PATENT SPECIFICATION

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COMPLETE SPECIFICATION.

Improvements in or relating to Expansion Brakes for Motor Vehicles.

I, VINCENZO LANCIA, trading as LANCIA & C., an Italian Subject, of 99, via Monginevro, Turin, Italy, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to expansion brakes for motor vehicles in which a single pair of brake shoes may be controlled by either of two independent actuating means.

It has already been proposed to use a mechanical control and a hydraulic control, or two independent mechanical controls operating separately at the two ends of each brake shoe. Such an arrangement necessitates however, the stress of actuating one control being dependent upon the other control.

Further it is also known to use two mechanical controls which act at the same end of two pivoted shoes, two cams being mounted side by side so that each acts on the shoes to one side of their median plane.

According to the invention the best possible conditions for the independent transmission of the forces exerted by the two controls, and for the equilibrium of the action exerted on the shoes are secured by the fact that two actuating members pivoted about axes which are at different distances from the centre of the drum of the brake, are arranged between the two oppositely arranged ends of the two shoes.

In the annexed drawings is shown by way of example a construction of a brake according to this invention, and

Figure 1 is the side view of the brake gear with the drum in section;

Figure 2 is a section on the line x—x of Figure 1.

In said Figures, 1 is the drum which is fixed to the wheel hub and 2, 2^1 are the brake shoes pivoted at 3, 3^1 on the support 4 fastened on the axle hub and intended to be moved away from each other against the action of spring 5 to force the lining 6 against the internal surface of drum 1.

On the stationary support 4, in register with the free end of the shoes 2, 2^1 two spindles 8, 8^1 are rotatably mounted by means of a box 7 carrying appropriate bearings, said spindles having heads 9, 9^1 respectively fixed to or integral therewith. Said heads 9, 9^1 are located intermediate opposite the end plates 10, 10^1 of the shoes 2, 2^1.

In the construction illustrated each head 9, 9^1 has a cylindrical shape and carries two projecting studs 11 located in eccentric positions thereon and adapted to bear on extensions 12, 12^1 fastened on the plates 10, 10^1 respectively, but of course the motion of the shoes 2, 2^1 from each other due to rotation of the spindles 8, 8^1 may be secured by other means and particularly by imparting a suitable cam shape to the heads 9, 9^1.

Each of the spindles 8, 8^1 has an arm 13, 13^1 fixed to or integral therewith and having connected thereto a rod ending at the operating member (pedal or lever) mounted on the vehicle within the driver's reach.

It is obvious that by this brake gear the shoes may be moved into operation both by actuation of arm 13 and by actuation of arm 13^1, that is by the operation of either of the actuating means entirely independent from each other, and then, in the event of one of said actuating means becoming inoperative, the brake may be applied by the manipulation of the other one.

The described double and independent operating means could be used in connection with brakes of a different type than the one illustrated.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. An expansion brake for motor vehicles, in which two brake shoes are subjected at the same adjacent ends to two independent controls, characterised in that the actuating members consisting of cams or the like are pivoted about axes which are at different distances from the centre of the brake drum.

2. The expansion brake for motor vehicles substantially as described or substantially as shown in the accompanying drawings.

Dated this 25th day of October, 1929.

