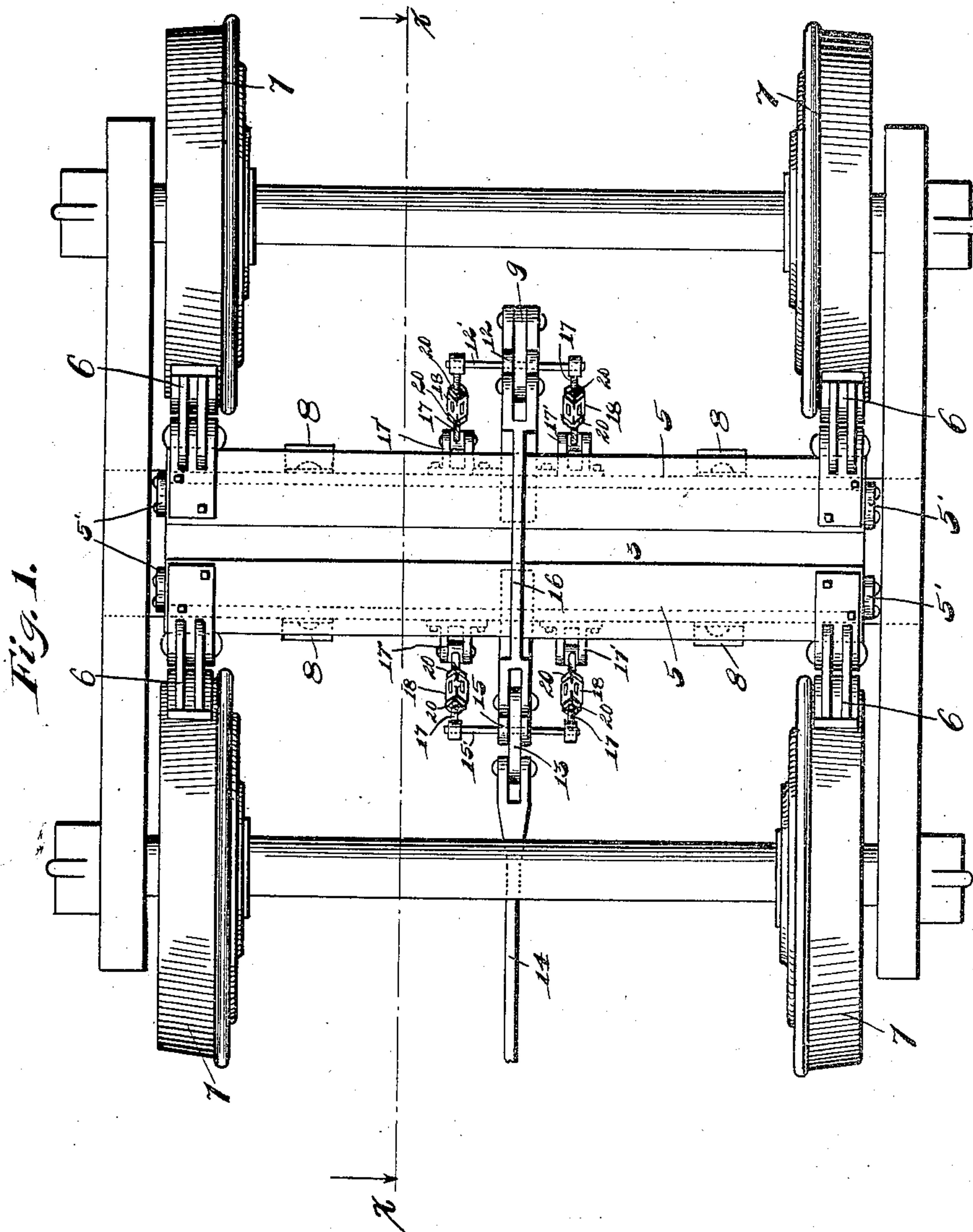


ADJUSTING APPARATUS FOR BRAKE BEAMS IN STREET CAR BRAKE RIGGING.

APPLICATION FILED FEB. 6, 1911.

Patented Aug. 8, 1911.

