July 21, 1936. C. W. GALLAHER, JR 2,048,254

BRAKE OPERATING MECHANISM

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Fig. 1.

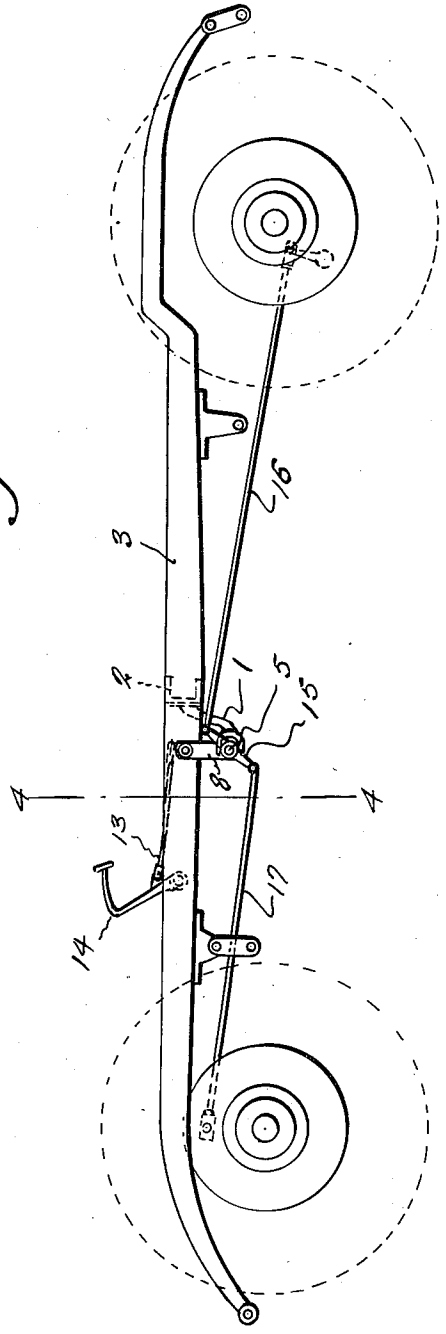


Fig. 3.

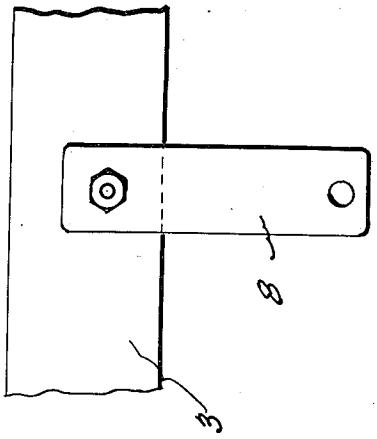
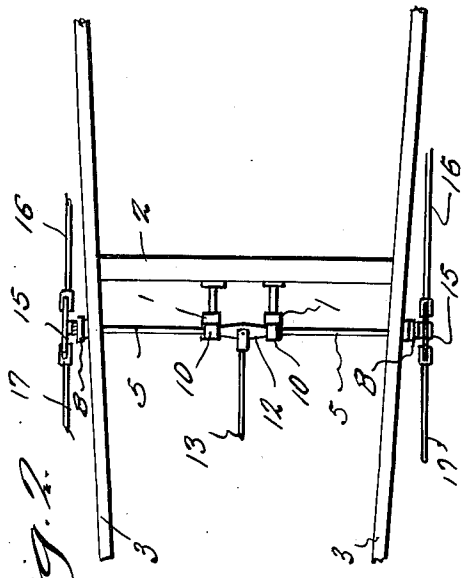


Fig. 4.



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Fig. 5.

