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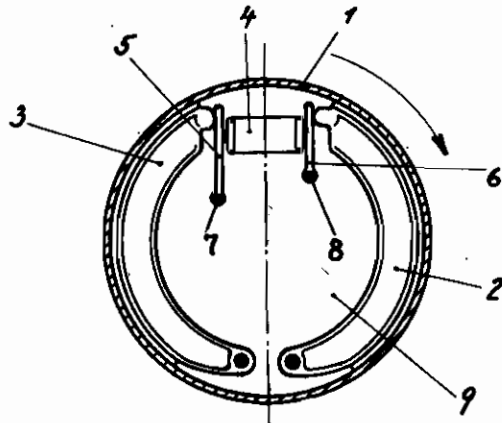
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HYDRAULIC BRAKE FOR POWER DRIVEN VEHICLES

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# ALIEN PROPERTY CUSTODIAN

## HYDRAULIC BRAKE FOR POWER DRIVEN VEHICLES

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The invention relates to internal shoe brake systems for automotive vehicles and particularly to those of the hydraulic or pneumatic type.

The present invention shows an advantageous device for equalising the application pressure on the brake shoes of internal shoe brake systems of the kind in which the actuation of the brake cylinder is effected preferably by hydraulic or pneumatic pressure and in which the brake shoes are preferably arranged symmetrically to each other, each brake shoe being pivotally mounted about a separate fixed fulcrum point in such a manner that one brake shoe is running-on, whilst the other is running-off the brake drum.

According to the invention, the brake cylinder is arranged vertically to the symmetry axis of the brake shoes and acts indirectly on the two brake shoes through levers by utilising the lever action, said levers being arranged for that purpose in such a manner that they bear on the one hand against the free ends of the brake shoes and on the other against fixed points on the back plate, on which they are mounted for pivoting movement, the length of said levers being chosen so as to obtain the same braking effect on each of the two brake shoes during service operation, i. e. when the drum is in rotation. The brake cylinder can be arranged, according to the invention, as well for acting upon the levers within the length between the bearing point of the free end of the brake shoe and the pivoting point of the lever on the back plate, as outside this length. In both cases, however, the longitudinal axis of

the brake cylinder does not coincide with the line of action of the expanding force acting on the brake shoes, as otherwise no action according to the invention could be obtained.

An example of construction of the subject of the invention is shown in the accompanying drawing.

The arrow in the drawing indicates the direction of rotation of the brake drum 1. The brake shoe running-on the brake drum is 2 and 3 is the running-off brake shoe under the unloading influence of the frictional force. The brake cylinder 4 provided with a thoroughly stepless internal bore is arranged vertically to the symmetry axis of the brake shoes and acts indirectly on the brake shoes through the levers 5 and 6, which on the one hand bear against the free ends of the brake shoes and on the other are pivotally mounted about the fixed points 7 and 8 on the back plate 9. The distance of the fulcrum points 7 and 8 of the levers from the bearing points of the brake cylinder on the levers is different for each of the two levers, so that the force transmitted through the levers to the brake shoes is likewise different. By suitably dimensioning the length of each lever, taking into consideration the different effects of the running-on resp. the running-off brake shoe, a completely uniform application of the brake shoes during service operation and thus a uniform wearing of the brake shoe linings can be obtained.

JOSEF HARTMANN.