2 SHEETS—SHEET 1.



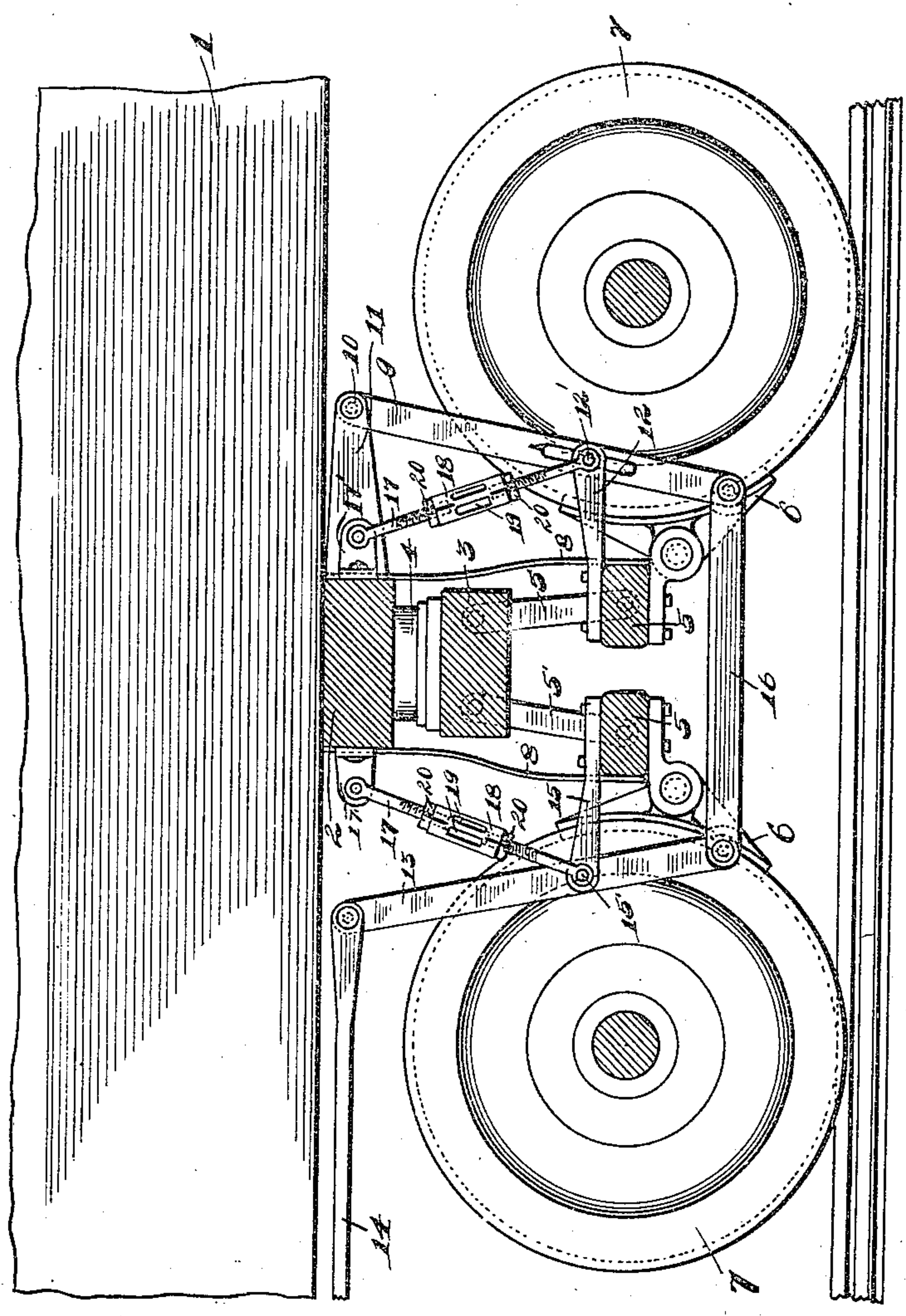
By Joshua R. N. Toms
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L. E. OLIVER & A. CURETON.
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 2 SHEETS—SHEET 2.

Fig. 2.



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UNITED STATES PATENT OFFICE.

LOUIS E. OLIVER, OF MAYWOOD, AND ALBERT CURETON, OF CHICAGO, ILLINOIS.

ADJUSTING APPARATUS FOR BRAKE-BEAMS IN STREET-CAR BRAKE-RIGGING.

999,849.

Specification of Letters Patent.

Patented Aug. 8, 1911.

Application filed February 6, 1911. Serial No. 606,785.

To all whom it may concern:

Be it known that we, LOUIS E. OLIVER and ALBERT CURETON, citizens of the United States, and residents of the cities of Maywood and Chicago, respectively, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Adjusting Apparatus for Brake-Beams in Street-Car Brake-Rigging, of which the following is a specification.

