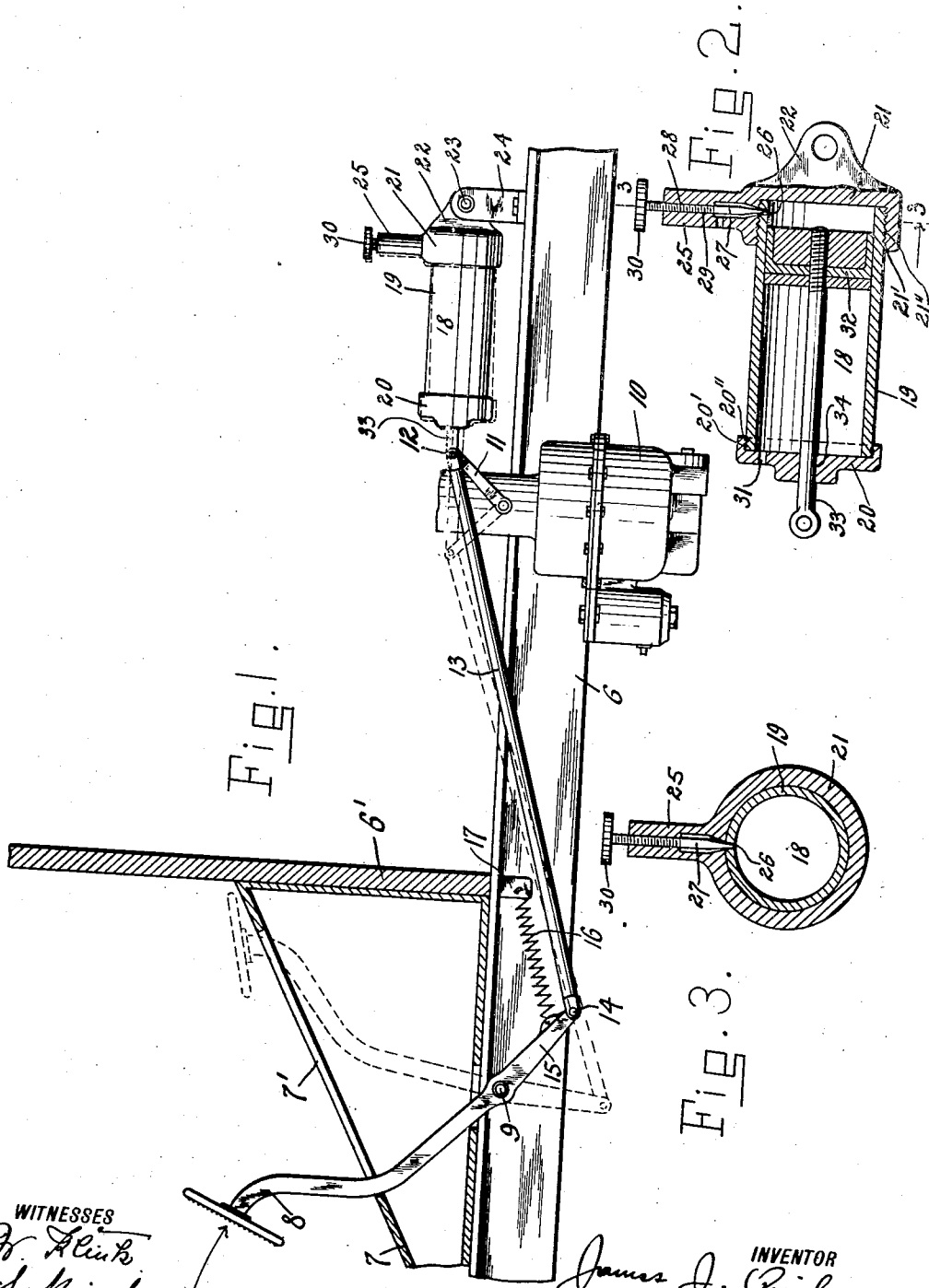


1,043,868.

J. J. QUIGLEY.
THROTTLE CONTROLLER.
APPLICATION FILED OCT. 9, 1911.

Patented Nov. 12, 1912.



WITNESSES
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THROTTLE-CONTROLLER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES J. QUIGLEY, a citizen of the United States, and resident of Mamaroneck, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Throttle-Controllers, of which the following is a specification.

The present invention relates to improvements in controlling means for throttles, and more particularly to controllers for the throttles of internal combustion engines used for propelling motor vehicles. These throttles are usually actuated by an accelerating mechanism comprising a rod connected with the throttle at one end, and at its other end with a pedal, the so-called "accelerator pedal," which is actuated by the foot of the driver. Normally a spring, engaging either the accelerator rod or the pedal, closes automatically the throttle to a predetermined minimum. For high duty, such as up-grades or fast running, the accelerator mechanism is operated to open the throttle more widely. It is to be noted that, when the car runs over a bad, or more particularly over a rough road, the shocks or jars to which the spring supported body of the vehicle is subjected are naturally transmitted to the driver of the car. Obviously, when the foot of the driver rests upon the accelerator pedal, such shocks and jars will be transmitted to this pedal, whereby the throttle will be accordingly opened and closed in quick succession against the will of the driver, thereby resulting in sudden changes in the speed of the movement of the car, which is very objectionable.

