Jan. 30, 1923. 1,443,510

W. H. THOMAS.
FOOT ACCELERATOR FOR MOTOR VEHICLES.
FILED OCT. 21, 1921.

Fig. 1

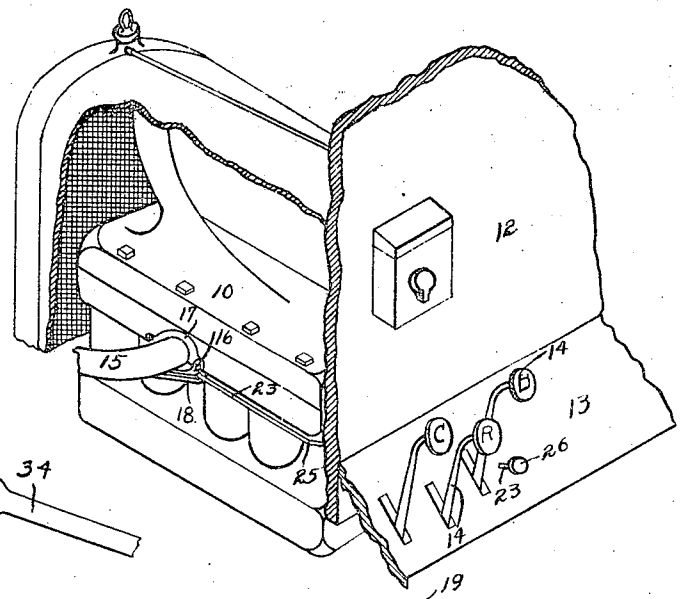


Fig. 2

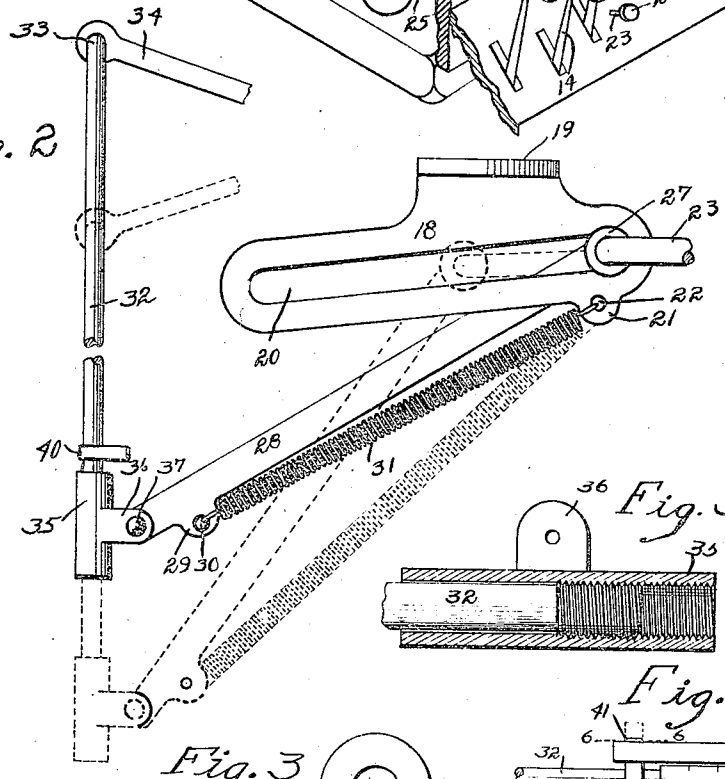


Fig. 5

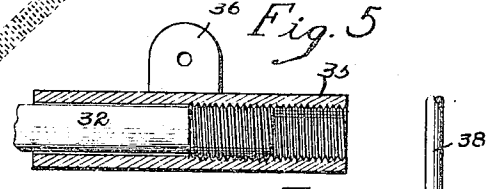


Fig. 4

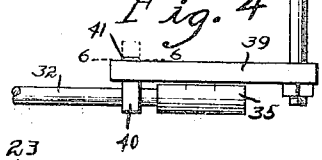


Fig. 3

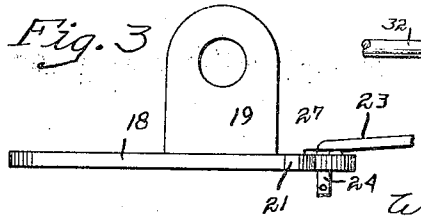
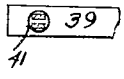


