

Dec. 30, 1958

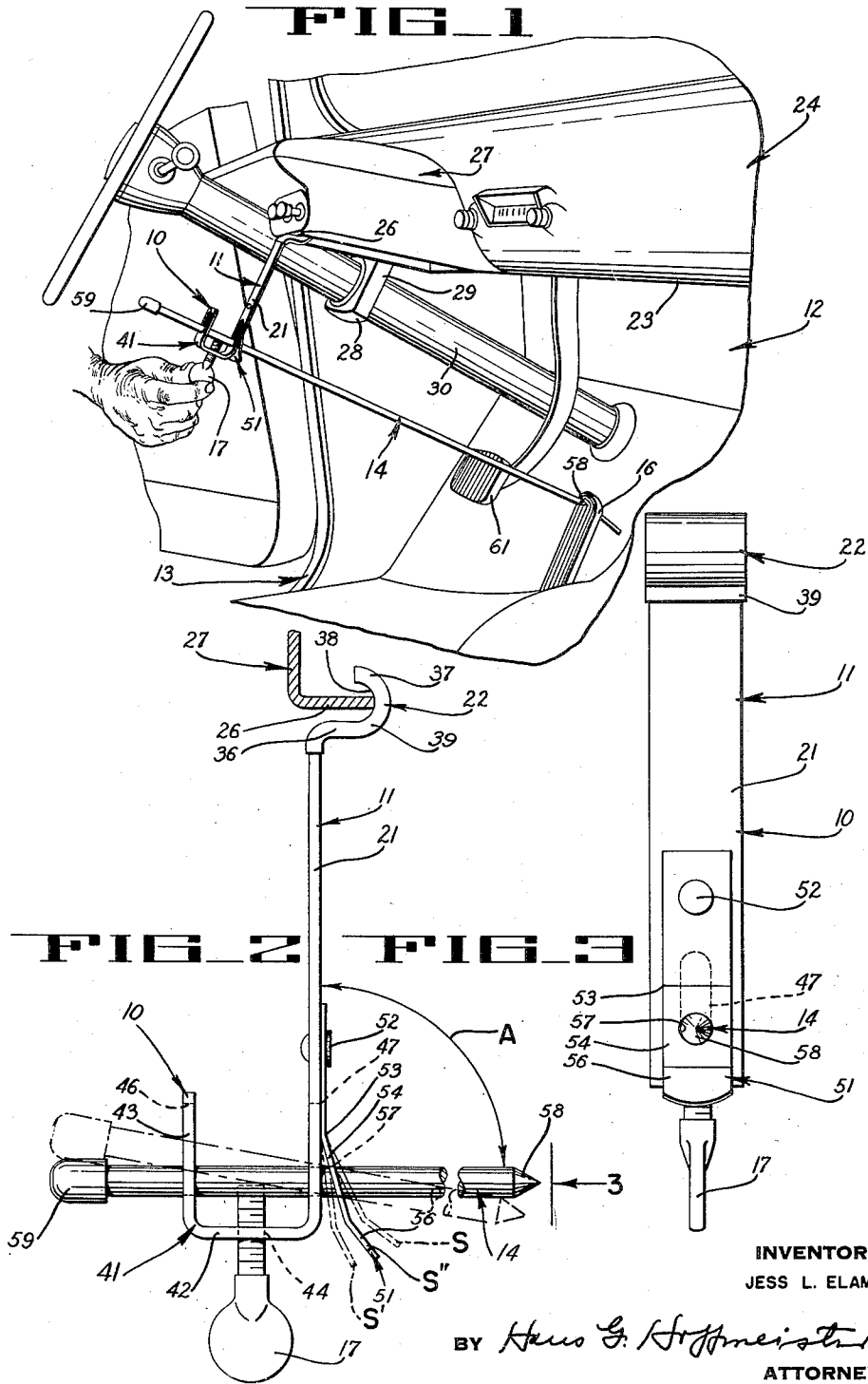
J. L. ELAM

2,866,356

PEDAL DEPRESSING AND HOLDING TOOL

Filed June 29, 1955

3 Sheets-Sheet 1



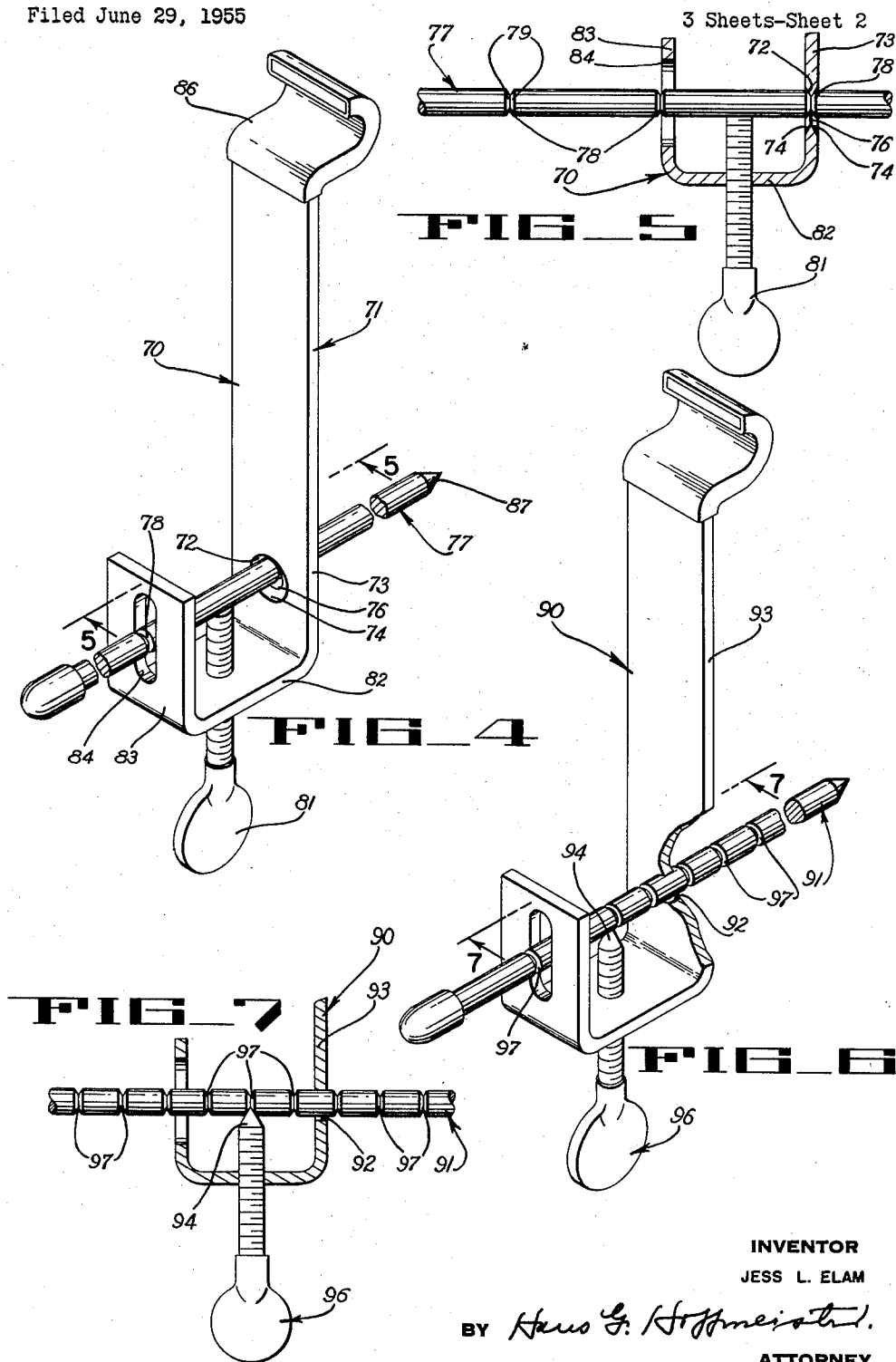
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PEDAL DEPRESSING AND HOLDING TOOL

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Application June 29, 1955, Serial No. 518,795

17 Claims. (Cl. 74—532)

This invention relates to special tools and instruments and more particularly to tools for depressing an automobile pedal.

Several automobile servicing operations require holding a pedal in a depressed position while the mechanism controlled by the pedal is inspected or adjusted. For example, in adjusting hydraulic brakes of an automobile, it is desirable to hold the brake pedal in a fixed, partially depressed position while a mechanic inspects each of the four wheels to ascertain whether the brakes are being evenly applied. When "tuning up" a motor, it is customary to set the throttle successively in several differently advanced positions to enable the mechanic to regulate different jets of the carburetor while the motor is operating at several different speeds. When balancing the rear wheels of an automobile, it is desirable that they be rotated at a constant speed while a mechanic inspects them to ascertain if their tires are concentric with their axes of rotation or if they set up undue vibration, and such rotation of the rear wheels is most readily accomplished by means of the car's motor with its throttle fixed in the appropriate partially advanced position.

