

J. W. LAMOREAUX.
CAR BRAKE.
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925,640.

Patented June 22, 1909.

Fig. 1.

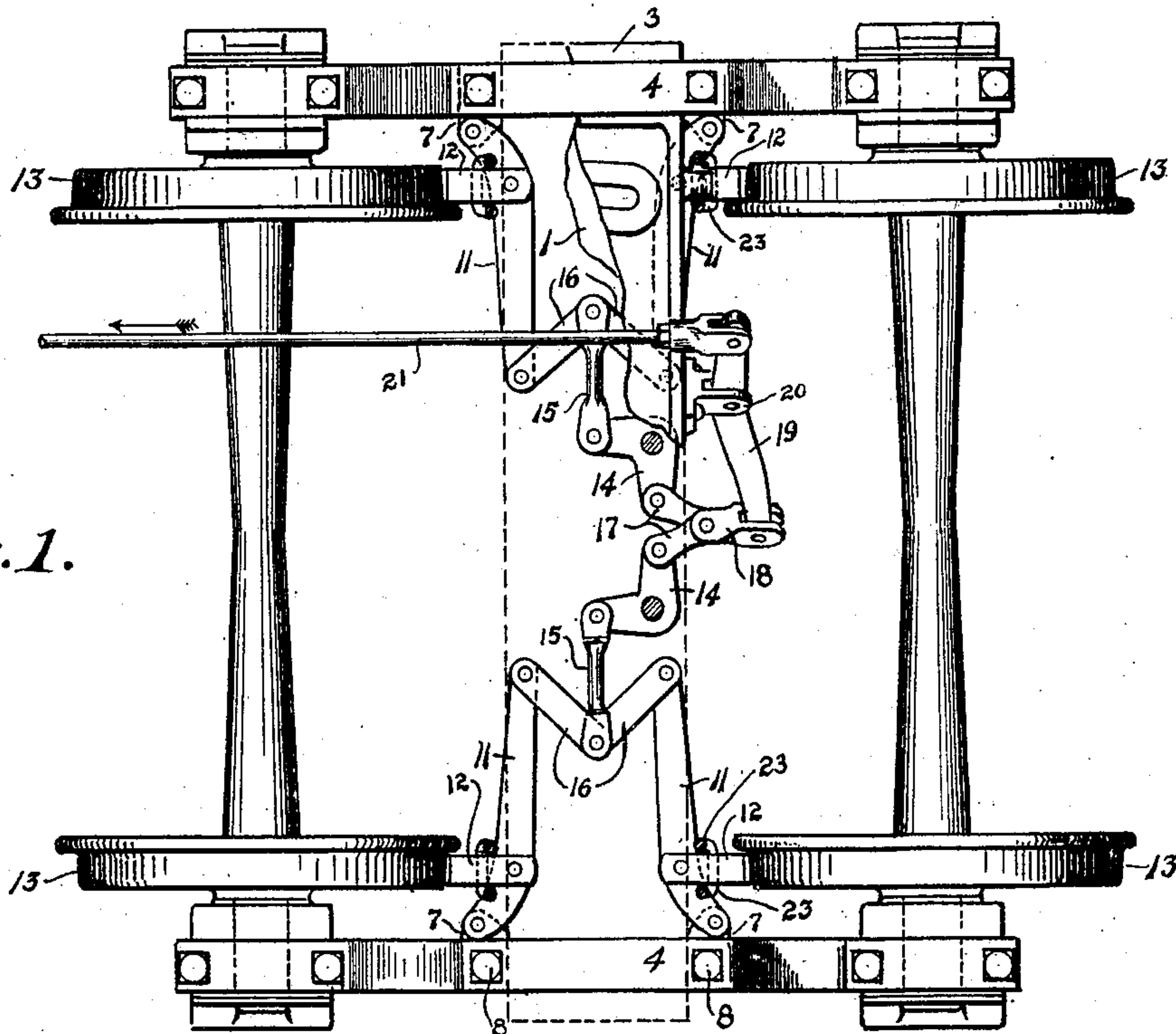
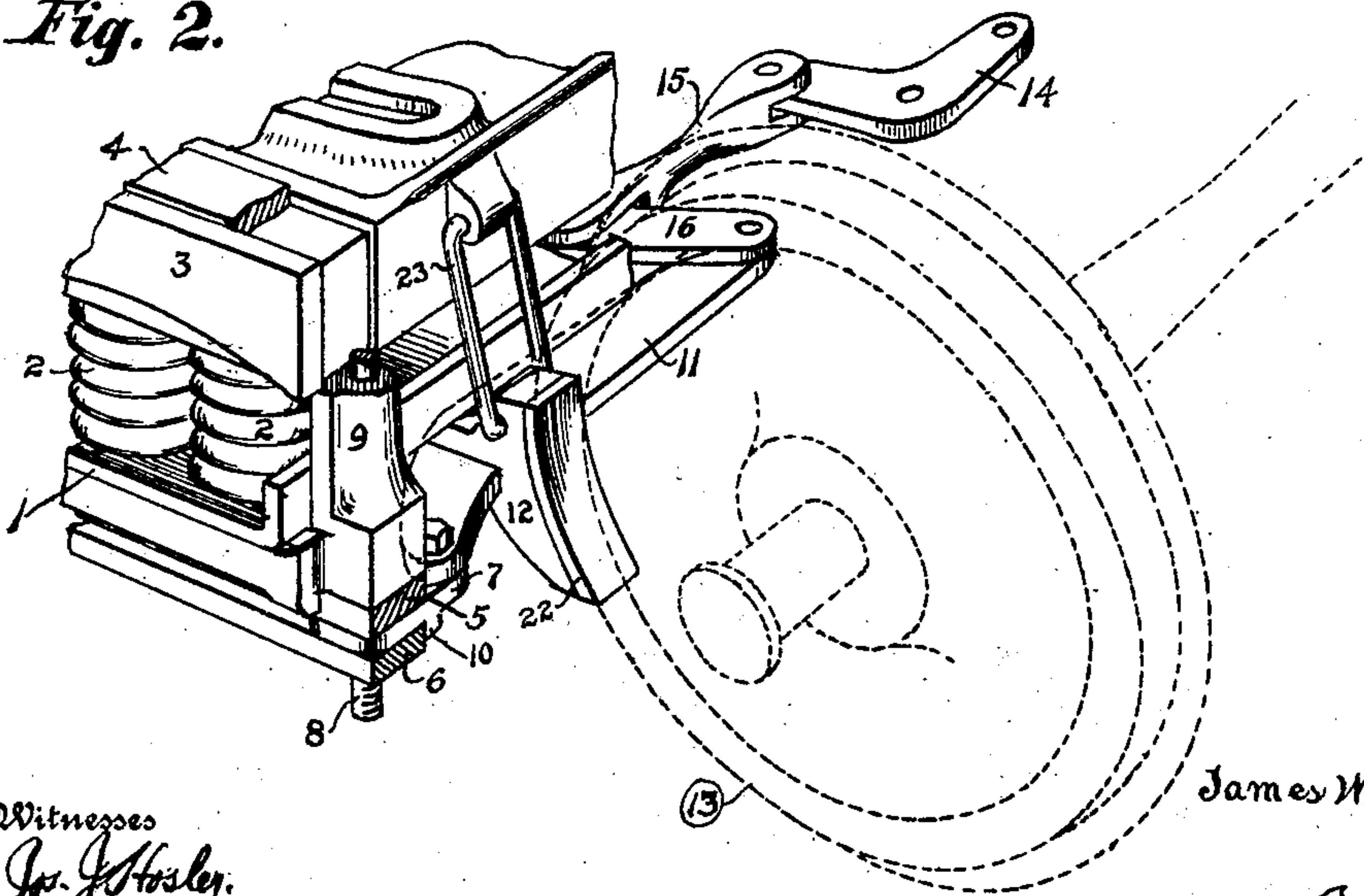


