No. 722,154. PATENTED MAR. 3, 1903.

J. SHELTON.

CAR BRAKE MECHANISM.

APPLICATION FILED JULY 15, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

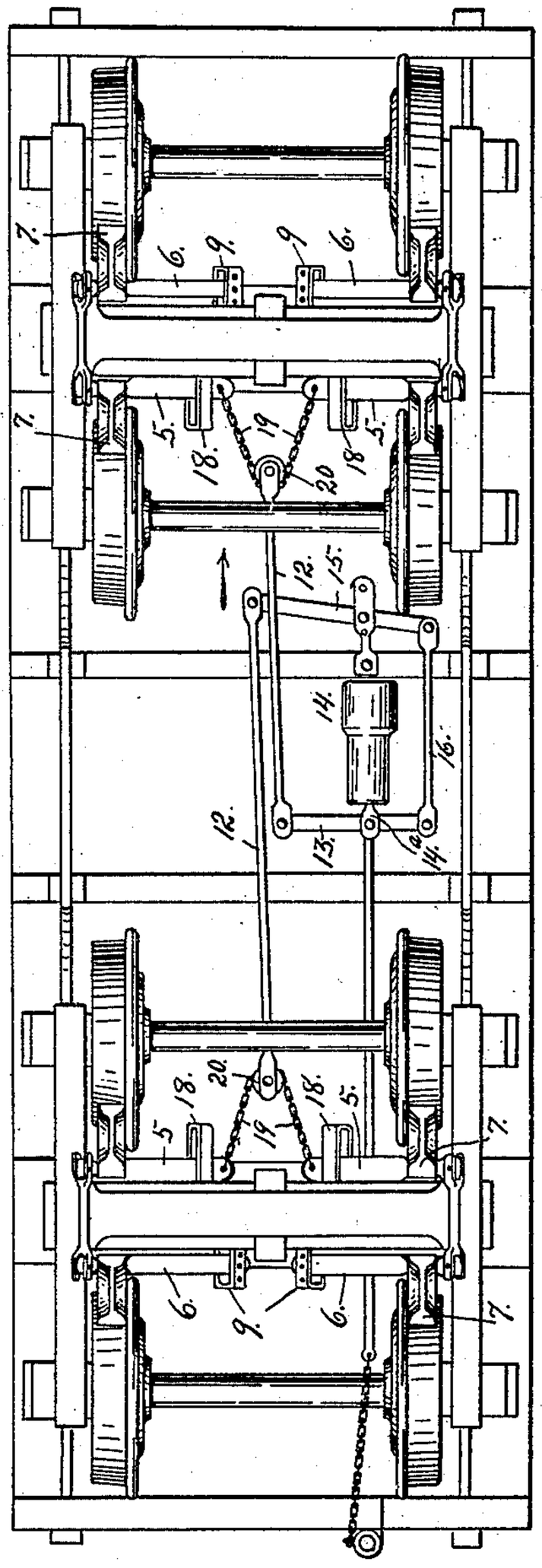

Fig. 1.

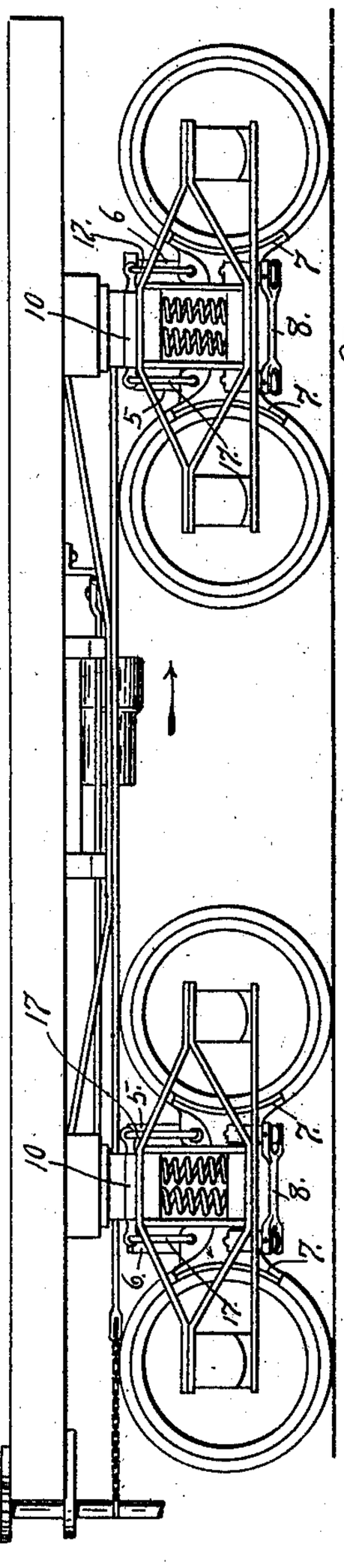

Fig. 2.