Many late model automobiles are not equipped with a hand throttle adapted to remain in a partially advanced position and thus to effect sustained operation of the motor at a selected speed, without being held. The only means provided on most cars for regulating engine speed is an accelerator pedal which must be depressed against spring pressure to attain increased engine speed and which, when released, is returned by the spring pressure, to retarded or engine-idling position. If a second mechanic is used to hold the accelerator pedal in a particular position while inspection and adjustment of the motor or parts operated thereby are performed, not only is the cost of servicing increased by the larger number of mechanics whose time must be charged to the job, but the results are apt to be unsatisfactory because of the difficulty of manually holding the accelerator pedal precisely in a fixed position against spring pressure for periods of any considerable duration.

An object of the invention, therefore, is to provide an improved pedal depressing tool.

Another object of the invention is to provide a tool for positively and indefinitely retaining a pedal in any selected position of partial or full depression.

Another object is the provision of a pedal depressing and retaining instrument that is suitable for use with the brake and clutch pedals of an automobile, but which is particularly adapted for depressing the lighter and more sensitive accelerator pedal and for immobilizing the same in selected depressed position.

Another object is to provide a tool which is capable of relatively delicate operation to attain accurate adjustment of the accelerator pedal so that a mechanic can, without assistance, cause the motor to precisely maintain any desired speed while he inspects and adjusts the motor or parts connected to the motor to operate at a speed proportional to that of the motor.

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Another object of the invention is a provision of a pedal depressing tool adapted to be mounted in operative position easily and quickly and capable of remaining in operative position without being clamped or otherwise positively fastened to the automobile.

Another object is to provide a pedal depressing tool that is adjustable to attain any desired degree of depression and which is capable of being temporarily disconnected from a pedal and thereafter to be re-engaged with the pedal without disturbing the adjustment of the tool to again depress the pedal to precisely the same position as before.

Other objects and advantages of the invention will become apparent from the following description and the drawings, in which:

Fig. 1 is a perspective showing the tool of the invention operatively connected to the accelerator pedal of an automobile.

Fig. 2 is a side elevation of the pedal depressing tool of Fig. 1, portions being broken away.

Fig. 3 is a front elevation of the tool viewed in the direction of arrow 3 of Fig. 2.

Fig. 4 is a perspective of a modified form of the pedal depressing tool of the invention.

Fig. 5 is a fragmentary section taken along lines 5—5 of Fig. 4.

Fig. 6 is a perspective of another modified form of the tool of the invention.

Fig. 7 is a fragmentary section taken along lines 7—7 of Fig. 6.

Fig. 8 is a perspective, partly broken away, of a further modified form of the tool of the invention.

Fig. 9 is a fragmentary section taken along lines 9—9 of Fig. 8.

The form of pedal depressing tool 10 illustrated in Figs. 1, 2 and 3 includes a bracket 11 adapted for mounting upon any one of several convenient fixtures in the driver's compartment 12 of an automobile body 13, in position for a rod 14 carried by the bracket 11 to engage the accelerator pedal 16 of the automobile. The tool 10 includes a manually adjustable thumbscrew 17 interposed between the bracket 11 and the rod 14 for varying the angle A (Fig. 2) included between the bracket 11 and the rod 14, and thereby affecting variation in the distance between the point where the bracket 11 is attached to the automobile body 13 and the point where the rod 14 bears against the accelerator pedal 16. Thus, the tool 10 is operable to depress the pedal 16 to any desired extent, and to hold the pedal in selected partially or fully advanced position as long as may be desired.

The bracket 11 includes an arm 21 of metal or other suitable rigid material capable of being machined and of being bent, as by forming dies, to desired configuration. A hook 22 (Figs. 2 and 3) is provided at the upper end of the arm 21, of such form that the hook 22 is readily engageable with any forwardly extending projection within the driver's compartment 12, higher than and somewhat to the rear of the pedal 16. For example, the forwardly extending lip flange 23 at the lower edge of the cowl or instrument board 24, the corresponding flange 26 at the lower edge of an instrument-mounting extension 27 of the cowl that is provided in some cars, and the forwardly extending flange 28 at the lower edge of the bracket 29 for the steering column 30, all provide convenient fixed abutments with which the hook 22 is selectively engageable. The hook 22 is so formed that when the bracket 11 is disposed in operative position, the hook 22 opens rearwardly and is thus adapted for substantially instantaneous engagement with and disengagement from whatever abutment of the automobile body 13 is selected to provide support for the tool 10. The hook 22 is formed by bending the upper end of the arm 21 for-

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ward substantially at a right angle from the remainder of the arm to provide a shank portion 36, and forming an upwardly extending reverse bend 37 of approximately 180° and of sufficiently large radius to define a relatively large, rearwardly opening recess 38. A sleeve 39 of rubber or similar cushioning material is stretched over the hook 22 to provide protection for the portion of the automobile body 13 upon which the tool 10 is mounted.

