Sept. 5, 1950 H. B. RODD 2,521,606

ACCELERATOR PEDAL ATTACHMENT

Filed April 15, 1947

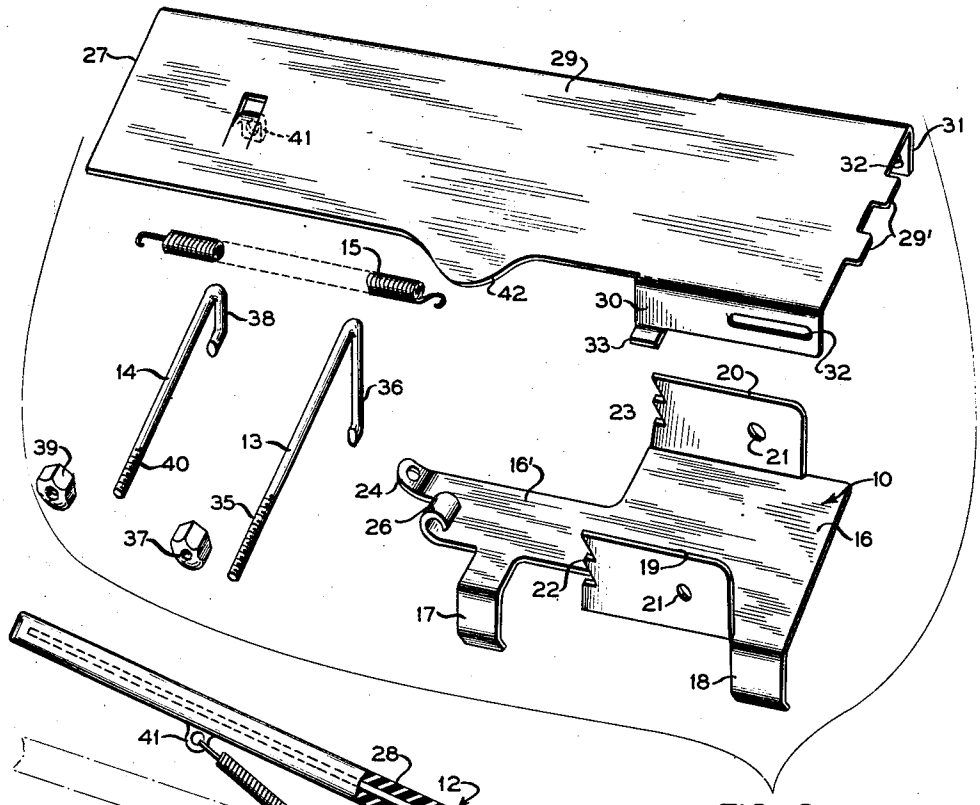


FIG. 2

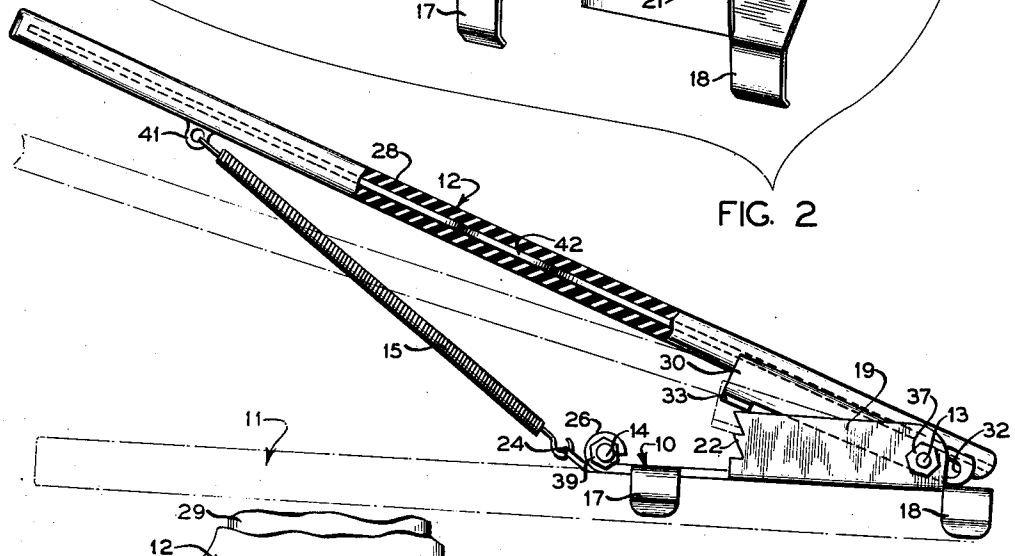


FIG. 1

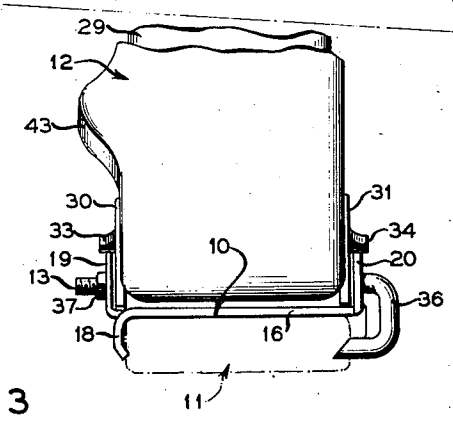


FIG. 3

INVENTOR.
H. B. RODD

BY

A. Yates Dowell

ATTORNEY

Patented Sept. 5, 1950 2,521,606

UNITED STATES PATENT OFFICE

2,521,606

ACCELERATOR PEDAL ATTACHMENT

Houston B. Rodd, Trona, Calif.

Application April 15, 1947, Serial No. 741,508

6 Claims. (Cl. 74—513)

1

This invention relates to improvements in adjustable foot operated throttle controls for vehicle engines and particularly to an improved adjustable attachment for a conventional accelerator foot pedal.

The accelerator pedals conventionally provided in automotive vehicles and particularly in automobiles have only a single range of operative movement and no provision for adjusting them to different types of shoes worn by vehicle drivers or to change the range of movement to relieve muscular fatigue during long continuous periods of driving.

It is among the objects of the present invention to provide an adjustable accelerator pedal attachment which can be quickly and easily set to operate at different angles to accommodate the pedal to shoes of different types, and particularly to different heel heights of shoes worn by persons driving the vehicle to which the device is applied, which is simple and economical to manufacture, easy to install by clamping it to a conventional accelerator pedal, and which is quickly and easily adjustable by the operator to any one of several different operative angles while the vehicle to which it is applied is in motion.

Other objects and advantages will become apparent from a consideration of the following description in conjunction with the accompanying drawing, wherein:

Fig. 1 is a side elevational view of the improved attachment applied to a conventional accelerator pedal, a portion being broken away and shown in section to better illustrate the construction thereof:

Fig. 2, an exploded perspective view of the various components of the attachment; and,

Fig. 3, an end elevational view of a fragmentary portion of the attachment looking toward the right hand end as viewed in Fig. 1.