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES W. LAMOREAUX, OF MASSILLON, OHIO.

CAR-BRAKE.

No. 925,640.

Specification of Letters Patent.

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Application filed February 8, 1909. Serial No. 476,825.

To all whom it may concern:

Be it known that I, JAMES W. LAMOREAUX, a citizen of the United States, residing at Massillon, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Car-Brakes, of which the following is a specification.

My invention relates to improvements in car brakes, wherein the ordinary brake beams are dispensed with and the different parts designed to actuate the brake-heads and set the brake shoes upon the peripheries are so arranged that a powerful leverage is provided. The different moving parts are located in compact relationship with reference to each other and so located that they are not liable to strike obstructions.

In the accompanying drawing, Figure 1 is a view showing the mechanism on the underside of an ordinary railway track, illustrating the spring plank in dotted lines. Fig. 2 is a perspective view showing portions of the spring plank, the truck bolster and the different parts pertaining to said spring plank and truck bolster.

Similar numerals of reference indicate corresponding parts in all the figures of the drawing.

In the accompanying drawing, 1 represents the spring plank, which is connected to the truck proper in the usual manner and upon which the usual springs 2 are placed and the truck bolster 3 located. For the purpose of connecting the spring plank 1 and the truck bolster 3 in proper relationship, one with the other, the usual upper and lower arch-bars 4 and 5 are provided, together with the lower arch strap 6. These parts within themselves form no specific part of the present invention, but must necessarily be present to constitute a truck. Between the lower arch-bar 5 and the arch strap 6 are located the fulcrum flanges or plates 7, which are connected in fixed relationship to the truck proper by means of the usual column bolts 8 and the columns 9.