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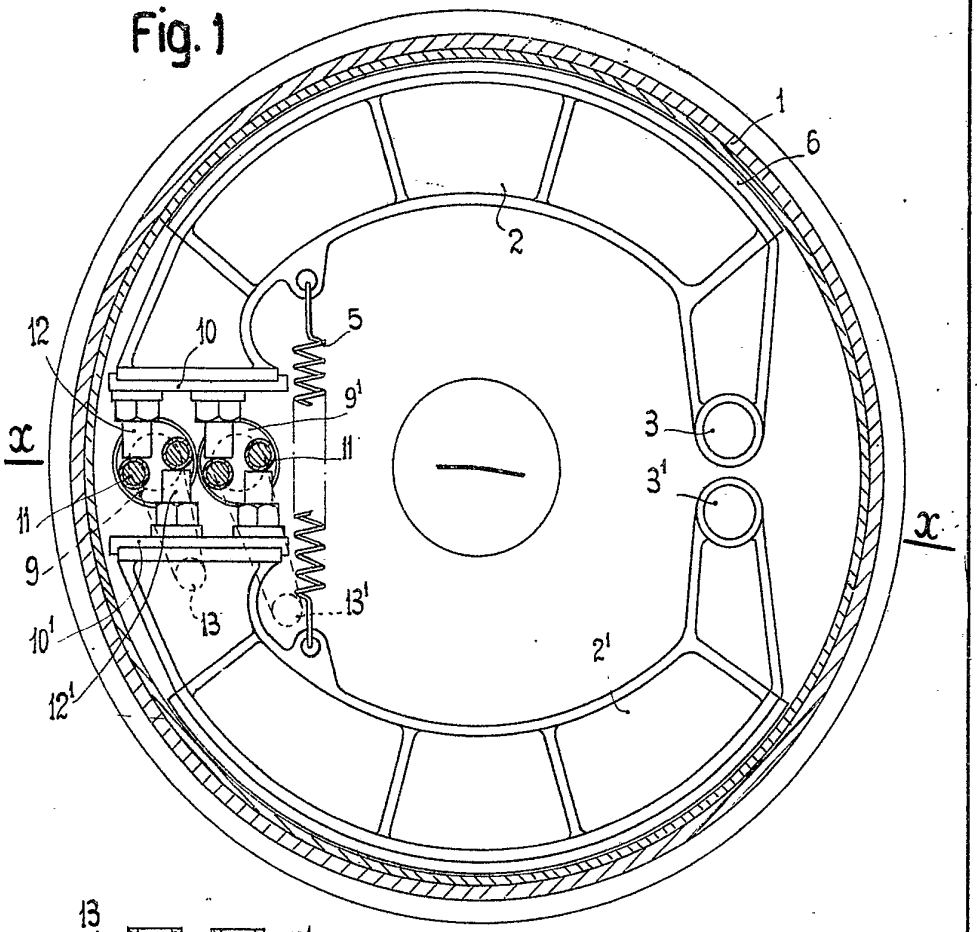
Fig. 1



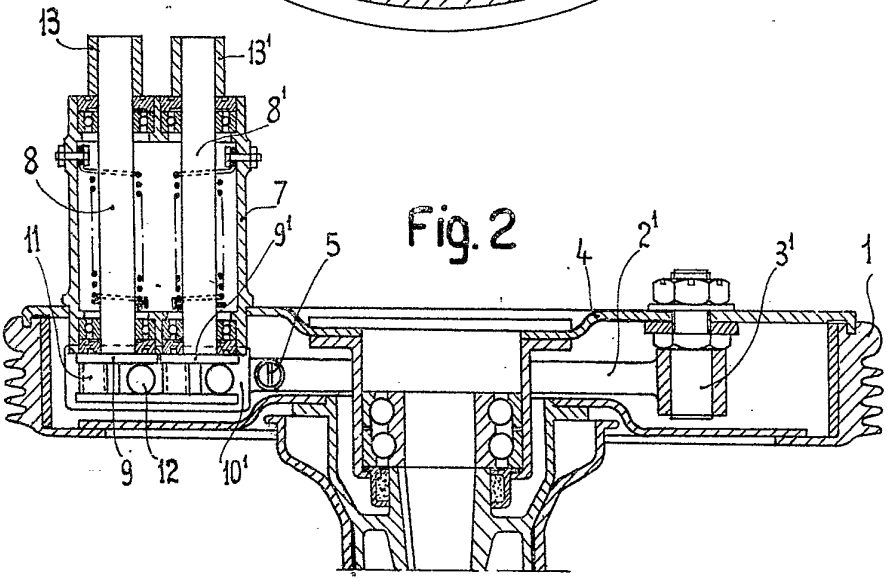


Fig. 2

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