No. 741,621. PATENTED OCT. 20, 1903.

H. E. BROWN & R. D. MOON.

CAR BRAKE.

APPLICATION FILED JULY 18, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

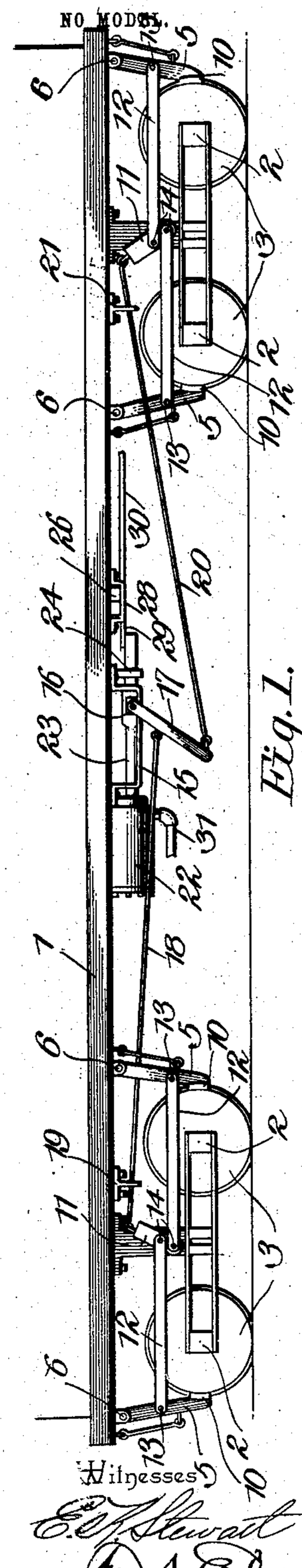

Fig. 1.