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NO MODEL. 2 SHEETS—SHEET 2.

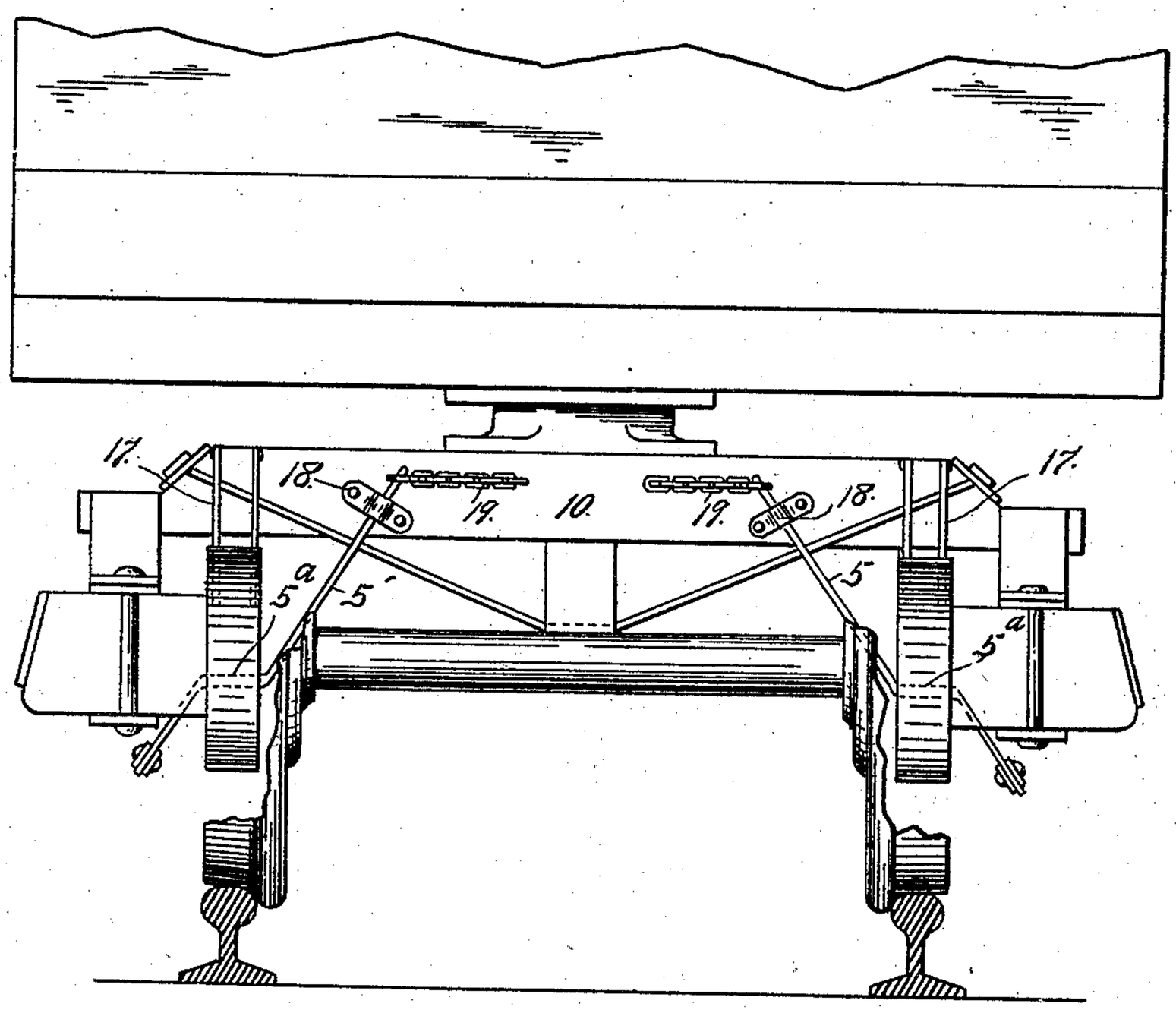

Fig. 3.

