

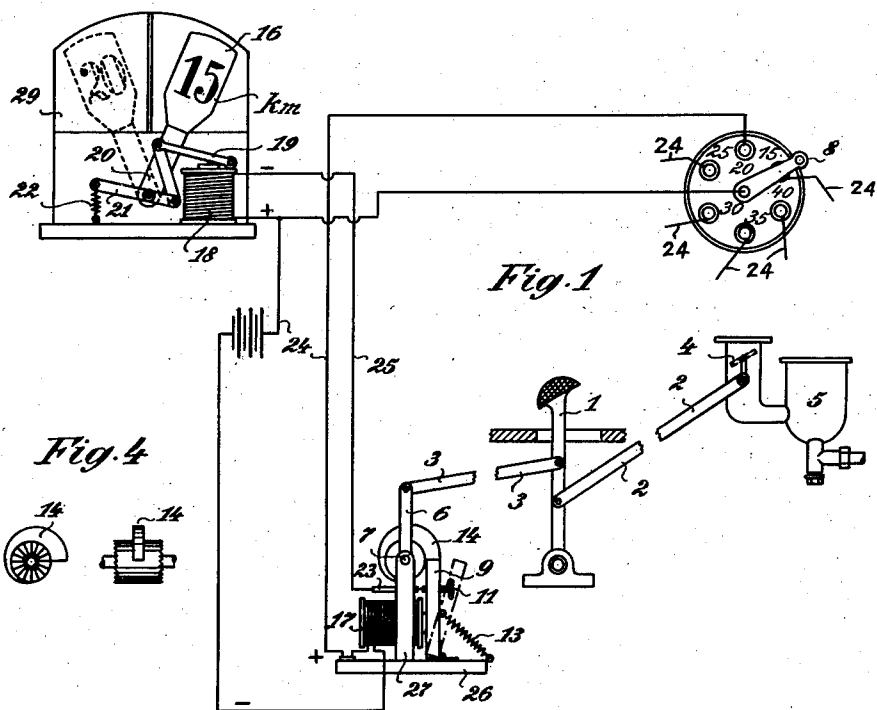
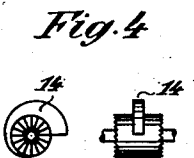
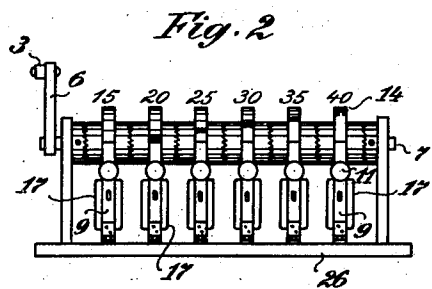
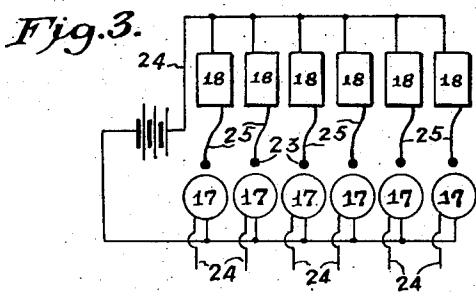
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DEVICE FOR INDICATING AND CONTROLLING THE SPEED OF MOTOR VEHICLES

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DEVICE FOR INDICATING AND CONTROLLING THE SPEED OF MOTOR VEHICLES

Application filed December 2, 1926, Serial No. 152,291, and in Germany February 9, 1926.

The invention relates to a device for indicating and controlling the speed of motor vehicles, by which simultaneously with the setting of a predetermined speed the degree of opening of the throttle valve of the carburettor is correspondingly adjusted and limited. The invention concerns the particular development of the device, according to which the foot-lever controlling the gas-supply is connected on one side with the throttle valve by means of a rod and on the other with an electrical checking device.

The drawings show in Fig. 1 the general view of the device.

Fig. 2 is a side elevation of the electrical checking device.

Fig. 3 diagrammatically illustrates the arrangement of the electromagnets of the respective circuits.

Fig. 4 shows a detail.