With continued reference to the drawing, the attachment comprises, in general, a base plate 10 engageable with the conventional accelerator pedal 11, a foot plate 12 pivotally connected at one end to the base plate 10 by a pivot pin 13, an adjustable clamp pin 14 and a tension spring 15 connected between the base plate 10 and the under side of the foot plate 12.

The base plate 10 is preferably formed of suitable sheet metal and comprises a rectangular portion 16 which overlies the rearward or heel portion of the conventional pedal 11 and is of substantially the same width as the conventional accelerator pedal, and an extension or tongue 16' of less width than the portion 16 extending

2

from the portion 16 toward the toe end of the conventional pedal when the device is in operative position and having its edges offset inwardly from the corresponding edges of the portion 16.

A tab 17 extends outwardly and downwardly from one edge of the extension 16' and a similar tab 18 extends downwardly from one longitudinal edge of the rectangular portion 16. These tabs are in longitudinal alignment and have their lower ends bent somewhat inwardly to firmly grip the corresponding side of the pedal 11. A pair of rectangular extensions 19 and 20 extend upwardly from the longer edges of the rectangular portion 15 and are disposed substantially at right angles to the rectangular portion adjacent the end thereof from which the tab 18 depends. Each of these rectangular extensions is apertured, as indicated at 21, and is provided at its forward end with a plurality of stepped notches 22 and 23 respectively. In the arrangement shown there are two notches provided in the forward end of each rectangular extension and each of these notches has a bottom edge substantially parallel to the surface of the rectangular portion 16, the top edges of the extensions also being substantially parallel to this rectangular portion. At its end remote from the portion 16 the tongue or extension 16' is provided with a forwardly extending apertured lug 24 and at one side of the lug with a pin receiving elongated sleeve or eye 26, the corner of the extension between tab 17 and the adjacent end of sleeve 26 being cut away to provide clearance for a nut threaded onto a bolt or pin extending through the sleeve.