At its lower end, the bracket 11 is provided with a J-shaped extension 41 defined by a rearwardly extending foot 42 and an upstanding flange 43 at the rear end of the foot 42. A tapped hole 44 (Fig. 2) is provided in the foot 42 for the reception of the thumbscrew 17, and aligned slots 46 and 47 are formed in the flange 43 and in the lower portion of the arm 21, respectively. The rod 14 extends through both slots 46 and 47, which are vertically elongated to permit pivotal movement of the rod 14 and the bracket 11 with respect to each other. In their lateral dimension, however, the slots 46 and 47 fit the rod 14 rather closely, providing only sufficient clearance to permit the rod 14 to slide freely there-through. Consequently, the rod 14 remains in a plane perpendicular to the face of the arm 21 and including the longitudinal axis of the same, although the rod 14 is axially adjustable and pivotally movable in the slots with respect to the arm 21.

A leaf spring 51 is secured by a rivet 52 to the arm 21 above the slot 47. From its point of attachment to the arm 21, the spring 51 extends downward in flat engagement with the forward face of the arm 21, to a bend 53 whence an oblique portion 54 of the spring 51 slopes downward and forward. A less steeply inclined lip 56 at the lower end of the oblique portion 54 provides a convenient thumb piece which facilitates manually flexing the spring 51 by pivoting the oblique portion 54 toward the arm 21. The spring is so designed that when it is freed of all restraint, the oblique portion 54 thereof extends from the arm 21 at an angle of approximately 25°, substantially in the position S indicated in broken lines in Fig. 2. A hole 57 (Fig. 3) is formed in the oblique portion 54 of the spring 51. This hole 57 is round and of slightly greater diameter than the rod 14 so that the rod 14 can slide freely through the hole 57 when the plane of the oblique portion 54 is perpendicular to the axis of the rod 14 or disposed at an angle of not less than 80° thereto, substantially in the position S' indicated in broken lines in Fig. 2. However, the difference between the respective diameters of the hole 57 and the rod 14 is so slight that when the spring occupies a canted position of less than 80° with respect to the rod 14, as illustrated in full lines at S'', the spring is locked to the rod, thereby effectively restraining the rod 14 against axial movement with respect to the spring.

Inasmuch as the inherent resiliency of the spring 51 continuously urges the oblique portion 54 of the spring 51 upward and outward from the full-line position S' thereof toward the relaxed position S, the spring 51 continuously urges the rod 14 to rotate counterclockwise as viewed in Figs. 1 and 2, about an axis extending transversely of the bracket 11 substantially at the bend 53 of the spring 51. Such rotary motion of the rod 14 is limited by the lower end of the slot 46 or by the thumbscrew 17. The rod 14 can be rotated in the opposite direction, that is clockwise, from the full line position to the adjusted position, as shown in phantom (Fig. 2) about said axis and against the bias of the spring 51 by the thumbscrew 17, the upper end of which abuts against the underside of the rod 14 between the arm 21 and the flange 43.

The rod 14 is of such length that its lower end can be placed against the accelerator pedal 16 while the hook 22 at the upper end of the bracket 11 is engaged upon any convenient rigid, forwardly facing abutment such as the flange 26, substantially in longitudinal alignment with the pedal 16 in a position higher than, and to the rear

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of the same, as illustrated in Fig. 1. The forward end of the rod 14 is provided with a moderately sharp point 58 to assist in preventing the rod 14 from slipping on the surface of the pedal 16. A cap 59, which may be formed of rubber, plastic, or the like, is fitted onto the after end of the rod 14 to present a convenient finger grip that facilitates manipulation of the rod 14, and which prevents separation of the rod 14 from the bracket 11 by sliding the rod 14 too far forward with respect thereto.

