Sept. 6, 1938. O. J. GILMAN 2,129,575

SELECTED SPEED REGULATOR

Filed April 10, 1937

Fig. 1.

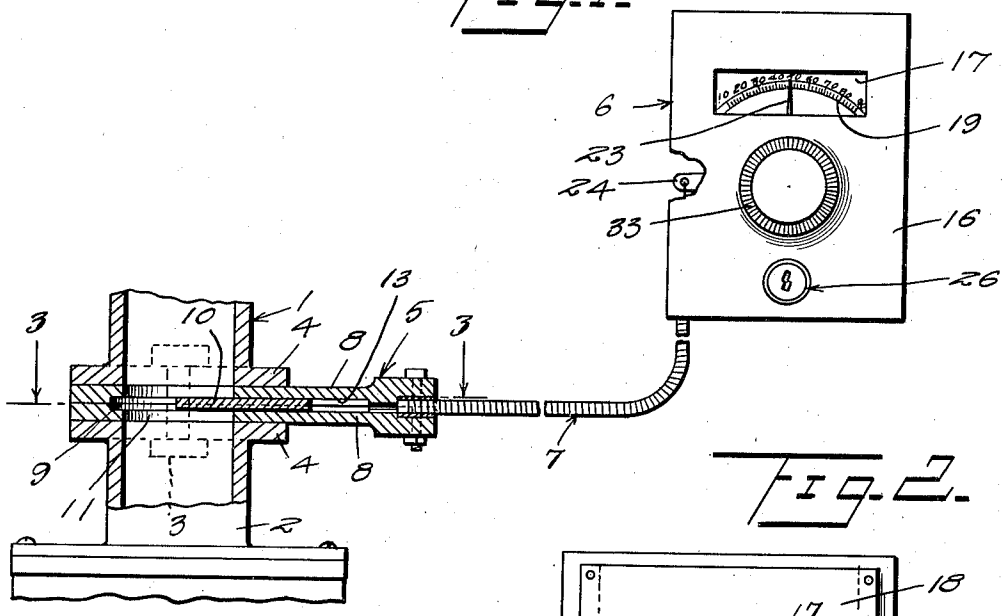


Fig. 2.

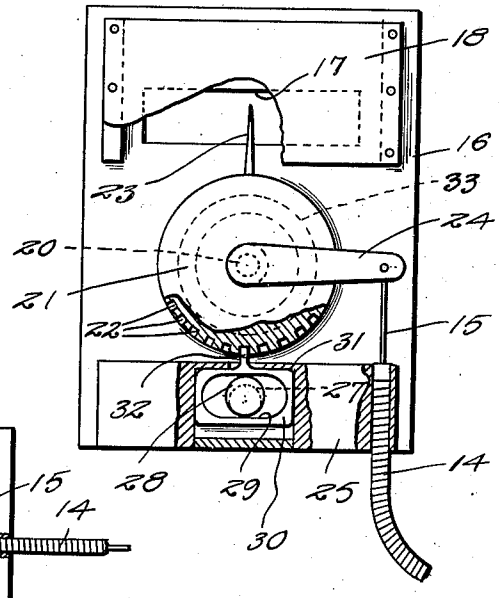
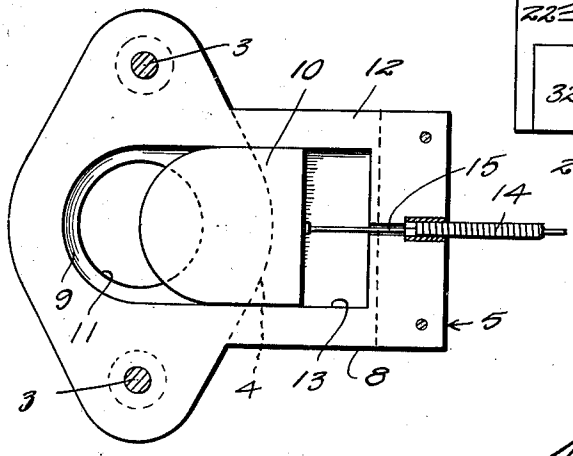


Fig. 3.