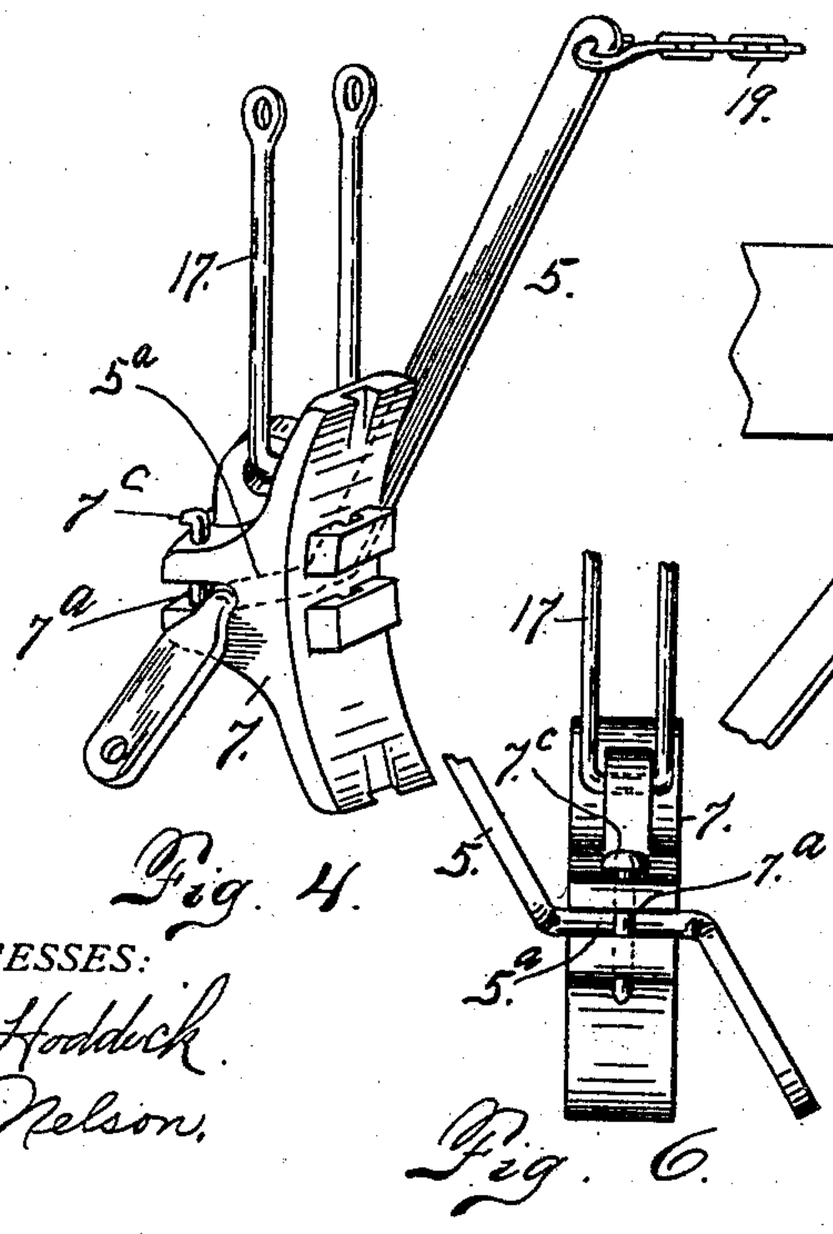

Fig. 4.