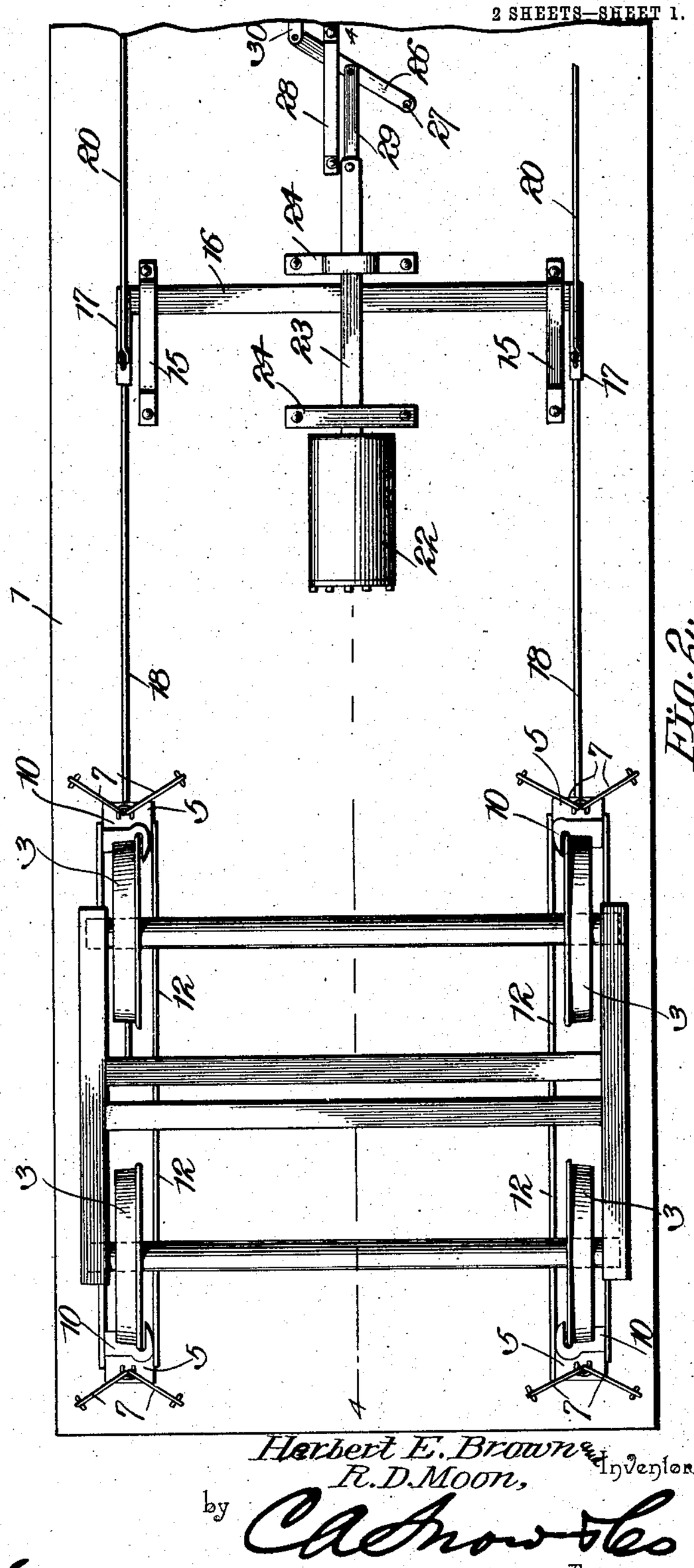

Fig. 2.

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 4.

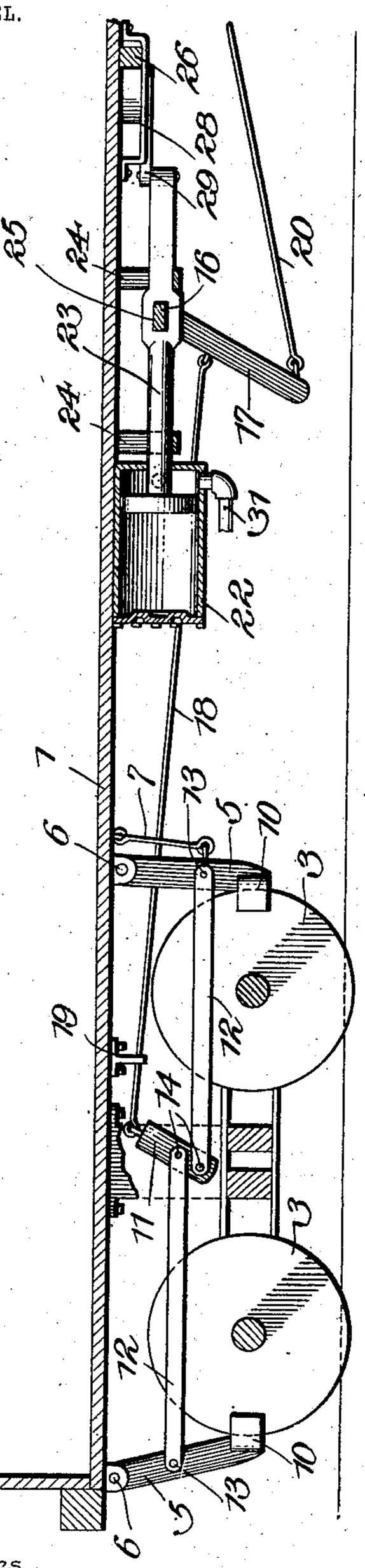

Fig. 3.