Our invention relates to brake rigging for street railway cars and more specifically to improvements in means for adjusting the brake beams so as to bring the brake shoes into proper position relative to the peripheries of the wheels coöperating therewith.

The object of our invention is the provision of means of the character mentioned through the incorporation of which in the brake rigging of a street car, the brake shoes thereof may be readily, expeditiously, and accurately adjusted in the manner above mentioned.

A further object is the production of adjusting means as mentioned which will be of durable and economical construction and efficient in operation.

Other objects will appear hereinafter.

With these objects in view our invention consists in improvements in brake beam adjusting mechanism characterized as above mentioned and in certain details of construction and arrangements of parts all as will be hereinafter more fully described and particularly pointed out in the appended claims.

Our invention will be best understood by reference to the accompanying drawings forming a part of this specification and in which—

Figure 1 is a bottom plan view of a conventional form of street railway car truck to which is applied adjusting mechanism embodying our invention, and Fig. 2 is a section taken on substantially line $x-x$ of Fig. 1, a portion of the body of car being also shown.

Referring now to the drawings we have illustrated therein a conventional street car employing four wheeled trucks of the ordinary type, the brake rigging thereof being operated in the ordinary manner. As illustrated in the drawings 1 indicates the car body each end of which is mounted on the transversely extending body bolster 2. Arranged directly below the bolster 2 is the truck bolster or channel bar 3, the latter being con-

nected with the bolster 2 for oscillatory movement relative to the latter by means of the usual king bolt or plate 4. Arranged below the bolster 3 are the usual brake beams 5, the same being swingingly supported for horizontal movement through the movement of links 5' the upper extremities of which are pivotally mounted in the respective ends of the bolster 3, the extremities of the brake beams 5 being connected with said links 5' in such a manner as to permit of oscillatory movement or adjustment of said beams. Carried by the brake beams 5 at the extremities thereof are the brake shoes 6 arranged for coöperation with the peripheries of the wheels 7, the arrangement being such that movement of the brake beams toward the respective pairs of wheels 7 effects the forcing of the brake shoes into engagement with said wheels and the consequent retardation thereof. Further, the arrangement is such that by oscillatory adjustment of the beams 5 the positions of the brake shoes 6 relative to the peripheries of the wheels 7 coöperating therewith may be adjusted so that, in order to effect the proper positioning of said brake shoes relative to said peripheries it is only required to oscillate said brake beams and to maintain the same in the position of adjustment. The mechanism or operation whereby such adjustment of said brake beams is effected and whereby said brake beams are held in positions of adjustment constitutes the present invention, such mechanism or operation being described hereinafter.

The brake shoes are normally held in released position, that is out of engagement with the wheels 7 by means of release springs 8, the upper extremity of said springs being fixed to the bolster 2, the lower extremities thereof engaging against the outer sides of the beams 5 as clearly shown in Fig. 2.

The mechanism for effecting operation of the brake beams toward and from the peripheries of the wheels with which the same coöperate is of the conventional type, such mechanism comprising the relatively stationary brake lever 9 the upper extremity of which is fulcrumed at 10 to a stationary bracket 11 rigidly secured to and projecting from the bolster 2. The lever 9 intermediate its extremities is pivotally connected through the medium of a pin or bolt 12' to an arm 12 which projects from and is rig-

idly secured to the adjacent brake beams 5 so that upon outward swinging of said lever the shoes 6 carried by said brake beam will be forced into engagement with the car wheels 7 with which the same coöperates. Arranged at the opposite side of the bolsters 2 and 3 is the floating brake lever 13 the upper extremity of which is connected in the usual manner with the operating brake rod 14. Said lever 13 intermediate its extremities is pivotally connected through the medium of a pin or bolt 15' with an arm 15 which projects from and is rigidly secured to the other of the brake beams 5. The lower extremities of the levers 9 and 13 are connected by the coupling bar 16 so that upon proper pulling or drawing of the brake rod 14 the said levers 9 and 13 will be swung to effect the forcing of the shoes 6 coöperating therewith into engagement with the car wheels. The operation of the levers 9 and 13 and the parts connected therewith upon the above mentioned drawing or pulling of the brake rod 14 is old and well known hence will need no further description.