One of the objects of the present invention is to provide an attachment for the controlling mechanism of throttles which obviates the defects above mentioned in that it prevents too sudden movement of the accelerator rod in one direction when going over a rough road.

With these and other objects in view, which will more fully appear as the nature of the invention is better understood, the same consists in the combination, arrangement and construction of parts hereinafter fully described, pointed out in the appended claim and illustrated in the accompanying drawings, it being understood that many changes may be made in the size and proportion of the several parts and minor details of construction without departing from

the spirit or sacrificing any of the advantages of the invention.

One of the many possible embodiments of the invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a section taken through a portion of the front part of an automobile provided with the attachment forming the subject matter of the present invention, some of the parts being shown in elevation; Fig. 2 is a central section taken through the attachment; and Fig. 3 is a section taken on line 3—3 of Fig. 2.

In the drawings, the numeral 6 indicates a portion of one of the side members of an automobile frame, upon which is mounted a vertical dash board 6', in front of which is arranged, under the usual hood, the motor of the automobile, not shown in the drawings. A foot board 7 is arranged at an acute angle to the dash board, and provided with a slot 7', through which projects the upper end of the accelerator pedal 8, which is fulcrumed at 9 to the frame, or to any other suitable support.

The numeral 10 designates a carbureter for an internal combustion engine, provided with a throttle which is connected with a throttle lever 11 to adjust the same, and to this lever is pivoted at 12 one end of an accelerator rod 13, its other end being in a similar manner attached at 14 to the arm 15 of the pedal. A spring 16, fastened to a lug 17 and to the arm 15 of the pedal, serves to hold the accelerator rod 13 in its outermost, and thus the pedal in its normal uppermost position, whereby the throttle will be held closed to a predetermined minimum.

Thus far the construction and operation of the mechanism do not vary in any essential way from those heretofore known and used.

To prevent the vibrations of the accelerator rod 13, a dash-pot 18 is provided. This dash-pot comprises a cylinder 19, closed by heads 20 and 21, which are held upon said cylinder in any suitable manner, for instance by providing said heads with screw threads 20' and 21', respectively, which mesh with the outer screw threads 20'' and 21'' at the ends of the cylinder 19. The head 21 terminates in a lug 22, which is pivoted at 23 to a standard 24, the latter being supported by the car frame. A tubular extension 25 upon the head 21 serves to admit air through an opening 26 in the outer end of

the cylinder to the latter, the size of said opening being controlled by a needle-valve 27, having a screw threaded stem 28, in engagement with the inner screw threads 29 of the tubular extension 25. A milled knob 30 is attached to or made integral with the stem of the needle valve, and is arranged within the hood of the motor of the automobile, whereby ready access can be had to said knob if an adjustment of the opening 26 in the cylinder of the dash-pot becomes necessary. A small vent 31 is, preferably, provided in the cylinder head 20 for a purpose which will be described hereinafter. A piston 32 of any suitable design is reciprocally arranged in the cylinder 19, its piston rod 33 projecting through an opening 34 in the cylinder head 20, and being pivotally connected to the outer end of the accelerator rod 13.

The operation of this device is as follows: The throttle can be opened to any desired degree by placing the foot upon the pedal and causing a movement of the same around its pivot in the direction of the arrow, shown in Fig. 1 of the drawings. The normal position of the pedal and the parts connected therewith is shown in full lines in Fig. 1 of the drawings. When the pedal moves to the dotted position shown in Fig. 1 of the drawings, the dash-pot will offer no resistance to the movement of the accelerator rod 13, since the air in the piston of the dash-pot will escape through the vent 31 in the head 20 thereof. When the car travels over a rough road and the operator has his foot upon the pedal, it is obvious that when

due to a jar or shock received by the spring supported body, the foot of the operator is thrown off the pedal, the accelerator rod will not return suddenly to the position shown in full lines in Fig. 1 of the drawings as the dash-pot will prevent a too sudden motion of the same toward its normal position, if the needle-valve 27 is set to the proper position, or in other words, the vehicle will not slow down suddenly against the will of the operator.

It will be observed that the device is in fact a shock absorber for the accelerator mechanism, and may consist of a dash-pot of any suitable type and design, whose function it is to prevent too sudden motion of the accelerator rod and the parts connected therewith from an open to a minimum position of the throttle.

What I claim is:—

In an automobile, the combination with a throttle, of a lever secured thereto, a dash-pot pivoted to a fixed support, the piston rod of said dash-pot being pivotally attached to said lever, an accelerator rod pivoted at one end to said lever, an operating pedal pivotally connected to the other end of said accelerator rod, and a spring acting upon said pedal to hold the said throttle in its normal position.

Signed at Mamaroneck, in the county of Westchester and State of New York, this 30th day of September, A. D. 1911.

JAMES J. QUIGLEY.

Witnesses:

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