The foot plate 12 comprises a sheet metal core member 27 of spring steel or similar resilient material having a covering 28 of rubber or some similar material which preferably overlies both surfaces and both edges thereof. The core 27 has a flat generally rectangular portion 29 with two elongated rectangular extensions 30 and 31 depending therefrom along the longer opposite edges at the heel end thereof, these extensions 30 and 31 being disposed substantially at right angles to the surface of the portion 29 and spaced apart a distance such that they fit between the extensions 19 and 20 on the base plate 10. The core 27 is also provided with two small tabs 29' at its pivoted end to easily facilitate the anchoring of the rubber covering 28. These extensions 30 and 31 are provided in their end portions at the heel end of the core member with elongated apertures 32 which are preferably substantially parallel to the generally rectangular portion 29, and at their forward ends with lat-

erally extending lug members 33 and 34 which overlie the forward end portions of the extensions 22 and 23 when the member 12 is operatively associated with the member 10, as shown in Fig. 3. The tongue 16' lies between the lug members 33 and 34 so that the lug members do not contact the base plate 10 when the foot plate is in lowered position so that the foot plate will not be obstructed by the base plate.

Forming the core member 27 of spring steel or similar resilient material has several advantages among which is the elimination of the danger of the foot plate being permanently bent by heavy foot pressure on the accelerator when the foot plate is held in an elevated position relative to the conventional accelerator pedal to which it is attached.

The pivot pin 13 has an externally screw threaded end portion 35 and at the opposite end a hook portion 36 which may conveniently be formed by bending the end portion of the pin to a position substantially at right angles to the major portion of the pin and then bending the tip of this end portion to a position substantially parallel to the major portion of the pin and sharpening the end of the tip portion. This pin 13 is inserted through the apertures 21 in the extensions 22 and 23 and through the elongated apertures 32 in the extensions 30 and 31 of the member 27 to pivotally connect the members 10 and 12 together. The hook portion 36 is extended downwardly and is of a size to bring the sharpened tip end portion against the side of the conventional accelerator pedal 11, as shown in Fig. 3. A nut 37 is then threaded upon the screw threaded end portion 35 of the pin 13 to force the sharpened tip end portion of the pin into the rubber covering of the accelerator pedal and tightly clamp the pedal between the hook 36 and the oppositely disposed depending tab 18.

The pin 14 is provided with a hook 38 similar to the hook 36 of the pin 13 but somewhat smaller in size. This pin is inserted through the elongated eye or sleeve 26 formed on the member 10 and a nut 39 is threaded on the screw threaded end portion 40 thereof and bears against the adjacent end of the sleeve 26 to force the sharpened tip end portion of the hook 38 into the side of the pedal 11 and clamp the pedal tightly between this hook and the oppositely disposed depending tab 17. The two screw threaded hook pins 13 and 14 thus firmly connect the adjustable attachment to the conventional accelerator pedal.

The coil tension spring 15 has one end thereof hooked into the lug 24 on the base plate 10 and has its other end hooked into an apertured lug 41 struck out from the center of the core 27 and depending therefrom, the spring being arranged to exert a continuous downward and rearward pull on the toe end of the foot plate 12. Intermediate its length the foot plate core 27 is provided with a lateral extension 42 which, when overlaid with the rubber covering 28, provides a lifting tab or knob as indicated at 43 in Fig. 3.

The attachment may be adjusted as follows, assuming that the foot plate 12 is in its lowermost position, in which it is substantially parallel to the accelerator pedal 11, and it is desired to raise the foot plate to its first angular position above the foot pedal, the toe portion of the operator's shoe is placed beneath the lift tab 43 and the foot plate 12 is raised against the force of spring 15 until the lugs 33 and 34 are opposite the lowest step in the front end portions of the extensions 19 and 20. The foot may then be moved somewhat rearwardly and the lifting pressure released whereupon the spring 15 will force the lugs into the lowest notch to rest upon the lowest horizontal step and will maintain the parts in this operative position until the adjustment is changed by the operator. In the same manner the foot plate 12 may be raised to the next step in the front ends of the extensions 19 and 20 or may be raised to its extreme angular position in which the lugs 33 and 34 rest upon the forward end portions of the top edges of the extensions 19 and 20.