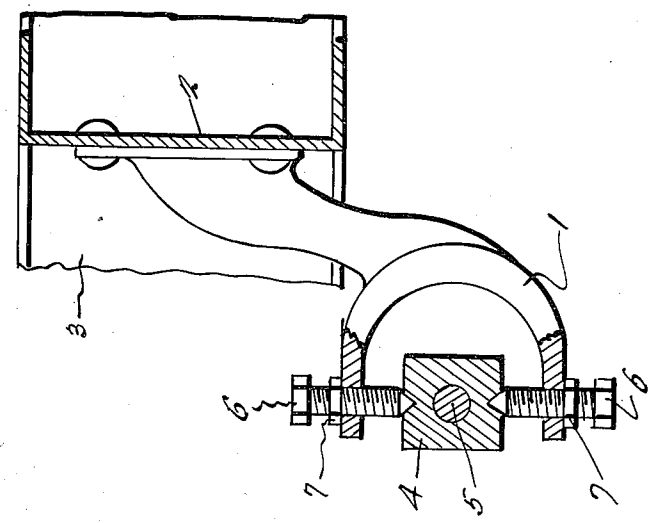


Fig. 4.

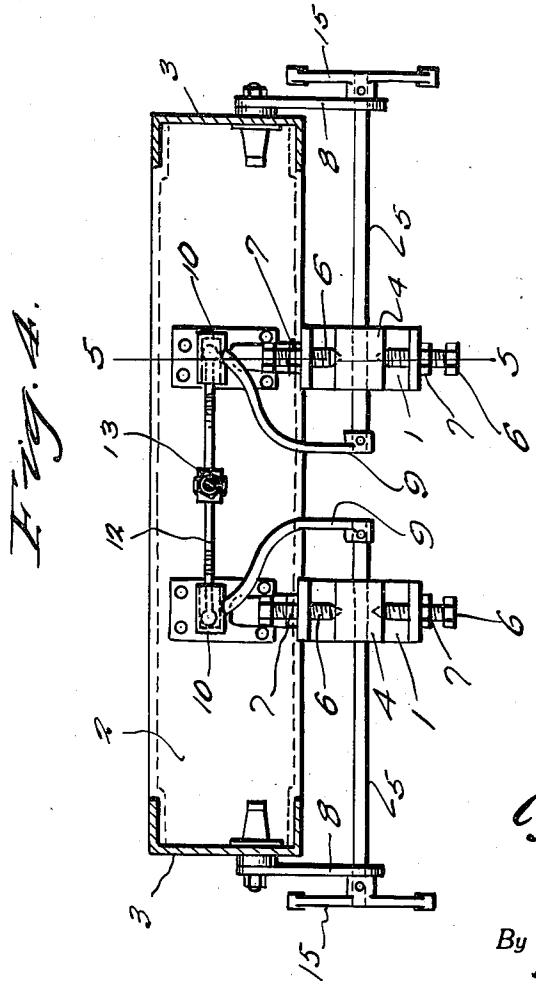
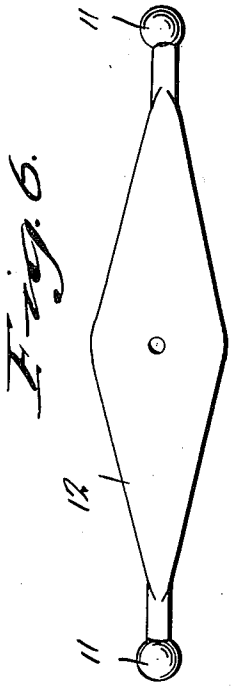


Fig. 6.



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Patented July 21, 1936 2,048,254

UNITED STATES PATENT OFFICE

2,048,254

BRAKE OPERATING MECHANISM

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Application October 26, 1933, Serial No. 695,350

1 Claim. (Cl. 188—204)

The present invention relates to new and useful improvements in brake operating mechanisms for vehicles having front and rear wheel brakes, and has for its primary object to provide, in a manner as hereinafter set forth, a mechanism of this character embodying a novel construction, combination and arrangement of parts through the medium of which automatic equalizing or balancing of the force which is applied to the brakes on the different wheels will be accomplished.

Another very important object of the invention is to provide, in a brake mechanism of the type including a pair of transverse rocker shafts, novel means for floatingly mounting said shafts between the front and rear brakes to equalize the pressure therebetween.