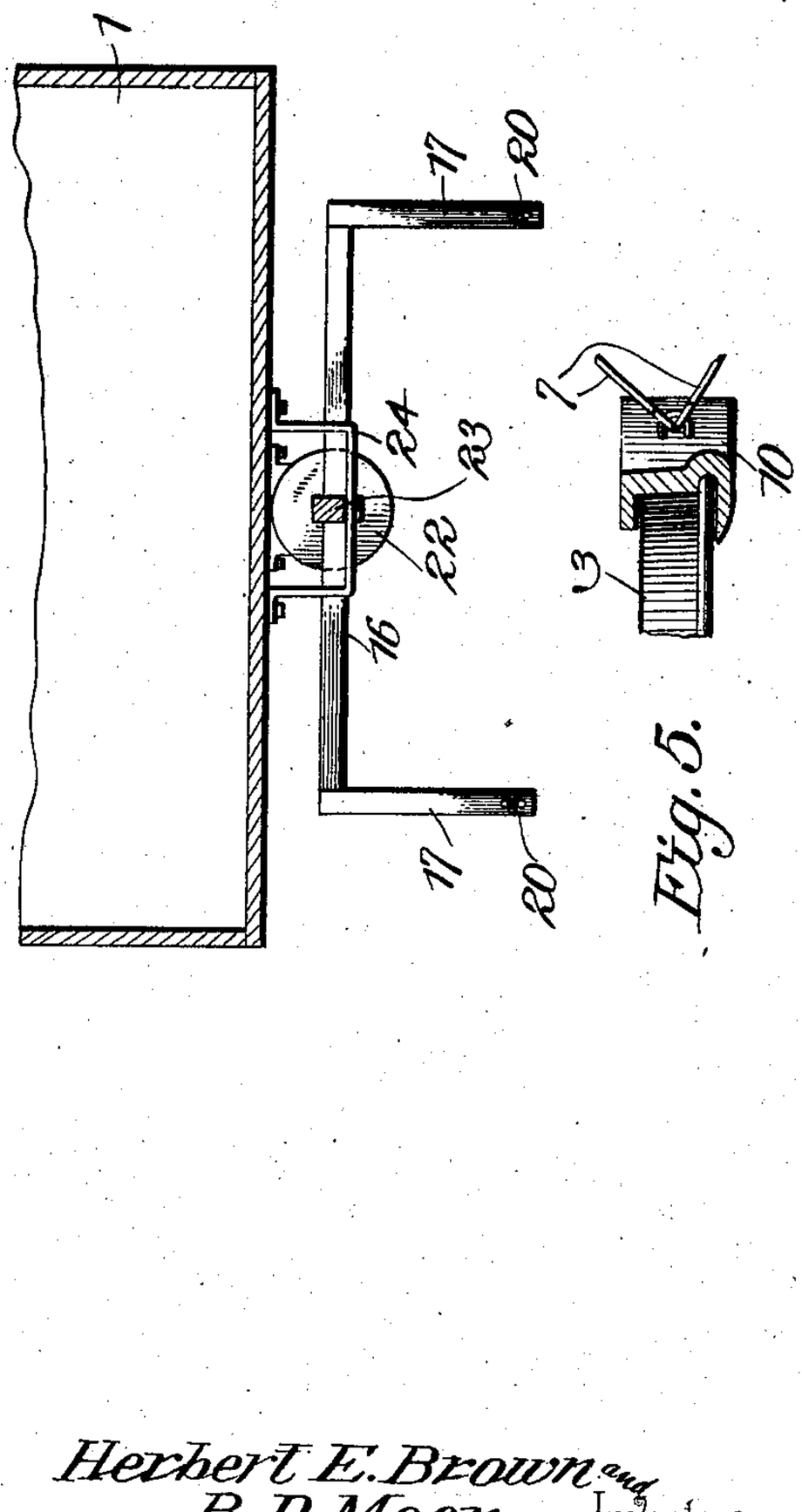

Fig. 5.

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No. 741,621. Patented October 20, 1903.

UNITED STATES PATENT OFFICE.

HERBERT EDDES BROWN AND RICHARD DAVIS MOON, OF GOLDTHWAITE, TEXAS.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 741,621, dated October 20, 1903.

Application filed July 18, 1903. Serial No. 166,183. (No model.)

To all whom it may concern:

Be it known that we, HERBERT EDDES BROWN and RICHARD DAVIS MOON, citizens of the United States, residing at Goldthwaite, in the county of Mills and State of Texas, have invented a new and useful Car-Brake, of which the following is a specification.

This invention relates to car-brakes, the object being to produce a device of this character of comparatively simple construction which will be efficient in operation, one in which the brakes will be applied simultaneously to all the wheels, and one in which the usual transverse brake-beams are dispensed with, thus obviating danger of accidents which sometimes occur through said beams falling upon the rails.

With these and other objects in view the invention comprises the novel details of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation of the car having this invention applied thereto. Fig. 2 is a bottom plan view of the same. Fig. 3 is a detail transverse sectional elevation. Fig. 4 is a longitudinal sectional elevation on the line 4 4 of Fig. 2. Fig. 5 is a detail transverse section of one of the brake-shoes.

Referring to the drawings, 1 indicates a car provided, as usual, with front and rear trucks of the ordinary construction, having journal-boxes 2, in which the axles of wheels 3 are journaled.

Pivoted to the car-bottom vertically above the wheels is a series of vertical brake-beams 5, arranged one for each of the wheels 3. These beams are each sustained by its pivoting-bolt 6, upon which it is free to swing, and by a pair of links 7, pivoted at their lower ends to the beam and at their upper ends to the car-bottom, the beams being provided at their lower ends with brake-shoes 10, formed, as shown in Fig. 5, to bear upon the tread of the wheel and also to receive the flange of the latter, the portion of the shoe which embraces the flange serving to prevent transverse displacement of the beam relative to the wheel.

