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1,493,414

T. J. ANDERSON

ACCELERATOR

Filed Sept. 17, 1921

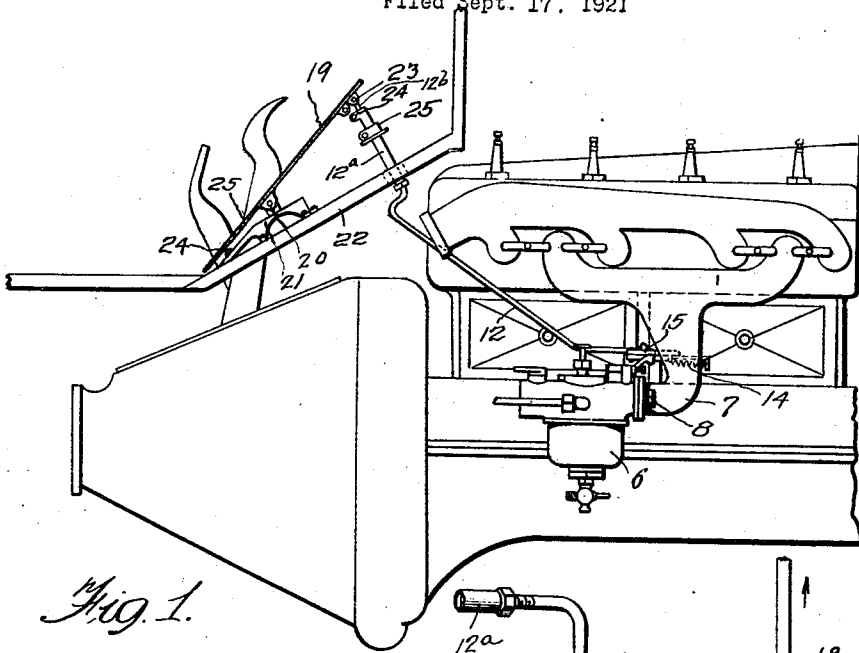


Fig. 1.

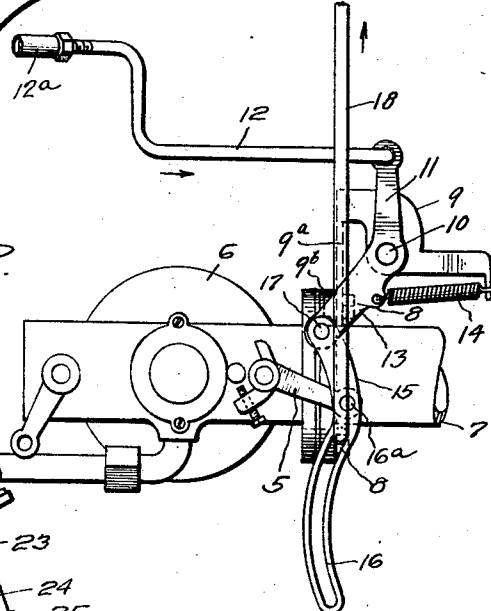


Fig. 2.

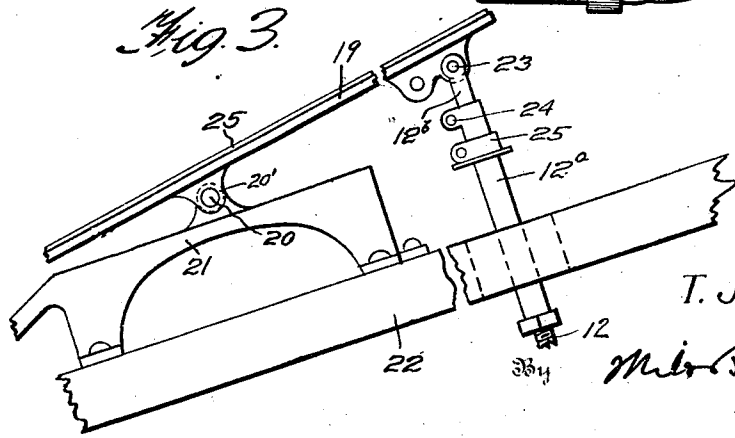


Fig. 3.

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UNITED STATES PATENT OFFICE.

TORVAL J. ANDERSON, OF ROCKDALE, WISCONSIN.

ACCELERATOR.

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To all whom it may concern:

Be it known that I, TORVAL J. ANDERSON, a citizen of the United States, residing at Rockdale, in the county of Dane and State of Wisconsin, have invented new and useful Improvements in Accelerators, of which the following is a specification.

This invention relates to devices for controlling the speed of motor vehicles which are driven by an internal-combustion engine, and more particularly a device generally known as an accelerator, the same consisting of a carbureter throttle control which is operated by a foot pedal.

The invention has for its object to provide a device of the kind stated which can be readily installed on the car, and which is simple in construction and reliable in operation.