Other objects of the invention are to provide a brake operating mechanism for vehicles which will be comparatively simple in construction, strong, durable, highly efficient and reliable in operation and which may be manufactured and installed at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:—

Figure 1 is a view in side elevation of a brake operating mechanism in accordance with the present invention.

Figure 2 is a view in top plan thereof.

Figure 3 is a detail view in side elevation of one of the swinging rocker shaft hangers.

Figure 4 is a view in vertical transverse section, taken substantially on the line 4—4 of Figure 1.

Figure 5 is a vertical sectional view, taken substantially on the line 5—5 of Figure 4.

Figure 6 is a detail view in top plan of the equalizer bar.

Referring now to the drawings in detail, it will be seen that the embodiment of the present invention which has been illustrated comprises a pair of yokes 1 which are rigidly secured to the cross member 2 which extends between the longitudinal members 3 of the vehicle frame. Mounted for rotary movement in a horizontal plane in the yokes 1 are bearing blocks 4 in which transverse rocker shafts 5 are journaled. The bearing blocks 4 are adjustably mounted in the yokes 1 between vertically aligned pivot screws 6 which are secured in adjusted position by lock nuts 7. The outer ends of the rocker shafts 5 are journaled in swinging hangers 8 which depend from the longitudinal side members 3 of the vehicle frame. It will thus be seen that the rocker shafts 5 are mounted for swinging movement in a horizontal plane.

Fixed on the inner end portions of the rocker shafts 5 are upwardly and outwardly extending levers 9 having opposed sockets 10 on their free ends which are substantially in alignment with the axes of the bearings 4. The sockets 10 are for the reception of ball heads 11 on the ends of an equalizer bar 12. A rod 13, from the service brake pedal 14 of the vehicle, is pivotally connected to the center of the equalizer bar 12.

Fixed on the outer end portions of the rocker shafts 5 are T-heads 15, to one end of which the rear brake rods 16 are pivotally connected and to the other ends of which the front brake rods 17 are pivotally connected.

When the service brake pedal 14 of the vehicle is depressed, the rocker shafts 5 are actuated through the medium of the equalizer bar 12 and the levers 9 in a direction to pull the rear brake rods 16 forwardly and the front brake rods 17 rearwardly to apply the brakes of the vehicle, as will be understood. The mountings of the rocker shafts 5 permit said rocker shafts to float between the front and rear brakes in a manner to equalize the pressure therebetween. In this connection, it may be well to here invite attention to the fact that the rocker shafts 5 are journaled loosely enough in the hangers 8 to permit swinging movement of said hangers. Of course, the bar 12 equalizes the pressure between the rocker shafts 5. The connection of the equalizer bar 12 with the levers 9 in alignment with the axes upon which the rocker shafts 5 swing prevents forward pull on the inner ends of said rocker shafts by the service pedal 14.

It is believed that the many advantages of a brake operating mechanism in accordance with the present invention will be readily understood, and although the preferred embodiment of the invention is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:—

In a vehicle including a frame and front and rear wheel brakes, a pair of transversely alined brackets carried by the frame and having yokes at their lower ends located below the frame, each

yoke having upper and lower horizontally arranged end parts having threaded holes therein in vertical alinement, bolts threaded through said holes and having pointed ends, a bearing block supported for rotary movement by each pair of bolts, each block having upper and lower recesses therein for receiving the inner ends of the bolts, a pair of rocker shafts journaled at intermediate points in said blocks with the inner ends of the shafts extending an appreciable distance from the blocks, levers attached at their lower ends to the inner ends of the shafts, said levers curving upwardly and outwardly and having their upper ends in substantial vertical alinement with the pairs of bolts, horizontally arranged opposed sockets on the upper ends of said levers, an equalizer bar having ball ends engaged in the sockets, means for actuating the equalizer bar, hangers pivotally connected at their upper ends to the side members of the frame and extending below the frame, the outer end portions of the rocker shafts being journaled in the lower ends of said hangers, T-shaped heads fixed on the outer ends of the rocker shafts, and rods connecting the ends of said heads with the front and rear brakes.

CYRUS WILEY GALLAHER, JR.