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SELECTED SPEED REGULATOR

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2 Claims. (Cl. 116—124)

This invention relates to the class of motor vehicles and pertains particularly to a novel means of controlling the speed of the same.

The present invention has for its primary object to provide a novel device designed for application to a motor vehicle, by means of which the maximum speed at which the vehicle may be operated may be set upon a locked control so that persons operating the vehicle will be prevented from running the same at a greater speed than is desired by the person responsible for the vehicle.

Another object of the invention is to provide in association with a fuel intake regulator adapted to be attached between the vehicle engine intake manifold and carbureter, a control unit which is adapted to be disposed in a position in the vehicle convenient for setting by the operator of the vehicle and coupled with the fuel intake regulating means whereby when the control is set to indicate a desired maximum speed for the vehicle, it may be locked to prevent unauthorized persons changing the speed.

A further object of the invention is to provide a lock controlled motor vehicle mechanism speed regulator which is of simple but rugged construction and which may be inexpensively manufactured and easily and quickly applied to a motor vehicle.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:

Figure 1 is a view illustrating in vertical section a portion of a motor vehicle engine intake manifold pipe and a carbureter coupled therewith, showing the device embodying the present invention inserted between the carbureter and manifold and showing in elevation the control means for the device.

Fig. 2 is a view in elevation of the rear of the control panel for the device.

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1.

Referring now more particularly to the drawing the numeral 1 generally designates a portion of the intake manifold of a motor vehicle engine to which is attached in the usual manner the outlet 2 of a carbureter. The coupling between the carbureter and the intake manifold is usually effected through the medium of bolts 3 which are passed through the adjacent spaced ears or flanges 4 which form integral parts of the carbureter and manifold units.

The device generally comprises the two units 5 and 6 which are coupled together by a Bowden wire which is indicated generally by the numeral 7. The unit 5 constitutes the control valve and consists of the two plate members 8 which are interposed between the bolt connected flanges 4 and which have their opposing faces cut out to form a slide chamber 9 in which the shut-off slide valve 10 is positioned. The plates 8 are provided with alined openings 11 which, when the plates are in position between the flanges 4, are concentric with the fuel passageways 1 and 2 and the slide valve 10 when moved inwardly in the chamber 9 is adapted to close the openings 11 so as to shut off the passage of fuel to the engine. The plates 8 are provided with the lateral integral extensions 12 which have their opposed faces recessed as indicated at 13, and these recesses merge with the recessed portions of the plates so as to receive the shut-off valve 10 when it is drawn outwardly to open the fuel passage. The Bowden wire 7 which consists of the usual flexible casing portion 14 and the wire 15, has one end of the casing secured between the extended portions 12 of the valve unit as illustrated in Fig. 3, and the adjacent end of the wire 15 connected with the slide valve 10 as here shown.

The control unit which is indicated generally by the numeral 6, is placed within the motor vehicle at some point convenient to the operator so that the mechanism speed for operating the vehicle can be changed conveniently. This unit consists of a plate or panel 16 in which a window 17 is formed, and secured to the back of the panel across the window 17 is a plate 18 upon the face of which a scale 19 is placed which is arranged to be seen through the window 17 when viewing the panel 16 from the front.

Below the plate 18 the panel has rotatably secured thereto a shaft 20 which passes through and has secured thereto the wheel 21 in the periphery of the lower half of which is formed a series of notches 22. This wheel carries a pointer 23 which extends upwardly between the plate 18 and the window opening 17, the plate 18 being suitably spaced from the panel 16 to permit the pointer or needle 23 to move freely when the wheel 21 is rotated.

