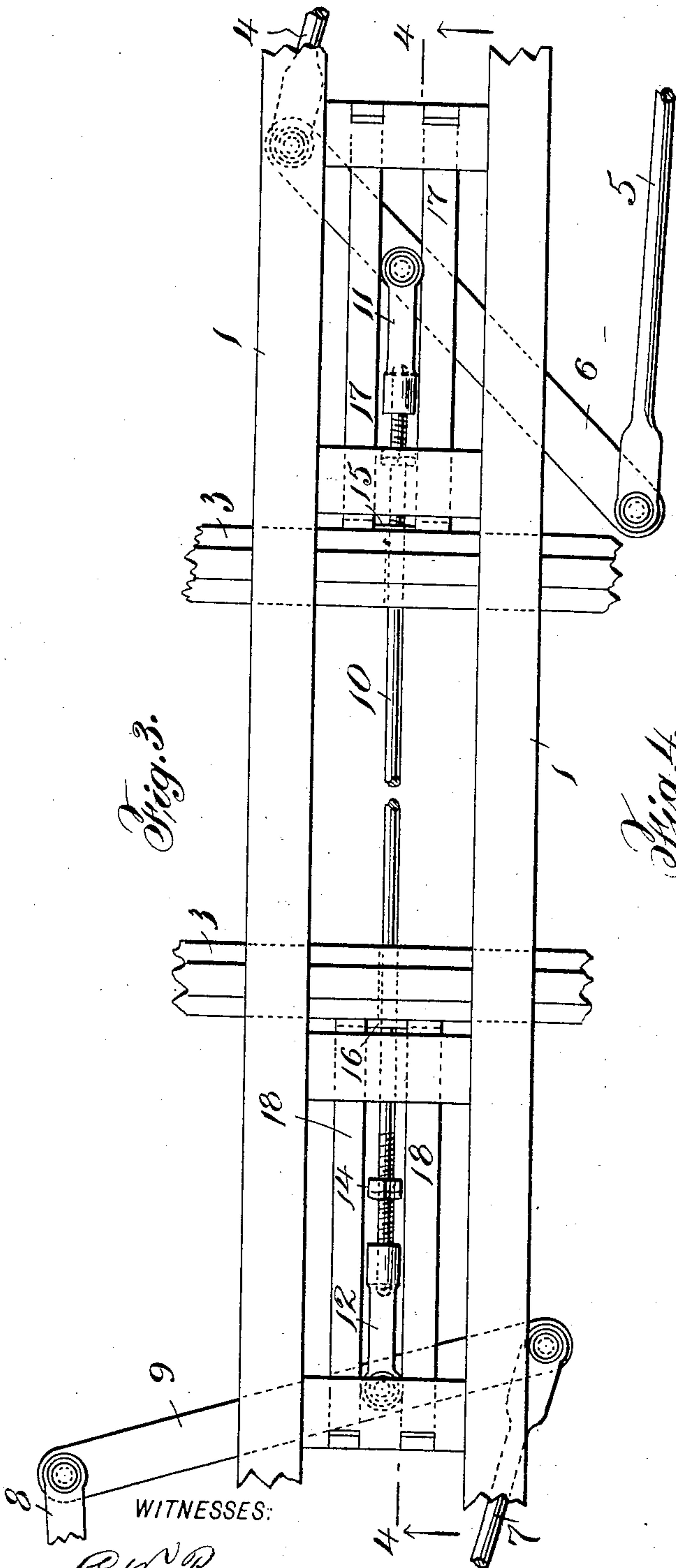


Fig. 3.

Fig. 4.