A handle 8 for setting and controlling the speed as desired is arranged near the driver's seat. In each position, upon the contact points 15, 20, 25 &c., which are arranged concentrically upon a disc and which correspond to the desired highest speeds, the handle 8 completes a circuit 24, which excites a particular electro-magnet 17. The latter belongs to a group of electro-magnets, the number of which corresponds to the number of contact points 15, 20 &c., and which are mounted upon a base plate 26. Each magnet when excited attracts, against the pull of a spring 13, its corresponding bar 9, which is pivotally located on the base plate in a vertical position. Thereupon the bar is moved into the path of a cam-disc 14, which is one of a group of similar discs, each of which is pivotally located above its corresponding magnet. The several cam discs, the same in number as the magnets 17, are located upon a spindle 7, which is mounted in the brackets 27 of the base plate 26. The discs 14 are fixed upon this spindle in an adjustable manner by means of concentrically arranged radial teeth (Figs. 2 and 4) and their stepped portions are placed in relation to each other (Fig. 2) according to the position of the throttle valve 4 controlling the gas-supply to the carburettor 5. A rod 3, which leads to the foot-lever 1, engages with

a fixed arm 6 of the spindle 7. Between the foot-lever and a lever-arm of the throttle valve 4 a further rod 2 is inserted.

If it is desired that a speed limit, for example of 15 kilometres, shall not be exceeded, the handle 8 is rotated on to the 15 kilometres, contact point. The corresponding magnet 17 is excited in the manner described and the bar 9 moves into the path of the arm disc 14 located above it. If the foot-lever 1 be pushed out in order to open the throttle valve 4 by means of the rod 2, the spindle 7 is rotated with the aid of the rod 3 and the arm 6, until the stepped portion of the disc 14, located above the particular magnet excited, strikes upon the head of the bar 9. By these means a further outward movement of the foot-lever is prevented and the throttle valve opens a limited passage which corresponds to the desired speed.

Upon a second base plate 28 another group of electromagnets 18 is located, the number of which corresponds with that of the groups of magnets 17. The corresponding magnets of the two groups are connected electrically in such a manner that if a magnet 17 of the first group is excited, a contact is completed by the bar 9 thereof, which excites the corresponding magnet, 18 through 11, 23 and the lead wire 25. Thereby a system of rods 19, 20, 21 is influenced in such a manner that a number disc 16 connected with the latter, springs into an aperture of the casing 29, indicating in this manner the several speed limits of the vehicle.

If a greater speed is desired the handle is rotated to another contact point; thereby the magnet hitherto excited is deprived of current, the spring-controlled bar 9 releases the corresponding cam disc, whilst the system of rods 19, 20, 21 brings back the corresponding number-disc to an invisible position of rest by means of a spring 22. The magnet 17 connected with a higher speed contact point pulls its bar into the path of the disc 14 which is now to be brought into operation, and the arm of which is lying displaced backwards in the direction of rotation; this means that the foot-lever can move further outwards and that the valve 4 opens a larger passage,

since the spindle 7 performs a greater partial rotation, until the cam-disc now in operation is checked by the arm of the particular magnet excited.

I claim:

5 1. A device for controlling the speed of motor vehicles, comprising a plurality of electromagnet circuits, an equal number of
10 spring-retained pivoted bars adapted to be attracted by said electromagnets when energized, means for energizing any particular
electromagnet circuit at will, a plurality of cam discs equal in number to the electro-
15 magnet circuits, and co-operating with and limited in their rotation by said pivoted bars,
a radial arm limited in its rotation by said cam discs, a foot lever for controlling the
supply of gas, a throttle valve, and link mechanism connecting said foot lever with the
20 radial arm and with the throttle valve, substantially as described.

2. A device for controlling the speed of motor vehicles comprising a plurality of electro-
25 magnet circuits, an equal number of spring-retained pivoted bars adapted to be attracted by said electromagnets when energized, means for energizing any particular
electromagnet circuit at will, a spindle, a plurality of stepped cam discs adjustably mounted
30 on said spindle, said discs being adapted to be limited in movement by said pivoted bars according to the electromagnet circuit energized, an arm radially mounted on said
spindle, a foot lever for controlling the gas
35 supply, a throttle valve and link mechanism between said foot-lever and said radial arm and throttle valve respectively.

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