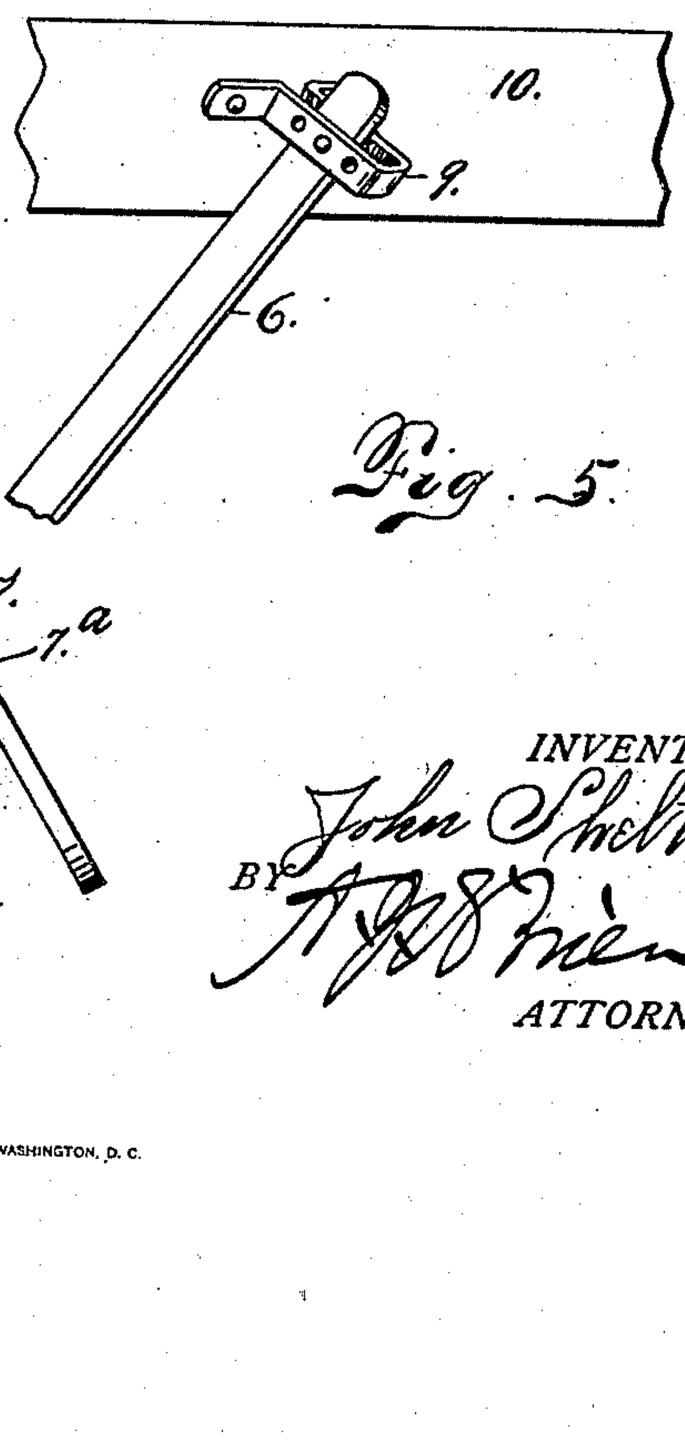

Fig. 5.

Fig. 6.

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UNITED STATES PATENT OFFICE.

JOHN SHELTON, OF DENVER, COLORADO.

CAR-BRAKE MECHANISM.

SPECIFICATION forming part of Letters Patent No. 722,154, dated March 3, 1903.

Application filed July 15, 1902. Serial No. 115,670. (No model.)

To all whom it may concern:

Be it known that I, JOHN SHELTON, a citizen of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Car-Brake Mechanism; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in car-brake mechanism, my object being to provide a brake construction in which brake-beams for supporting the shoes are not employed, thus doing away with a fruitful source of accidents and providing what I term a "beamless-brake mechanism."

The ordinary brake-beams sometimes become loose and fall upon the track, derailing the car. With my improved construction the connections and appliances are located well above the track to prevent them from coming in contact with objects thereon.