When it is desired to operate the engine continuously at any speed greater than idling speed, the tool 10 may be employed to depress the pedal 16 and to maintain the same in fixed, partially or completely depressed position, for a period of any desired duration. The tool is mounted in operative position by first engaging the hook 22 with any convenient forwardly projecting structure rigid with the automobile body 13 such as the flange 26 (Fig. 2). This provides a rigid abutment against which the upper end of the arm 21 can press in a rearward direction and also provides support for the bracket 11, since the terminal portion of the hook 22 extends over the forwardly projecting flange 26. The operator should then flex the spring 51 toward the arm 21, this being most readily accomplished by placing the thumb against the rear face of the flange 43 and the index finger against the forward face of the lip 56 and then squeezing to press the spring 51 rearwardly. This causes the oblique portion 54 of the spring to pivot about a transverse axis at or adjacent the bend 53, moving the oblique portion 54 substantially to the dotted-line position S' wherein the oblique portion 54 is so nearly perpendicular to the axis of the rod 14 that the rod can slide freely through the hole 57 in the spring 51 as well as through the clearance slots 46 and 47. Accordingly, while the spring 51 is thus held, the rod 14 can be slid to the right, as viewed in Figs. 1 and 2, until the point 58 at the forward end of the rod 14 is brought to bear upon the upper, after face of the accelerator pedal 16, preferably adjacent the upper end of the same (see Fig. 1). The operator should then release the spring 51, permitting the same to return toward the relaxed position S thereof. However, such return motion of the spring is limited because of the restricted size of the hole 57 through which the rod 14 extends, with the result that when the spring attains the canted, full-line position S'' on the rod 14, a binding relationship will develop between the spring and the rod which locks the rod 14 against axial movement in either direction with respect to the spring. The operator should then screw the thumbscrew 17 upward against the under surface of the rod 14; and since the thumbscrew 17 engages the rod 14 rearwardly of its point of support by the spring 51, the rear end of the rod 14 is thus raised, causing the entire rod to pivot about a transverse axis at or adjacent the bend 53 of the spring 51. Such pivoting motion of the rod 14 with respect to the bracket 11 increases the angle A between the rod 14 and the arm 21, thereby effectively increasing the distance between the flange 26 and the point 58 at the forward end of the rod 14; and since the flange 26 is fixed and the pedal 16 is movable, such increase in the distance between the flange 26 and the point 58 results in forcing the accelerator pedal 16 downward. The resultant opening of the throttle of the carburetor causes the motor to operate at increased speed.

Due to the fact that the pivotal motion of the rod 14 about said transverse axis is attained by means of a screw which must be rotated through a full 360° in order to attain axial advance thereof by a small fraction of an inch, the tool 10 is subject to extremely delicate adjustment permitting the accelerator pedal 16 to be depressed very gradually so that the precise, desired speed can readily be attained. Moreover, the thumbscrew 17 will, because of the friction between its threads and those in the foot 42 with which they are engaged, remain in adjusted position until intentionally turned by the operator.

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Therefore, should the operator desire to permit the motor to idle and thereafter to be operated again at the same speed as before, he can remove the point 58 from the pedal 16, permitting the latter to return to its fully raised position, without disturbing the adjustment of the tool 10. When thereafter desired, the operator can again depress the pedal 16 by hand far enough to permit the point 58 again to be engaged with the upper surface of the pedal 16 to retain the pedal in exactly the same position as that in which it was previously held by the tool 10.

The tool 10 is of such light-weight construction that the gravitational force exerted thereby against the pedal 16 is substantially less than that required to overcome the force of the spring (not shown) resisting depression of the pedal 16. Therefore, the tool 10 will not, of its own weight, have any effect upon the pedal, and the pedal 16 will be depressed only as the result of axial adjustment of the rod or manipulation of the thumbscrew 17. Nevertheless, the tool 10 is of ample strength to permit its use in depressing the brake pedal, such as that indicated at 61 in Fig. 1, or the clutch pedal (not shown) of an automobile, either of which usually requires the exertion of considerably greater force to effect depression thereof, than does the relatively sensitive accelerator pedal 16.

Figs. 4 and 5 illustrate a modified form 70 of pedal depressing tool embodying the principles of the present invention. In this form, the mounting bracket 71 differs from the bracket 11 previously described in that instead of an elongated slot, a circular hole 72 is formed in the lower portion of the arm 73. As best shown in Fig. 5, both ends of the hole 72 are bevelled so that the hole 72 is defined by two frusto-conical surfaces 74 that meet in an annular edge 76 whose diameter is large enough to permit the pedal-engaging rod 77 to slide freely through the circular opening defined by the edge 76. The rod 77 may be releasably secured against axial movement through the hole 72 by engaging the edge 76 in a selected one of a series of annular grooves 78 which are formed at spaced intervals along the rod 77. Each groove 78 is defined by two frusto-conical surfaces 79 which meet at the bottom of the groove. The angle between the two surfaces 79 is preferably slightly greater than that between the surfaces 74 defining the hole 72, permitting the edge 76 at a side of the hole 72 to seat in the bottom of the selected groove 78. Thus, the edge 76 provides non-ginding pivotal interconnection between the rod 77 and the bracket arm 73 when the rod 77 is pressed against the upper side of the hole 72 by the thumbscrew 81 which is threaded through the foot 82 at the lower end of the bracket arm 73. As in the previously described form of the tool, the upstanding flange 83 at the rear end of the foot 82 is provided with a vertically elongated slot 84 in which the rod 77 is guided as it moves with respect to the bracket 71.