The mechanism for effecting oscillatory adjustment of the brake beams 5 in order to effect the adjustment of the shoes 6 relative to the peripheries of the wheels 7 as above mentioned will now be described. This mechanism is very simple consisting in the provision of connecting rods or bars 17 which are connected at their lower extremities to the extended outer extremities of the pins 12' and 15', there being two of said rods 17 connected with each of said pins, that is one at each side of each of the levers 9 and 13. The upper extremities of the rods 17 are pivotally connected with ears 17' which are rigidly secured to and projecting from respective sides of the bolster 2. Interposed in each of the rods 17 is a turn buckle 18 through the medium of which said rod may evidently be longitudinally adjusted, the adjacent ends of the rod at the point of interposition of the turn buckle therein being oppositely screw threaded. With this arrangement then it is clear that oscillatory adjustment of the brake beams 5 may be readily effected by simply rotating the turn buckles 18 since said turn buckles determine the lengths of said rods 17. In order to facilitate rotation of said turn buckles in effecting this adjustment the same are preferably provided with slots 19 into which the end of a tool may be inserted as will be readily understood. Threaded upon each of the rods 17 adjacent the opposite extremities of the turn buckle interposed therein are lock nuts 20 which evidently serve as a means of locking said rods in their positions of longitudinal adjustment.

With the provision then of adjusting mechanism as above set forth in the brake

rigging of a railway car the ready and expeditious adjustment of the brake beams in order to effect the proper position of the brake shoes relative to the wheel peripheries engaged thereby is secured; the construction herein described being also adapted to maintain the brake beams and hence the brake shoes in the positions to which they are adjusted.

The adjusting mechanism as set forth is durable and economical, the same is of great efficiency in operation and is not susceptible to readily becoming inoperative. The provision of such mechanism in the brake rigging of a railway car will render the same better fitted to serve the purpose for which it is designed since the motorman or driver of the car will be adapted to better control the car when the shoes properly engage the peripheries of the wheels coöperating therewith. This being so accidents which frequently occur by reason of the absence of the proper adjustment of the brake shoes relative to the peripheries of the wheels will be eliminated; the company operating the cars being also benefited since without proper adjustment of the braking mechanism the car cannot be operated to its best advantage.

While we have illustrated and described the preferred construction for carrying our invention into effect this is capable of variations or modifications without departing from the spirit of the invention. We, therefore, do not wish to be limited to the exact details of construction as set forth but desire to avail ourselves of such variations and modifications as come within the scope of the appended claims.

Having described our invention what we claim as new and desire to secure by Letters Patent is:

1. The combination with a brake rigging for railway cars comprising a brake beam carrying brake shoes, said beam being mounted for movement toward and from the car wheel peripheries engaged by said brake shoes, said brake beam being mounted for oscillatory movement for effecting the adjustment of the positions of said brake shoes relative to the peripheries of said wheels, of a bar having one end eccentrically connected with said brake beam and having its opposite end held stationary whereby adjustment of the length of said bar effects oscillatory adjustment of said brake beam; and a turn buckle interposed in said bar, substantially as described.

2. The combination with a brake rigging for railway cars comprising a brake beam having brake shoes, said beam being mounted for adjustment toward and from the peripheries of the car wheels adapted to be engaged by said brake shoes, said brake beams being mounted for oscillatory

movement for effecting adjustment of the positions of said brake shoes relative to said wheel peripheries, of a bar having its lower end eccentrically connected with said brake beam and having its upper end held stationary whereby adjustment of the length of said bar effects oscillatory adjustment of said brake beam; a turn buckle interposed in said bar for effecting longitudinal adjustment thereof; and means on said bar for maintaining the same in positions of longitudinal adjustment, substantially as described.

3. The combination with a brake rigging for railway cars comprising a brake beam having brake shoes, said beam being mounted for adjustment toward and from the peripheries of the car wheels adapted to be engaged by said brake shoes, said brake beams being mounted for oscillatory movement for effecting adjustment of the posi-

tions of said brake shoes relative to said wheel peripheries, of a bar having its lower end eccentrically connected with said brake beam and having its upper end held stationary whereby adjustment of the length of said bar effects oscillatory adjustment of said brake beam; a turn buckle interposed in said bar for effecting longitudinal adjustment thereof; and a lock nut threaded on said bar for locking said bar in positions of longitudinal adjustment, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

LOUIS E. OLIVER.
ALBERT CURETON.

Witnesses:

JOSHUA R. H. POTTS,
W. C. SMITH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."