My present invention may be termed an improvement on the construction set forth in my previous application, filed March 17, 1902, Serial No. 98,640, all of which will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a bottom view of a car equipped with my improved construction. Fig. 2 is a side elevation of the same. Fig. 3 is an inside end view, the wheels being partly broken away to better disclose the features of my improvement. This view is obtained by looking in the direction of the arrow in Figs. 1 and 2. Fig. 4 is a perspective view of a brake-head mounted upon the live-lever of my construction. Fig. 5 is a perspective view of the upper portion of the dead-lever, showing its guide-bracket. Fig. 6 is a rear view of the brake-head looking into the slot engaged by the offset of a lever.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate the live-lever, and 6 the dead-lever, of my improved mechanism. These levers occupy a position inclined or extending obliquely to the vertical plane of the car-wheels and brake-heads. Each lever is provided intermediate its extremities with a horizontal offset which is circular in cross-section. This offset is designated 5^a on the live-levers and 6^a on the dead-levers and is clearly indicated by full lines in Fig. 6 and by dotted lines in Figs. 1, 3, and 4 of the drawings. Journaled on the offset of each lever is a brake-head 7, adapted to receive and hold a suitable brake-shoe, which is readily detachable. This brake-head construction is best illustrated in Fig. 4. As shown in this view, the head is provided with a horizontal slot 7^a, which receives the part 5 of the lever, the latter being held in place by a key 7^c. It must be understood, however, that the head may be held in place on the lever in any suitable manner or by any other suitable means. The lower extremities of the levers 5 and 6 are pivotally connected by a rod 8. The upper extremity of each lever 6 passes through a guide-bracket 9, attached to the truck-bolster 10. This lever extremity is held in the bracket by a pin or bolt and is adjustable to take up the slack of the brake-shoes, the said bracket being provided with extra openings for the purpose. The upper extremity of each lever 5 passes through a guide-bracket 18, attached to the bolster, and is connected above the bracket with a chain 19. This chain passes around a pulley 20, mounted on one extremity of the brake-rod 12, the extremities of the chain being respectively connected with the upper extremities of the two live-levers belonging to the same truck. One of the brake-rods 12 is connected at its inner extremity or its extremity remote from the pulley 20 with an ordinary cylinder-lever 13 of an air-brake system, as the Westinghouse. This lever is actuated by the piston of the brake-cylinder 14, which also is of ordinary construction. The other brake-rod 12 is connected with a le-

ver 15, usually termed the "floating" lever of an air-brake system. The levers 13 and 15 are connected by a rod 16. The brake-heads are suspended from a bottom bar of the car by U-shaped hangers 17.

From the foregoing description the use and operation of my improved air-brake mechanism will be readily understood. As the piston of the brake-cylinder is forced outwardly its stem 14^a, acting on the lever 13 and on the lever 15 through the connecting-rod 16, actuates the brake-rods 12 and forces the shoes of the brake-head 7 against the treads of the car-wheels, as will be readily understood.

Having thus described my invention, what I claim is—

1. In a car-brake, the combination with the brake-heads, of live and dead levers occupying a position inclined to the vertical plane of the brake-heads, each lever having a horizontal offset intermediate its extremities, upon which offset, a brake-head is journaled, a rod connecting each pair of levers composed of one live-lever and one dead-lever, below the shoes, and suitable means connected with the upper extremities of the live-levers for applying the brakes.

2. In a car-brake, the combination with the brake-heads, of live and dead levers occupying a position obliquely or inclined to the vertical plane of the brake-heads and car-wheels, each lever having an offset intermediate its extremities, upon which offset a brake-head is mounted, a rod connecting each pair of levers composed of one live-lever and one dead-lever, below the shoes and outside of the car-wheels, and suitable means connected with the live-levers for applying the brakes.

3. In a car-brake, the combination of the brake-heads each of which is provided with a horizontal slot open at the rear, live and dead levers occupying a position inclined to the vertical plane of the brake-heads and car-wheels, each lever having an offset intermediate its extremities, the said offset engaging the slot of its corresponding brake-head, a key inserted in the brake-head to hold the lever in place on the open side of the slot, a rod connecting each pair of levers composed of one live-lever and one dead-lever below the shoes and outside of the car-wheels, and suitable means connected with the live-levers for applying the brakes.

4. In car-brake mechanism, the combination with the brake-heads, and means for suspending the same from the bottom of the car, of live and dead levers, each of which is provided with an offset intermediate its extremities, upon which offset the brake-head is journaled, the said levers extending obliquely or occupying a position inclined to the vertical plane of the brake-heads and car-wheels, a rod connecting each live-lever with its adjacent dead-lever below the brake-heads, a guide within which the upper extremity of each dead-lever is adjustably mounted, and a rod connecting the upper extremities of the live-levers of each truck with the brake-operating devices, substantially as described.

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

JOHN SHELTON.

Witnesses:
DENA NELSON,
A. J. O'BRIEN.