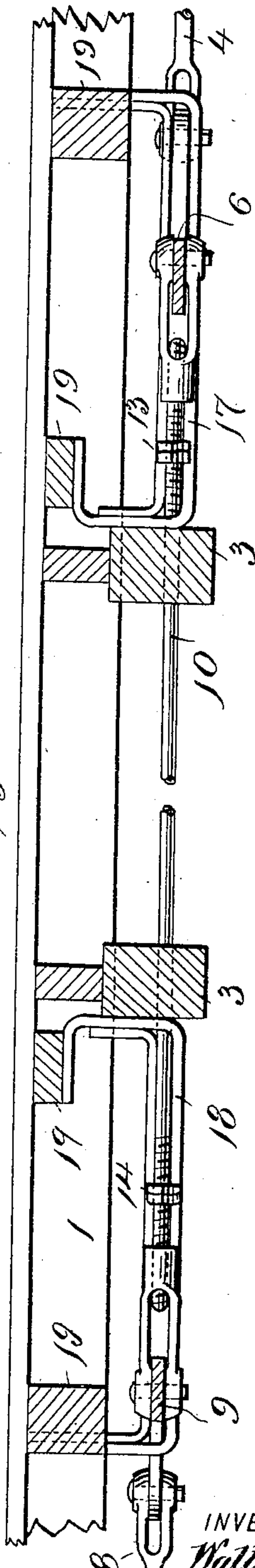
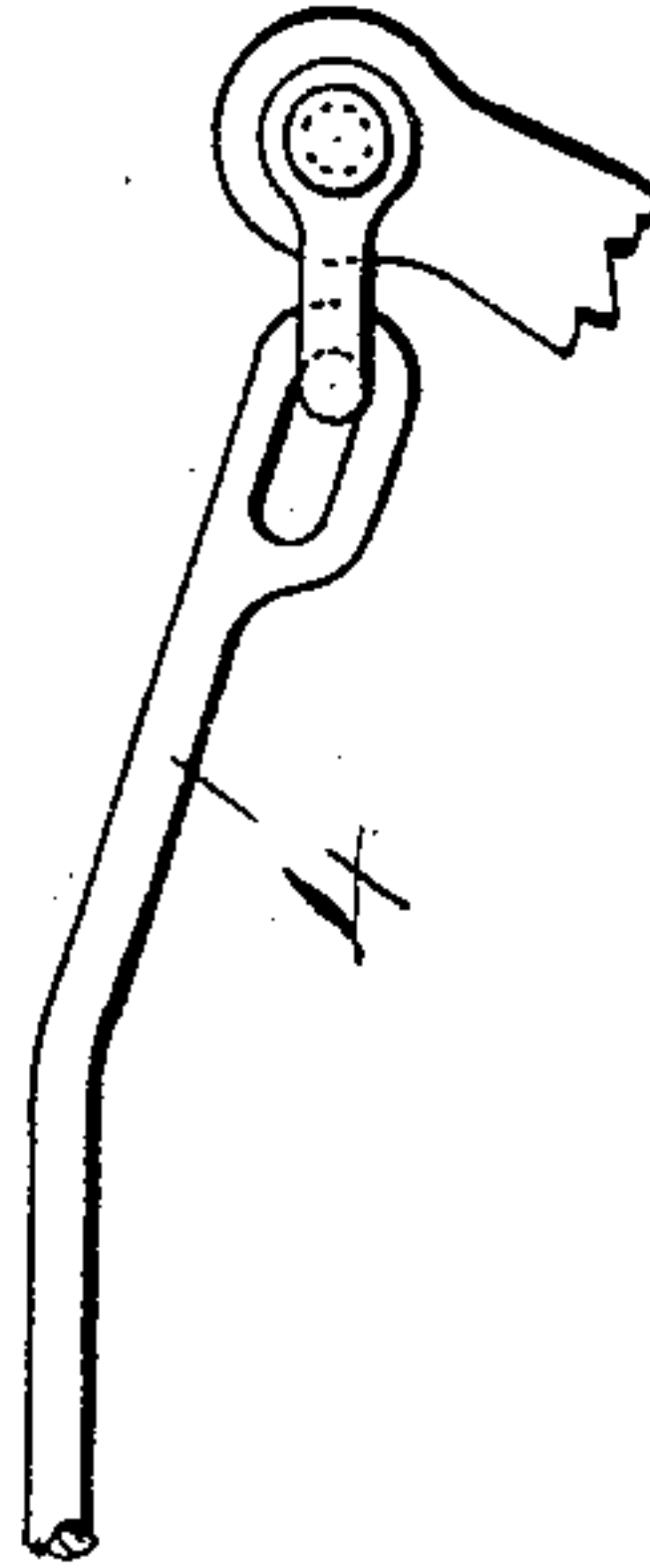


Fig. 5.



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UNITED STATES PATENT OFFICE.

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CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 771,522, dated October 4, 1904.

Application filed November 24, 1903. Serial No. 182,446. (No model.)

To all whom it may concern:

Be it known that I, WALTER S. ADAMS, a citizen of the United States, and a resident of the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Car-Brakes, of which the following is a specification.

The object of my invention is to provide a brake mechanism for cars and the like which will distribute the pressure evenly between various wheels of the truck or trucks and which will when broken through an accident or other cause act on some of the wheels although inoperative as to others. This I accomplish by means of my invention, as will appear below.

