N° 29,128 A.D. 1913

(*Under International Convention.*)

*Date claimed for Patent under Patents and Designs Act, 1907, being date of first Foreign Application (in Italy),* 11th Aug., 1913

*Date of Application (in the United Kingdom),* 17th Dec., 1913

*Accepted,* 28th May, 1914

COMPLETE SPECIFICATION.

## Improvements in or relating to Brakes.

We, LANCIA & Co., 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 improvements in brakes having brake blocks or shoes, more particularly brakes applied to motor cars, in which the pressure exerted upon the brake blocks or shoes for applying them to the brake drum, is uniformly divided.

It has been proposed to pass a flexible band over the brake shoes, which band when pulled from its ends pressed the shoes on to the drum and in some instances it is known to use an ordinary chain for the same purpose. A chain is certainly to be preferred to a cord for the purpose but in order to press the shoes or blocks completely and uniformly on to the drum, it is necessary that the chain should be suitably shaped.

According to this invention a chain is used, the links of which are flat and pivoted to each other, so that the pivot pins project above the links in order to contact with the outer face of the blocks or shoes. The chain thus engages the blocks at several points placed at an equal distance apart and the pressure surfaces of the chain are all equal and uniformly arranged.

The invention also comprises a device for regulating the tension of the chain.

A construction according to this invention is illustrated in the accompanying drawing in which

Figure 1 shows in elevation a complete brake, and

Figure 2 a corresponding plan.

The brake drum 1 is surrounded by two blocks or shoes 2 pivoted at 3 to a fixed point which may be, as shown in the drawing, the gear case 4 of the change speed gear, and shackles 5, $5^1$ are attached to the blocks and normally controlled by springs 6, $6^1$. The shackles 5, $5^1$ are used for guiding the chain, so as to prevent it from shifting.

On the outer circumference of the two blocks 2, a chain 7 extends over the complete circumference, and one end of the chain is connected to the brake rod 8 operated directly from the brake control mechanism (lever 9 *etc.*), and the other end is fixed, for instance by a link 10, to a pivot 11 connected to the gear case 4.

At the pivot point of the two blocks, the chain can be replaced by a link or

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strap or by a turn-buckle or tension device 12 which can be adjusted by the nut 13 normally held in by a helical spring 14.

When applying the brake, the rod 8 is pulled, and the chain 7 exercises a pressure on the blocks 2, which pressure is uniformly distributed over the whole circumference of the brake drum 1 owing to the flexibility of the chain. Therefore the blocks are not applied only at certain parts of the drum in the usual manner which tends to produce such a deformation of the blocks that for the most part they do not come into contact with the surface of the drum.

When the brake is to be released, the chain 7 is slackened, whereupon the springs 6, $6^1$ move the blocks 2 pivoted at 3, away from the surface of the drum.

The turnbuckle 12 enables the length of the chain 7 to be adjusted at will.

With this system, the brake blocks can always act on the whole of the circumference of the brake drum, for which reason the braking is more uniform, and the wear of the parts reduced.

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

1. A brake in which the brake-blocks or shoes are pressed on to the drum by pulling a chain, provided with a chain, the link members of which are flat and pivoted to each other by means of projecting pivot pins, so that the latter take up uniform positions on the blocks and transmit to the latter a uniformly distributed pressure.

2. Apparatus as set forth in Claim 1, in which the chain is interrupted at the pivot point of the brake blocks, and the two sections of the chain are connected by a turnbuckle so that the length of the chain can be adjusted.

3. The brake substantially as described or as illustrated in the accompanying drawing.

Dated this 17th day of December, 1913.

BOULT, WADE & TENNANT,
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Chartered Patent Agents.

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LANCIA & CO.'S Complete Specification.

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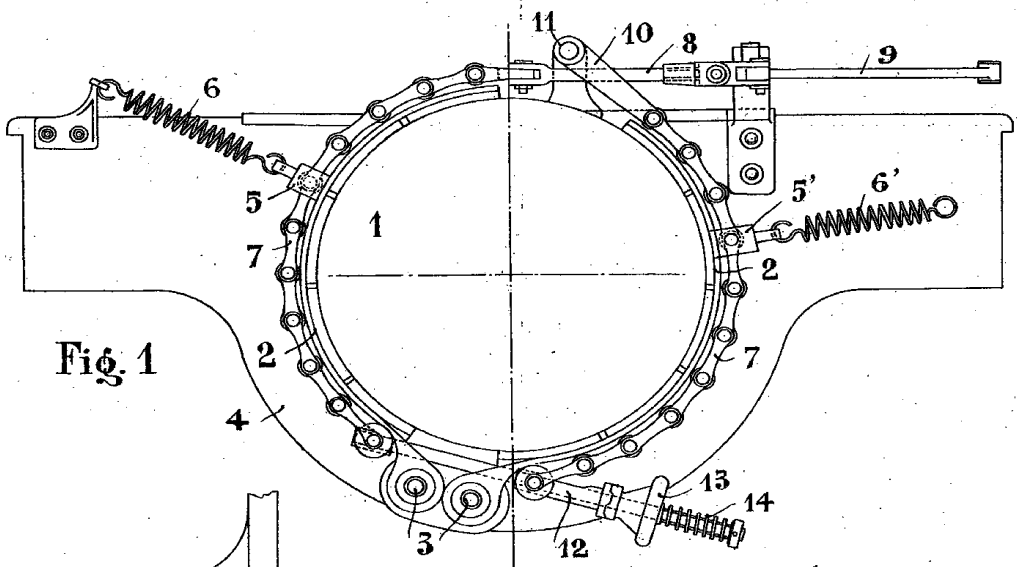