Fig. 6



Inventor
Walter H. Thomas

Witness
Fred Latta

By

By Bair & Freeman
Attorneys

Patented Jan. 30, 1923. 1,443,510

UNITED STATES PATENT OFFICE.

WALTER H. THOMAS, OF SPENCER, IOWA.

FOOT ACCELERATOR FOR MOTOR VEHICLES.

Application filed October 21, 1921. Serial No. 509,329.

To all whom it may concern:

Be it known that I, WALTER H. THOMAS, a citizen of the United States, and a resident of Spencer, in the county of Clay and State of Iowa, have invented a certain new and useful Foot Accelerator for Motor Vehicles, of which the following is a specification.

The object of my invention is to provide a foot accelerator of very simple and inexpensive construction, which will be efficient in operation and is for use with motor vehicles.

A further object is to provide a foot accelerator of the kind mentioned, which can be readily and easily attached to a motor vehicle and can be easily adjusted after installation.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which:

Figure 1 shows a sectional view of the front end of a motor vehicle, parts being broken away, the engine being equipped with a foot accelerator embodying my invention.

Figure 2 shows a top or plan view of the accelerator, parts being broken away.

Figure 3 shows a side elevation of the supporting bracket of the device.

Figure 4 shows a top elevation of the parts of the device, which are connected with the ordinary throttle control rod.

Figure 5 shows a detail, sectional view through part of the device, illustrating the method of adjustment thereof; and

Figure 6 shows a sectional view taken on the line 6—6 of Figure 4.

In the accompanying drawings, I have used the reference numeral 10 to indicate generally the engine of a motor vehicle, having the radiator 11, the dash 12 and the foot board 13.

Extending through the foot board are the controlling levers 14. Extending from one side of the water jacket of the engine is the water pipe 15, which is secured to the water jacket by means of bolts 16, extending through a flange 17.

My improved foot accelerator includes a bracket, comprising a substantially flat plate 18, having at one side a flange 19, extending at right angles from the body of the plate. The plate 18 of the bracket has an elongated slot 20 and has at one edge, near what I would call its rearward end, a laterally extending ear 21, in which is a hole 22. The flange 19 is designed to be mounted on one of the bolts 16, as shown in Figure 1, and the plate 18 is slightly inclined from its rearward end downwardly and forwardly. The parts are so arranged that when the plate is installed, the longitudinal axis of the slot 20 is inclined from its rearward end, downwardly, forwardly and laterally from the engine.

A rod 23 has one end bent and extended through the slot 20, as at 24, and is thence inclined upwardly and rearwardly and extended through the foot board 13. The rod 23 has a slight bend at 25 to clear the engine.

On the upper rear end of the rod 23 is a head 26 adapted to be engaged by the foot for operating the foot accelerator.

On the bent portion 24, just above the plate 18, is a collar 27, which slides on the plate 18. A bar or link 28 has its rearward end pivoted to the lower end of the extension 24 and extends normally from thence forwardly and slightly laterally away from the engine, as shown for instance by full lines in Figure 2.

The link or bar 28 has near its forward end, an ear 29, in which is a hole 30. A coil spring 31 is conected to the ear 29 and the ear 21.

Extending across the engine from one side to the other between the cylinders is a rod 32, having one end bent downwardly, as at 33, and projected through a hole in a throttle valve controlling arm 34, which is connected with the throttle valve of the carburetor. On the opposite end of the rod 32, there is mounted by a screw-threaded connection a sleeve 35, having a rearwardly extending ear 36, to which the forward end of the link or bar 28 is pivoted, as at 37.