The wheel 21 has attached thereto the crank arm 24 to the free end of which the other end of the Bowden wire 15 is connected, and the other end of the casing 14 is secured to a block 25 which is mounted transversely of the lower portion of the panel 16 upon the back of the latter. This block 25 supports a lock nut which is generally designated 26, and may be of any suitable type, preferably the type in which there is a key-controlled rotatable barrel 27 upon the inner end of which an eccentric disc 28 may be secured. This disc 28 upon the inner end of the lock barrel positions in the elongated slot 29 formed in a follower 30 which is slidably mounted in a recess 31 in the block 25, and this slide carries a latch finger 32 which, when the slide is moved to the upward limit of its path of travel, will engage in one of the notches 22 of the wheel 21. By this means the wheel can be secured in any set position, and when the lock securing means is released the necessary rotary motion can be imparted to the wheel 21 by the knob 33 which is disposed at the front of the panel 16 and mounted upon the shaft 20 to which the wheel is secured.

From the foregoing it will be readily apparent that when the device embodying the present invention is installed, it will be initially set or adjusted so that when the needle 23 is moved to the extreme left position the fuel control slide valve 10 will be in a position to close the fuel passage between the carbureter and the intake manifold. Then by rotating the wheel 21 the needle may be set to 40, 50, or 60, or any of the other speed indications shown on the dial so that the valve plate 10 will be drawn outwardly a sufficient distance to allow only enough fuel to pass into the intake manifold to effect the operation of the engine at the speed designated by the needle. After the needle has been set to the desired speed position, then it may be secured by the operation of the lock nut 26 so as to secure, through the medium of the securing finger 32, the wheel against unauthorized rotation.

From the foregoing it will be readily apparent that the device herein described is of simple construction but may be made to operate effectively to control the speed of a motor vehicle in which it is installed so that the owner of the vehicle, for example, a commercial vehicle or the like or a vehicle which persons other than the owner may drive, can be assured that the vehicle will not be operated at a speed greater than he wishes it to be.

What is claimed, is:

1. Control means for a reciprocable actuator, comprising a panel having a window opening therein, a shaft extending through the panel, a control knob upon one end of the shaft, a body mounted upon the other end of the shaft and upon the opposite side of the panel from the knob, said body having a circular peripheral portion provided with a plurality of sockets, an arm secured to the body and the shaft to rotate therewith, said arm being adapted to be coupled at its free end with the said reciprocable actuating element, a plate disposed in spaced relation with the side of the panel adjacent which said body is mounted and covering the window opening in the panel, a pointer carried by said body and extending into the area between the plate and the panel, said plate having a scale thereon which is viewable through the window opening and across which the pointer moves, and a locking unit carried by the panel and having a reciprocable finger adapted for selective engagement in said sockets.

2. Actuating and control means for a reciprocable unit of the character described, comprising a plate member having window opening therein, a panel secured to and in parallel relation with rear face of said plate and overlying said window opening, said panel carrying a scale viewable through said opening, a shaft extending through the plate beneath said opening and panel, a control knob upon the shaft at the opposite side of the plate from said panel. A crank arm carried by said shaft and adapted for connection with said reciprocable unit, a flat body mounted upon said shaft at the rear of said plate and secured to the shaft to turn therewith, said body having a rounded lower edge provided with a plurality of spaced sockets arranged in said edge concentrically with the shaft, a pointer carried by and extending from the edge of said body and interposed between said scale carrying face of the panel and the plate to be seen through said window, a bar secured to the rear face of said plate beneath the said rounded edge of said body and having a chamber therein in vertical alignment with said shaft, a reciprocable slotted member in said chamber having an upwardly directed keeper finger extending through the top of said bar and adapted for insertion into a socket of said rounded lower edge of the overlying body, and a key actuated rotatable lock unit mounted in said plate and carrying an eccentric cam disposed in the slot of said reciprocable member for effecting the movement of said keeper finger relative to the socketed edge of said body.

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