For the purpose of holding the fulcrum flanges or plates 7 against pivotal movement they are provided with the flanges 10, by which it will be understood that other means may be employed as the only object designed to be accomplished is to hold the fulcrum flanges 7 in a rigid condition with reference to the truck. To the fulcrum flanges or plates 7 are pivotally connected the brake-head levers 11, which levers are provided

with outer curved ends, which curved ends or portions are for the purpose of bringing the pivotal points of said levers into such a position that when they are turned upon their pivotal points as hereinafter described, the brake-heads 12 will move to and from the peripheries of the car wheels 13 in substantially straight lines.

To the bottom or underside of the spring plank 1 or its equivalent are pivotally attached the L shaped levers 14, which levers are formed in pairs and to one end of each lever is pivotally attached a link, 15, which link is pivotally attached to the ends of the brake lever links 16, which brake lever links are normally located at an angle to each other, the outer ends of said links being pivotally attached to the brake-head levers 11.

To the levers 14 are connected the short links 17, which links are pivotally attached at their opposite ends to the pull-head 18, to which pull-head is pivotally attached the main or direct acting lever 19, which main or direct acting lever is fulcrumed upon the fixed bifurcated flanges 20, said bifurcated flanges being held in fixed relative position with reference to the truck proper and may be attached to the truck bolster 3 or its equivalent. To the direct acting lever 19 is attached the rod 21, which rod is actuated by the ordinary mechanism employed to set car brakes, which mechanism may be and preferably is that commonly used in air brake systems. The mechanism designed to set and release the brakes does not form any specific part of the present invention. It will be understood that each of the brake-heads 12 are to be provided with the usual brake shoes 22, which brake shoes are carried by the pivoted links 23, which links are suspended from the truck bolster 3.

The operation of the invention is as follows: When it is desired to set or apply the brakes or in other words to move the brake-heads, together with the brake shoes toward and in contact with the peripheries of the wheels power is applied so as to move the rod 21 in the direction indicated by the arrow, Fig. 1, which movement forces the inner ends of the brake-head levers away from each other by means of the links constituting what might be termed compound toggle joints.

It is well understood that in the operation of brakes that it is only necessary to apply force sufficient to stop the rotation of the

wheels to bring about the full and complete effectiveness of resistance to the continued movement of the train. It is also well understood that such force as just above described
5 is only necessary in cases of emergency, but it is of importance that the mechanism designed to set the brake shoes should be of such a nature that it is easy of operation and that the mechanism should be such that little
10 danger is experienced in use; that is to say the accidental lowering or dropping of the parts, which parts have a tendency to derail a moving train. By my peculiar construction the ordinary, heavy and cumbersome
15 brake beams are dispensed with, but at the same time the brake-heads and brake shoes are actuated and moved toward the peripheries of the car wheels with great leverage, effectiveness and ease.
20 It will be understood that by forming the brake-head levers 11 and locating them as shown two pairs of brake-head levers are provided and so located that they can be moved upon their pivotal points to and
25 from the spring plank and to and from the peripheries of the car wheels upon both sides of the spring plank, whereby pressure is brought to bear upon the peripheries of the four wheels of the truck proper.

30 Having fully described my invention what I claim as new and desire to secure by Letters Patent, is—

1. In a car brake of the class described, a truck having a spring plank and a truck
35 bolster, brake-head levers spaced from each other and provided with outer curved ends,

said brake-head levers pivoted at their outer curved ends, brake-heads fixed to said brake levers, links pivoted to the inner ends of the brake-head levers, L shaped levers pivoted
40 intermediate their ends and links adapted to connect the L shaped levers and the brake-head lever links together, links connected to the L shaped levers and to a pull-head and a direct acting lever pivoted intermediate its
45 ends and an actuating rod secured to said actuating lever, substantially as and for the purpose specified.

2. In a car brake of the class described, a truck provided with a spring plank and a
50 truck bolster, brake-head levers pivoted at their outer ends, at one side of their longitudinal centers, brake-heads carried by said brake levers, said brake-heads provided with brake-shoes, an actuating brake lever
55 pivoted intermediate its ends, a rod adapted to actuate said actuating brake levers, links operatively connected to the actuating member, L-shaped levers connected to the afore-
60 said links and links connected to the L-shaped levers and brake lever links connected to the last mentioned links and to the brake-head levers, substantially as and for the purpose specified.

In testimony that I claim the above, I
65 have hereunto subscribed my name in the presence of two witnesses.

JAMES W. LAMOREAUX.

Witnesses:

MINNIE CRIPPS,
DOW J. YOUNG.