My accelerator is designed to be mounted on a motor vehicle, having a throttle control rod 38, such as is shown in Figure 4, extending alongside the steering post. The steering post is omitted from Figure 1 for the purpose of better illustrating the other parts.

On the throttle rod 38 is fixed an arm 39, which normally extends downwardly and

toward the engine 10. Mounted on the rod 32 is a flat cotter pin 40, which is extended through a suitable opening in the arm 39 and bent over, as shown at 41.

This flat cotter pin 40 serves to frictionally grip the rod 32 and to hold the same tightly.

It will be understood that there is sufficient play of the parts at the points where they are pivotally connected to permit the proper operation of the device.

In the practical use of my improved foot accelerator, after the parts have been assembled, as hereinbefore described, it will, of course, be understood that the hand lever for controlling the throttle valve may be manipulated in the ordinary way.

The rotation of the rod 38 will cause the rod 32 to be moved longitudinally for controlling the throttle.

In this connection, it may be noted that the arm 39 has preferably a round hole, through which the arms of the flat cotter pin 40 are inserted.

When the foot accelerator is in use, the spring 31 normally holds the portion 24 of the rod 23 at the rearward end of the slot 20, which tends to hold the rod 32 in position for holding the throttle closed.

When the foot is pressed on the head 26, the rod 23 is forced forwardly. The movement of the rod 23 moves the portion 24 slidably in the slot 20, thereby forcing the rear end of the link 28 forwardly.

Insomuch, as the rod 32 is held against forward movement by its connection with the arm 39, it will be seen that the forward end of the link 28 will be forced laterally to the position, shown by the dotted lines in Figure 2 for moving the rod 32 substantially longitudinally and thereby opening the throttle valve.

The spring 31 tends consequently to return the parts to their normal position, so that the throttle valve can be very accurately controlled.

In the usual installation, the parts are so arranged that the link 28 rests just below the plate 18 and the spring 31 rests alongside said plate 18, when the parts are in normal position.

My foot accelerator is of very simple construction and is readily and easily assembled and installed on a car. Any desired adjustment can be readily given to the throttle valve and parts by lifting the end 33 of the rod 32 from the arm 34 and screwing the rod 32 farther into or farther out of the sleeve 35.

Some changes may be made in the construction and arrangement of the various parts of my improved foot accelerator, without departing from the real spirit and purpose of my invention, and it is my purpose to cover by my claims, any modified forms of structure or use of mechanical equivalents, which may be reasonably included within their scope.

I claim as my invention:

1. A foot accelerator comprising a bracket, provided with an elongated slot, a supporting element on said bracket, an actuating rod, having a portion slidably mounted in said slot, a link pivoted to said rod, a controlling rod, a member adjustably mounted thereon and pivoted to said link, and a spring secured to said link and to said plate near one end of said slot.

2. A foot accelerator comprising a bracket, having substantially the form of a plate, provided with an elongated slot, a supporting element on said bracket, an actuating rod, having an end portion slidably mounted in said slot, a link pivoted to said end portion, a controlling rod, a sleeve mounted thereon by a screw-threaded connection and pivoted to said link, and a spring secured to said link and to said plate near one end of said slot, and means for connecting said last rod with the arm on a throttle control rod.

3. In a foot accelerator, a bracket having the form of a plate provided with an elongated slot, a flange on said plate arranged substantially at right angles to the body thereof, an actuating rod having a head on one end and having at its other end a bent portion slidably received in said slot, a collar on said portion on one side of said slot, a link pivoted to said portion on the other side of said slot, said plate having an ear, an ear on said link, a spring connected with said ears, a throttle control rod, a screw-threaded member on said throttle control rod pivoted to said link, an arm designed to be mounted on said throttle control rod, and a flat cotter pin extended around said last rod and pivotally connected with said last-described arm.

Des Moines, Iowa, June 21, 1921.

WALTER H. THOMAS.