This form of the tool of the invention is mounted in operative relation to a pedal, by first engaging the hook 86 at the upper end of the bracket arm 73 with a suitable abutment (not shown) as hereinbefore described, and then with the rod 77 disposed substantially centrally of the hole 72 to clear the edge 76, sliding the rod forward through the bracket until the edge 76 is aligned with the last groove 78 to reach the bracket arm 73 before the point 87 at the forward end of the rod engages the pedal. Then, by screwing the thumbscrew 81 upward, the rod 77 will be forced upward, seating the edge 76 in the selected groove 78. Continued upward adjustment of the thumbscrew 81 will then cause the rod 77 to pivot about the edge 76 at the upper side of the hole 72, thereby increasing the distance between the hook 86 and the point 87 until the latter engages the pedal and forces the same to an advanced-throttle position.

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There being no spring in this form of the tool of the invention, it is necessary for the operator to hold the bracket 71 and the rod 77 with the edge 76 in registry with the selected groove 78 until the point 87 is brought to bear against the pedal. Thereafter, the resistance offered by the pedal to pivotal movement of the rod 77 about the edge 76, assures retention of the edge 76 within the selected groove 78.

The form of the pedal depressing tool indicated at 90 in Figs. 6 and 7 resembles that of Figs. 4 and 5 in that its pedal-engaging rod 91 pivots about the edge of a hole 92 in the bracket arm 93. However, securing the rod 91 in selected position of axial adjustment relatively to the bracket arm 93 is attained by seating the pointed upper end 94 of the thumbscrew 96 in a selected one of a series of notches or grooves 97 formed at spaced intervals along the rod 91. In other respects, the form of tool shown in Figs. 6 and 7 coincides in both construction and operation to that of Figs. 4 and 5.

In the embodiment of the invention illustrated in Figs. 8 and 9, the pedal-depressing tool 110 includes an open-topped casing 111 defined at the lower end of the bracket arm 112 by a foot 113 extending perpendicularly from the arm, an end flange 114 upstanding from the rear end of the foot 113, and spaced side flanges 116 upstanding from the lateral edges of the foot 113. The pedal-engaging rod 117 extends slidably through a clearance hole 118 in the arm 112 and through a vertically elongated slot 119 in the end flange 114. As in the forms of the tool illustrated, respectively, in Figs. 4 and 6, the rod 117 pivots about the upper edge of the hole 118 in the bracket arm 112, but in this case retention of the rod 117 in selected position of axial adjustment is attained by frictional engagement of the rod 117 with the edge of the hole 118 and with a cam 121 against which the rod 117 is pressed by a leaf spring 122 secured to the after face of the arm 112 by a rivet 123. Both the cam 121 and the spring 122 are disposed within the casing 111, the cam 121 being secured to a shaft 124 journaled in the opposed side flanges 116 and extending through one of the flanges 116 to the exterior of the casing 111, where the shaft is provided with a peripherally knurled knob 126.

The cam 121 engages the underside of the rod 117, and is so contoured that when it is rotated counterclockwise as viewed in Figs. 8 and 9, it raises the rear end of the rod 117 and thereby pivots the rod about the edge of the hole 118 in that direction which increases the distance between the hook 127 at the upper end of the bracket arm 112 and the point 128 at the forward end of the rod 117.

The tool 110 is mounted in operative position by first engaging the hook 127 with a suitable fixed abutment (not shown) in the driver's compartment of the automobile and then sliding the rod 117 forward to engage its point 127 with the pedal to be depressed. The knob 126 should then be turned counterclockwise (Figs. 8 and 9), thus causing the rod to pivot about a transverse axis at the upper side of the hole 118. This increases the distance between the point 128 and the abutment engaged by the hook 127 and thereby depresses the pedal by an amount determined by the extent to which the knob 126 is turned. The pitch of the camming surface of the cam 121 is so gentle that the downward pressure exerted against the cam by the rod will not cause the cam to rotate in the opposite direction. Hence the cam 121 will continue to retain the parts in their extended positions, and the pedal in its depressed position, until the cam is returned to or toward its withdrawn position by reverse rotation of the knob 126.

While I have shown and described preferred forms of the pedal-depressing tool embodying the present invention, it will be understood that the invention is capable of further modification and variation without departing from the principles thereof. It is to be understood, therefore,

that the scope of the invention should be limited only by the scope and proper interpretation of the claims appended hereto.