When it is desired to lower the foot plate 12 to its lowermost position relative to the conventional pedal 11 the foot plate is moved somewhat forwardly by heel pressure against the heel end thereof, moving the lugs 33 and 34 forwardly of the front ends of the extensions 22 and 23 whereupon the spring 15 will pull the foot plate 12 down until the lugs 33 and 34 rest upon the surface of the portion 16 of the member 10 at the front ends of the extensions 22 and 23. From this lowermost position the foot plate 12 may be raised to any desired position of angular adjustment in the manner indicated above.

The improved attachment is of extremely simple and inexpensive construction having only seven different parts including the nuts for the pins 14 and 15, is easy to install by merely threading the nuts upon the screw threaded portions of the corresponding clamping pins, and is extremely easy to adjust to any desired operating position even when the vehicle to which it is applied is in motion.

It will be obvious to those skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof, and therefore the invention is not limited by that which is shown in the drawing and described in the specification, but only as indicated in the appended claims.

What is claimed is:

1. An accelerator pedal attachment comprising a base plate attachable to the heel portion of an accelerator pedal, a foot plate having a heel portion pivotally connected to said base plate, a resilient tension member operatively connected between said base plate and said foot plate, said base plate comprising a thin metal member having a portion shaped to overlie the heel portion of an accelerator pedal, means for clamping said base plate to the accelerator pedal, a pair of upstanding extensions disposed one along each longitudinal edge of said pedal overlying portion and having stepped notches at corresponding ends thereof, said foot plate comprising a thin metal core member and a covering therefor, a pair of depending extensions at one end of said core member fitting between said extensions on the base plate and having elongated apertures therein and projecting lugs engageable in the stepped notches in said upstanding extensions to retain said foot plate in different postions of angular adjustment relative to a supporting accelerator pedal, said clamping means including an element passing through said base plate and said foot plate and pivotally connecting the same.

2. An accelerator pedal attachment comprising a base plate attachable to an accelerator pedal, a foot plate pivotally connected to said base plate, a resilient tension member operatively connected between said base plate and said foot plate, said

base plate comprising a member having a portion shaped to overlie an accelerator pedal, means for clamping said base plate to an accelerator pedal, and an upstanding extension disposed on said base plate and having stepped portions, said foot plate comprising a core member and a covering therefor, a depending extension on said core member fitting said extension on the base plate member and having elongated apertures therein and projecting lugs engageable in the stepped portions in said base plate extensions to retain said foot plate in different positions of angular adjustment relative to a supporting accelerator pedal.

3. An accelerator pedal attachment comprising a base plate attachable to an accelerator pedal, a foot plate pivotally connected to said base plate, a resilient tension member operatively connected between said base plate and said foot plate, said foot plate comprising a thin metal core portion of resilient material and a covering of rubber-like material, said core portion having at one end thereof a pair of oppositely disposed depending extensions having elongated apertures therein and projecting lugs engageable by said base plate to retain said foot plate at said various positions of angular adjustment.

4. An attachment for a foot operated throttle control for an automobile engine comprising a member constructed to be clamped to a conventional accelerator pedal and having a pair of spaced upstanding portions at corresponding ends thereof having stepped portions, a foot plate pivotally secured to said member and having a pair of lugs engageable with the stepped portions of said upstanding portions, means carried by said member for securely fastening said member to an accelerator pedal, and tension means operatively connected to said member and said foot plate operative for exerting a rearwardly and downwardly directed pull on said foot plate.

5. An accelerator pedal attachment comprising a base plate attachable to an accelerator pedal, a foot plate pivotally and slidably connected to said base plate, stepped abutments on said base plate, means on said foot plate selectively engageable with any one of said abutments upon slidable and pivotal movement of said foot plate relative to said base plate whereby the angular relationship between said plates may be varied, and resilient means connecting said plates for holding said means in engagement with said abutments.

6. An accelerator pedal attachment comprising a base plate attachable to an accelerator pedal, a foot plate pivotally and slidably connected to said base plate, stepped abutments on said base plate, means on said foot plate selectively engageable with any one of said abutments upon slidable and pivotal movement of said foot plate relative to said base plate whereby the angular relationship between said plates may be varied, resilient means connecting said plates for holding said means in engagement with said abutment, and a laterally extending projection on said foot plate engageable by the shoe of an operator whereby the foot plate may be conveniently moved to engage said means with another of said abutments.

HOUSTON B. RODD.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,157,140	Anderson	Oct. 19, 1915
1,213,826	Bloom	Jan. 30, 1917
1,468,571	McGinley	Sept. 18, 1923
1,733,854	Bailey	Oct. 29, 1929
2,123,299	Gibbons	July 12, 1938