Disposed at substantially the longitudinal center of each truck is a vertical block or member 11, to which the beams disposed, respectively, in front and rear of the truck are attached by links 12, there being provided for each beam a pair of said links, which are disposed one upon either side of the beam and attached thereto by a common pivoting-bolt 13 and also to the member 11 by a common pivoting-bolt 14. It is to be noted that the connecting-links of one of the beams is attached at the lower end of the member 11, while those of the other beam are attached to said member adjacent to its longitudinal center, whereby movement of the upper end of the member in one direction serves to move the brake-shoes into engagement simultaneously with their respective wheels, while a reverse movement of the member releases the shoes. It is also to be observed that owing to the employment of a pair of links for each beam and lying one on either side of the wheel the pressure of the shoe upon the wheel will be equalized, thus insuring a uniform wearing of the parts.

Attached to the bottom of the car centrally between its trucks is a pair of transversely-spaced straps 15, forming longitudinal guides which sustain the opposite ends of a transverse beam 16, to each end of which is pivoted a vertically-depending lever 17, said levers being arranged in longitudinal alinement each with the brake-beams and members 11 at either side of the car. Pivoted adjacent to the longitudinal center of each lever is a brake-rod 18, which extends rearward and is attached to the upper end of rear member 11, the rear end of the rod being at a point adjacent to the member arranged in a guide 19, attached to the car-bottom. A similar brake-rod 20 is pivoted to the lower end of the lever, extends forward for attachment to the upper end of the forward truck member 11, the rod adjacent to said member being arranged in a guide 21, likewise attached to the car-bottom. From this arrangement it will be seen that when the lever 17 has its upper end moved in one direction it will through the medium of brake-rods 18 20 move the members 11 simultaneously for applying the brakes and when moved in the opposite direction will actuate the members to release the brakes and it will also be noted that owing

to the levers 17 being both connected with beam 16 the operation of the latter in the manner presently to be described will simultaneously actuate the levers, thus simultaneously operating all of the brake-beams of the car.

22 is a cylinder attached beneath the car and in which works a piston, the rod 23 of which is disposed longitudinally of the car and works in guides 24, bolted or otherwise secured to the bottom of the latter. The piston-rod is provided at a point between the guides with a transverse opening 25, through which the beam 16 extends, whereby longitudinal reciprocation of the piston serves to move the beam back and forth in its guides 15.

26 is a lever pivoted at one end, as at 27, beneath the car and working at its free end in a guide 28, consisting of a metal strap attached to the car. This lever is connected to the piston-rod by means of a link 29, pivoted to the forward end of the latter and to the lever at a point adjacent to its longitudinal center, while the free end of the lever is connected by a link or rod 30 with the usual hand or foot operated brake-lever. (Not shown.)

31 is a pipe extending longitudinally of the car and communicating with the cylinder 22 to admit a fluid, such as air or steam, thereto for operating the piston. Thus it will be seen that when it is desired to apply the brakes air is admitted to the cylinder, thus driving the piston forward and moving the beam 16 forwardly in its guides, whereby stress upon the levers 17 will be exerted in the proper direction for applying the brakes, as above explained. After the brakes have been applied the air is permitted to escape from the cylinder at the proper time to relieve the piston from pressure, when the weight of the beams 5 in again swinging to a vertical position will return the piston and attendant parts to normal position. The brakes may be also applied by hand or foot power through the medium of lever 26 and its attendant parts, as will be readily understood.

From the foregoing it will be seen that we produce a device of simple construction which will be highly efficient in operation and one which is admirably adapted for the attainment of the ends in view.

It is to be understood that we do not limit or confine ourselves to the precise details herein set forth, inasmuch as minor changes may be made therein without departing from the spirit or scope of the invention.

Having thus described our invention, what we claim is—

1. The combination with a car, of supporting-wheels arranged in pairs at opposite ends thereof, a plurality of vertically-disposed brake-beams pivotally connected at their upper ends with the car and arranged one adjacent to each wheel, a block or member arranged between each pair of brake-beams, links connecting the beams in pairs with the members and operable thereby for applying the brakes, an operating-lever movably associated with the car between the members, rods connecting the respective members with the lever and means for operating the lever.

2. The combination with a car, of supporting-wheels arranged in pairs at opposite ends thereof, a plurality of vertically-disposed brake-beams pivotally connected at their upper ends with the car and arranged one adjacent to each wheel, a block or member arranged between each pair of brake-beams and operatively connected therewith, said member being operable for simultaneously operating the beams, a transverse bar movably associated with the car between the members, a pair of operating-levers carried by the bar and each operatively connected with a pair of the members for simultaneously operating the same, a cylinder carried by the car, a piston operating therein, means for actuating the piston, and operative connections between the piston and transverse bar for moving the latter to simultaneously actuate the levers.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

HERBERT EDDES BROWN.
RICHARD DAVIS MOON.

Witnesses:
N. J. McGUYER,
JACK McGUYER.