The object stated is attained by means of a combination and arrangement of parts to be hereinafter described and claimed, and in order that the same may be better understood, reference is had to the accompanying drawing, in which:

Figure 1 is an elevation of the complete device installed; Fig. 2 is an enlarged plan view of the device minus a foot pedal, and Fig. 3 is an elevation of the foot pedal.

Referring specifically to the drawing, 5 denotes the throttle lever of a carbureter 6, the outlet end of the latter being connected to the usual intake manifold 7. The connected ends of the carbureter and the intake manifold are flanged, and by means of bolts 8 passing through these flanges the connection is made.

One of the bolts 8 serves to support a bracket member 9 by means of an arm 9^a extending from said member and clamped to the back of the manifold flange by being seated beneath the head of said bolt. Flanges 9^b are formed on the member 9, and engage the edges of the flange of the manifold, to prevent the bracket member from becoming disarranged. To the bracket member 9 is pivoted as shown at 10, an angle lever having connected to one of its branches 11 an actuator rod 12, and to its other branch 13 a spring 14 anchored to the bracket member, said spring serving to swing the lever in a direction opposite to that it is adapted to be swung by the rod 12.

To the outer end of the lever branch 13 is connected one end of a link 15 having its other end provided with a curved slot 16,

and intermediate its end, the link 15 is connected to the throttle lever 5, as shown at 16^a. The connection between the link 15 and the lever branch 13 is shown at 17. It will be understood of course, that the connections 16^a and 17 are pivoted connections.

At 18 is shown the usual cross rod which is ordinarily connected to the throttle lever 5, and forms a part of the hand throttle-control mechanism. This rod instead of being directly connected to the throttle lever 5, is connected to the link 15, it being provided with a downturned end which seats loosely in the slot 16. The rod 18 crosses and rests on rod 12 so that it may work freely in slot 16 and not stick or wedge therein.

The throttle lever 5 is operated to open the throttle by pushing the rod 12 in the direction of the arrow in Fig. 2. This movement of the rod 12, swings the lever arm 13 in such a direction that, through the link 15, the lever 5 is swung to throttle-opening position. The rod 18 does not interfere with this operation, due to its sliding connection with the link 15. The throttle can also be opened by pulling the rod 18 in the direction of the arrow in Fig. 2, whereupon the link 15 swings the throttle lever 5 as before. The spring 14 operates in both instances to retract and restore the parts to their normal position.

The rod 12 is operated by a foot pedal 19, pivoted as shown at 20, to a support 21 mounted on the foot board 22 of the car, the latter being apertured for the passage of the rod to the forward end of the foot pedal to which it is pivotally connected as shown at 23. The rear end of the support 21 carries a back stop 24 for the foot pedal 19 to permit the use of the latter as a foot rest. The pivot 20 runs through a bushing 20'.

The foot pedal end of the rod 12 is a tubular section 12^a which telescopically seats a stem 12^b by which the connection 23 with the foot pedal is made. A suitable clamping means 24 locks the parts 12^a to 12^b together. The purpose of this structure is to permit lengthening and shortening of the rod 12 for the proper adjustment of the device.

The part 12^a carries an adjustable abutment 25 to limit the travel of the rod 12, in the direction to close the throttle, by engaging the foot board 22.

The foot pedal 19 may also have a rubber

facing 25', to prevent slipping of the foot.

The closing movement of the throttle valve is not dependent entirely on the spring 14, because if the latter should break, or
5 any parts of the accelerator mechanism stick, the throttle valve can be opened or closed by the rod 12 actuated by foot pedal 19. Referring to Fig. 2, it will be noted that the slotted end of the link 15 projects, and hence
10 it can be grasped and operated manually to open and close the throttle valve. This facilitates adjustment of the carbureter, as the link 15 is close to the carbureter needle valve or other parts to be adjusted, and the throttle valve can be opened, and closed, without
15 the operator leaving the carbureter and operating the foot pedal or the throttle lever on the steering wheel.

The accelerator is designed more particularly for a Ford automobile, and it can
20 readily be installed without extra bolts and without any changes in the carbureter, and the hand throttle lever on the steering wheel can be set in any position without danger of

the throttle valve being forced to closed position by the spring 14, the latter, as pointed
25 out hereinbefore not being depended upon altogether for closing the throttle valve. The spring may be a very weak one as the throttle valve can be opened and closed by
30 the pedal 19.

I claim:

The combination with a carbureter throttle lever, of an angle lever, a link connected
35 at one end to one branch of the angle lever, an actuator rod connected to the other branch of the lever, a connection between the link and the throttle lever intermediate the ends of the link, said link having a longitudinal slot in its end which is opposite the
40 first mentioned end, and an actuator rod having a sliding connection with the slotted end of the link, said rod extending across and resting on the first-mentioned actuator rod.

In testimony whereof I affix my signature.
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TORVAL J. ANDERSON.