Having thus described the invention, what I believe to be new and desire to protect by Letters Patent is:

1. A vehicle pedal depressing device comprising an arm, mounting means at one end of the arm, a foot extending from the other end of the arm, a leaf spring secured adjacent one end to said arm and including a portion extending obliquely from the arm, the degree of obliquity of said portion being variable by flexure of the spring toward and away from the arm, a rod extending slidably through aligned apertures in the arm and the spring, said aperture in the arm being sufficiently larger than the rod to permit substantially unrestricted sliding and pivotal movement of the rod with respect to the arm, said aperture in the spring being only so much larger than the rod that the spring establishes binding engagement with the rod to lock the rod against axial movement when the spring is in relaxed position outwardly of the arm, and means carried by said foot for turning the rod in pivotal movement about a transverse axis adjacent said spring.

2. A vehicle pedal depressing device comprising an arm having a foot extending therefrom and a flange extending from the foot in spaced relation to the arm, mounting means at a portion of the arm spaced from the foot and flange, a leaf spring secured to said arm and having a free end biased obliquely from the arm, a rod extending slidably through aligned clearance holes in said arm and flange and through a smaller hole in the oblique portion of the spring whereby the rod is locked against sliding movement with respect to the spring when the oblique portion thereof is canted with relation to the rod, and means interposed between said rod and foot for pivoting the rod about a transverse axis adjacent said arm.

3. A vehicle pedal depressing device comprising an arm having a foot extending therefrom and a flange extending from the foot in spaced relation to the arm, mounting means at a portion of the arm spaced from the foot and flange, a leaf spring secured to said arm and having a free end biased obliquely from the arm, a rod extending slidably through aligned clearance holes in said arm and flange and through a smaller hole in the oblique portion of the spring whereby the rod is locked against sliding movement with respect to the spring when the oblique portion thereof is canted with relation to the rod, and a screw threaded through said foot and engaging said rod to releasably retain the rod in selected position of pivotal adjustment about a transverse axis adjacent said arm.

4. A vehicle pedal depressing device comprising an arm having a foot extending therefrom and a flange extending from the foot in spaced relation to the arm, mounting means at a portion of the arm spaced from the foot and flange, a rod extending slidably through aligned clearance holes in said arm and flange and having a series of longitudinally spaced notches within which an edge of one of said holes is selectively receivable to releasably lock the rod against sliding movement with respect to the rod and to support the rod for pivotal movement about a transverse axis, and a screw threaded through said foot and engaging said rod to releasably retain the rod in selected position of pivotal adjustment about said edge.

5. A vehicle pedal depressing device comprising an arm having a foot extending therefrom and a flange extending from the foot in spaced relation to the arm, mounting means at a portion of the arm spaced from the foot and flange, a rod extending slidably through aligned clearance holes in said arm and flange and having a series of longitudinally spaced notches within which an edge of one of said holes is selectively receivable to releasably lock the rod against sliding movement with

respect to the rod and to support the rod for pivotal movement about a transverse axis, and adjustable means carried by said foot and engageable with said rod to releasably retain the rod in selected position of pivotal adjustment about said edge.

6. A vehicle pedal depressing device comprising an arm, mounting means at one end of the arm, a foot extending from the other end of the arm, a flange extending from the foot in spaced relation to the arm, a rod extending slidably through aligned apertures in the arm and the flange, said apertures being sufficiently larger than the rod to permit sliding and pivotal movement of the rod with respect to the arm, said rod having a series of longitudinally spaced notches therein, and a screw threaded through said foot and having a point selectively receivable in said notches to lock the rod against axial movement with respect to the arm and to lock the rod in selected position of pivotal movement about a transverse axis.

7. A vehicle pedal depressing device comprising an arm, mounting means at one end of the arm, a foot extending from the other end of the arm, an end flange and laterally spaced side flanges upstanding from said foot, a rod extending loosely through aligned apertures in the arm and end flange, said rod being axially slidable through the apertures and being pivotally adjustable about an edge of one of said slots to vary the distance between an end of the rod and the mounting means, a shaft extending rotatably through said side flanges adjacent said rod, a cam rigid with said shaft and engaging said rod, and means for turning said shaft and cam to lock the rod in selected position of pivotal adjustment about said edge.

8. A vehicle pedal depressing device comprising an arm, mounting means at one end of the arm, a foot extending from the other end of the arm, an end flange and laterally spaced side flanges upstanding from said foot, a rod extending loosely through aligned apertures in the arm and end flange, said rod being axially slidable through the apertures and being pivotally adjustable about an edge of one of said slots to vary the distance between an end of the rod and the mounting means, a shaft extending rotatably through said side flanges adjacent said rod, a cam rigid with said shaft and engaging said rod, and means for turning said shaft and cam to lock the rod in selected position of pivotal adjustment about said edge, and a spring supported from said arm and pressing the rod against the cam.