Fig. 1

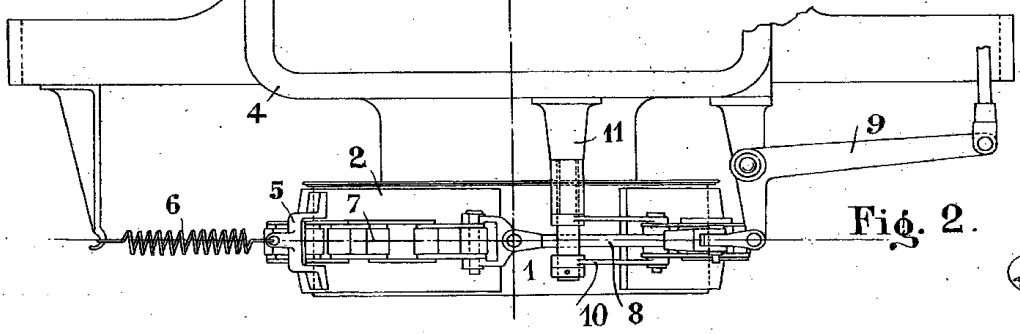


Fig. 2.



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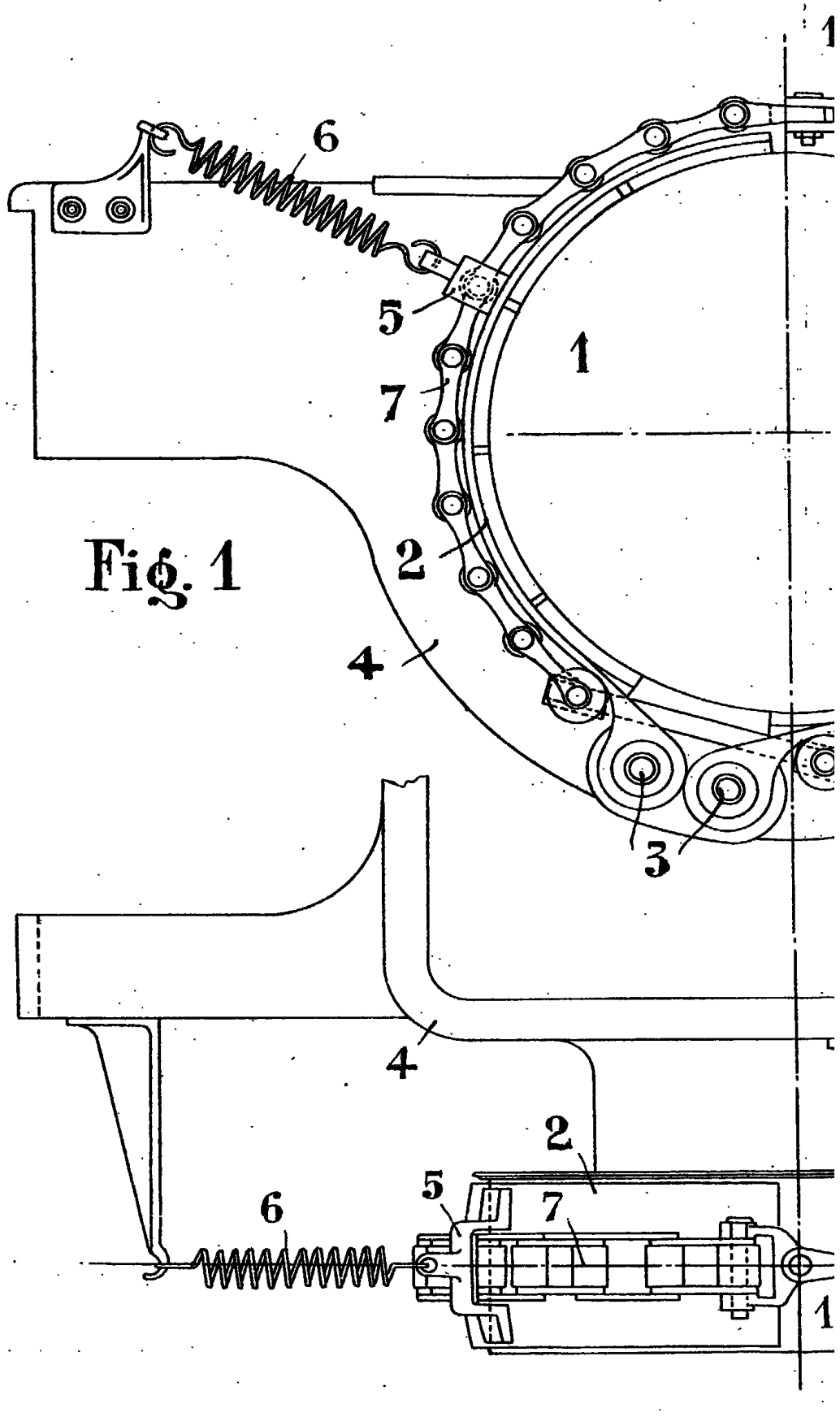