For a more particular description of one embodiment of my invention reference is to be had to the accompanying drawings, in which—
Figure 1 is a plan view showing a portion of a brake mechanism provided with my invention under normal conditions when pressure is applied from the left. Fig. 2 is a similar view, except that the brake-rod to the truck at the right is represented as broken and the positions of other parts are correspondingly changed. Fig. 3 shows the position of the parts when the tie-rod is broken and pressure is applied from the left. Fig. 4 is a sectional view taken on the line 4 4 of Fig. 3 looking in the direction of the arrows. Fig. 5 is a detailed view of a portion of the mechanism.

Throughout the various views similar reference characters designate similar parts.

For convenience I have shown longitudinal sills 1 and crossings 2 and 3 of a car-frame, which may be of any conventional type, although a part of a car with pivotal trucks is disclosed and only that part of the brake mechanism to which my improvement relates. This mechanism contains the usual rods 4 and 5, connected to the floating lever 6. The rods 4 and 7 are connected with the brake mechanism on the trucks and the rods 5 and 8 to the brake-windlass or other suitable actuating means. The floating levers 6 and 9 are connected by a tie-rod 10, which passes through perforations in the crossings 3, and the ends

of the rod 10 are given oppositely-disposed threads, which engage the corresponding threads in the bifurcated ends 11 and 12, which are pivoted to the floating levers 6 and 9, so that the distance between these levers may be adjusted by merely turning the rod 10. Between the ends 11 and 12 and crossings 3 are lock-nuts 13 and 14, which engage the threads at the ends of the rod 10 and are adapted to impinge against the metallic plates 15 and 16, respectively, which are fixed on the crossings 3 adjacent to their perforations. The floating levers 6 and 9 are supported and guided by brackets 17 and 18, each of which comprises two parallel guides, which are fixed together by uprights, which are secured to the struts 19 and which are separated a sufficient distance to allow a floating lever to slide between them. These brackets 17 and 18 are preferably placed on each side of the rod 10 and near enough to the ends 11 and 12 to act as guides for them as well as the floating levers, thus preventing all torsional strains of the rod 10 against the walls of the perforations in the crossings 3.

From the foregoing the operation of my invention will be readily understood. Assuming the mechanism to be in its normal condition and pressure applied from the end of the car to the left of the figures, the parts will then assume the position shown in Fig. 1 when force is exerted through the rod 8 and floating lever 9 to the rod 7 and from thence to the brake on one truck, and at the same time pressure will be exerted through the rod 10, floating lever 6, and rod 4 to the brake mechanism of the other truck. Under abnormal conditions, as when the rod 4 brakes or becomes disconnected from the truck mechanism, the brake may still be applied to the other truck, because when the nut 13 comes against the plate 15 the rod 10 can move no farther in the direction of its length, so that the floating lever 9 has a fixed fulcrum in the end 12, and forces exerted in the rod 8 will be transmitted to the brake mechanism through the rod 7 and floating lever 9. If the rod 10 should become broken, the brake can be applied to one set of wheels through the rods 4

and 5 or 7 and 8 and floating levers 6 or 9, as is apparent, and then the floating levers would be fulcrumed against the ends of the guides of the brackets 17 and 18, as shown at the left of Fig. 3; but when so arranged they are not efficient, because the fulcrums are so displaced that sufficient force cannot easily be brought against the wheels through the brake-shoes. From this it is obvious that the brakes may be applied to one of the trucks even though disabled as to the other trucks, thus insuring against rendering the brakes inoperative even under extraordinary conditions.

While I have shown and described one embodiment of my invention, it is obvious that many other forms may be provided which employ its essential characteristics and sacrifice none of its advantages.

What I claim is—

1. In a brake mechanism, floating levers, means for supporting and guiding said levers, a tie-rod connecting said levers, and means for limiting the movement of said tie-rod in the direction of its length.

2. In a brake mechanism, floating levers, means for supporting and guiding said levers,

adjustable means connecting said levers whereby the distance between them may be determined, and nuts for limiting the longitudinal movement of said adjustable means.

3. In a brake mechanism, floating levers, a tie-rod connecting said levers, and lock-nuts on said rod which limit the movement of said rod in the direction of its length.

4. In a brake mechanism, floating levers, a tie-rod connecting said levers, lock-nuts on said rod which limit its movement in the direction of its length, and means for adjusting the distance between said floating levers.

5. In a brake mechanism, floating levers, brackets which guide and support said levers, a tie-rod connecting said levers, means for adjusting the distance between said levers, and means for limiting the movement of said rod in the direction of its length.

Signed in the city and county of Philadelphia, State of Pennsylvania, this 19th day of November, 1903.

WALTER S. ADAMS.

Witnesses:

H. A. HENLING,

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