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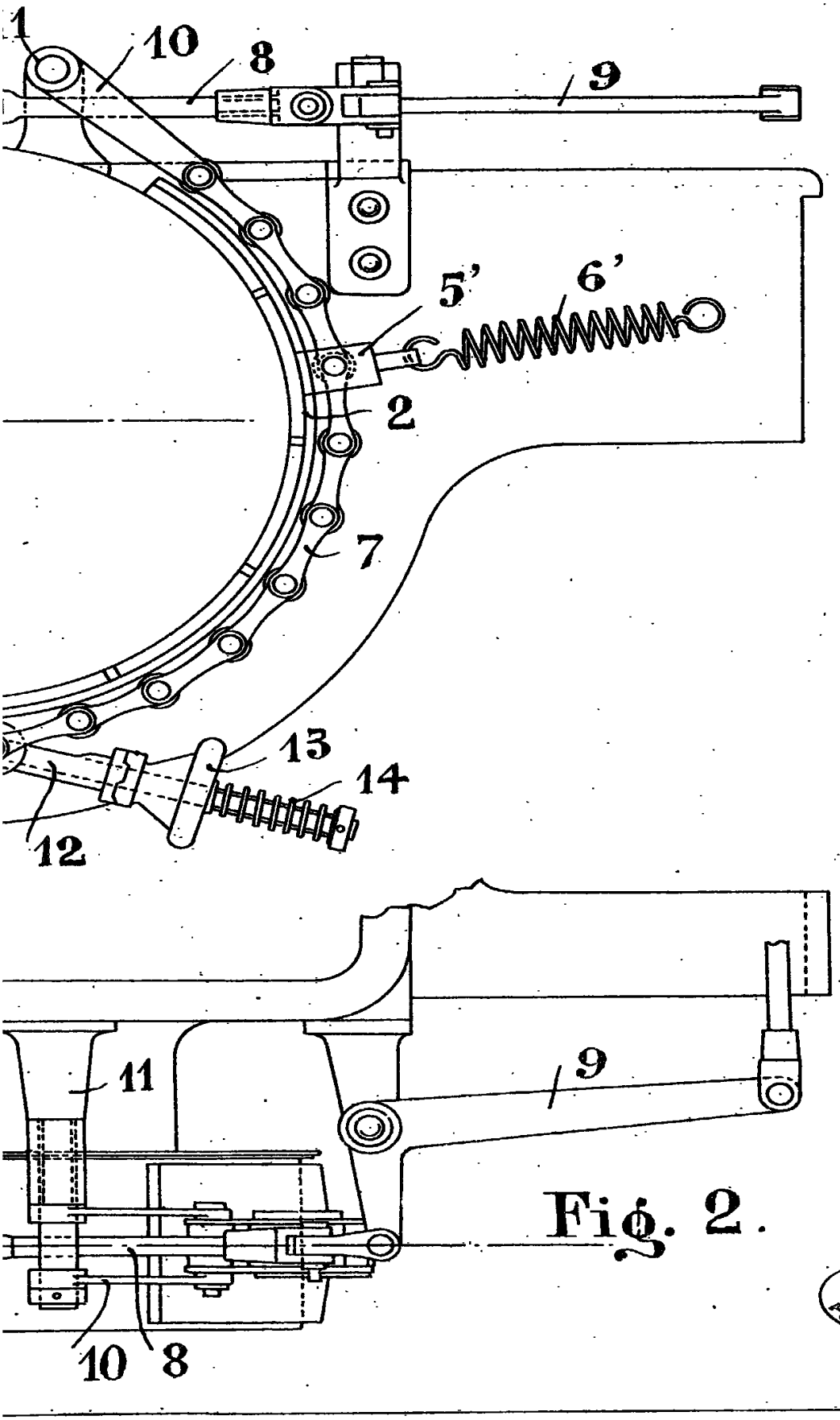


Fig. 2.



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