9. In a tool for holding in depressed position a pedal mounted upon a vehicle body, a mounting bracket having an arm engageable at one end with said vehicle body, a rod adjustably received in the other end of said arm and having an end portion adapted to be moved into a position to bear against the pedal, and means adjustably mounted on said arm and arranged to apply force to said rod at a point spaced from said arm to increase the distance between said one end of the arm and said end portion of the rod to thereby depress said pedal.

10. A pedal depressing and holding device usable with a pedal mounted resiliently on a vehicle body comprising, a bracket having an arm engageable at one end with said vehicle body, a flange formed at the other end of the arm and extending in spaced relation thereto, constantly variable adjusting means on said arm, a rod extending slidably through a hole in said arm adjacent said adjusting means, said rod being engageable at one end with the pedal, means on said arm establishing a point about which said rod is urged pivotally toward said adjusting means when brought to bear against the pedal, and fixed guide means on said flange engageable with said rod for limiting pivotal movement of said rod about said point to within a predetermined plane upon manipulation of said adjusting means to vary the position of the pedal.

11. A tool for holding in depressed position a pedal

mounted on a vehicle body comprising, a bracket having an arm engageable with said vehicle body, a flange on said arm at one end thereof and extending in spaced relation thereto, a rod pivotally disposed on said bracket adjacent one end of said arm and having an end portion adapted to be brought to bear upon the pedal, guide means on said flange to limit pivotal movement of said rod to within a predetermined plane, constantly variable adjusting means on said arm engageable with said rod for moving said rod in the plane defined by said guide means to vary the position of the pedal, and resilient means interposed between said rod and said bracket and arranged to urge said rod toward said adjusting means.

12. A device for depressing a pedal mounted on a vehicle body which has a forwardly extending projection, comprising an arm having a rearwardly opening recess adjacent one end thereof adapted to receive the projection to pivotally support the arm from the vehicle body in a position extending downward from the point of support of the arm, a flange formed at the other end of the arm and extending in spaced relation thereto, a rod disposed on said bracket adjacent said other end of said arm for movement either axially or pivotally into engagement with the pedal, guide means on said flange limiting pivotal movement of said rod to within a predetermined plane, constantly variable adjusting means on said arm engageable with said rod for moving said rod in the plane defined by said guide means, and resilient means interposed between said rod and said bracket and arranged to urge said rod pivotally toward said adjusting means.

13. In a tool for use with a pedal mounted resiliently on a vehicle body which has a forwardly extending projection adjacent the pedal, a bracket having a rearwardly opening recess adjacent one end thereof, said recess being adapted to receive the projection of the vehicle body to pivotally support the bracket from the vehicle body in a downwardly extending position, a rod extending through a hole in said bracket adjacent the other end thereof, said rod having an end portion engageable with the pedal, rod guide means on said bracket adjacent said hole defining a plane in cooperation with said hole in which said rod can be moved, rod adjusting means on said bracket disposed in the plane defined by said hole and said rod guide means whereby to pivot said rod against the resilient force of the pedal about a point of engagement of said rod in said hole to vary the distance between the pedal and said pivotal support for said bracket upon manipulation of said adjusting means.

14. A tool for use with a pedal mounted resiliently on a vehicle body which has a forwardly extending projection adjacent the pedal, comprising a bracket having a rearwardly opening recess adjacent one end thereof adapted to receive the projection to pivotally support the bracket from the vehicle body in a downwardly extending position, a rod received adjustably in a hole in said bracket adjacent the other end thereof and arranged to be brought to bear against the pedal, said rod having a plurality of axially spaced grooves therein, rod guide means on said bracket adjacent said hole defining a plane in cooperation with said hole wherein said rod can be

moved pivotally, rod adjusting means on said bracket disposed in the plane defined by said hole and said guide means, said grooves being adapted to hold said rod in selected axial adjustment in said hole relative to said bracket upon engagement of said rod with the pedal thereby applying a continuing force on said rod to turn said rod pivotally about a point of engagement thereof in said hole toward said rod adjusting means.

15. In a tool for holding in depressed position a pedal mounted on a vehicle body, a bracket having an arm engageable with said vehicle body, a rod pivotally disposed on said bracket adjacent one end of said arm and having an end portion adapted to be brought to bear upon the pedal, constantly variable adjusting means on said arm engageable with said rod for moving said rod end portion to vary the position of the pedal, and resilient means interposed between said rod and said bracket and arranged to urge said rod toward said adjusting means.

16. A vehicle pedal depressing device comprising an arm having an aperture adjacent one end thereof, a foot extending from said arm adjacent said aperture, a rod extending through the aperture in said arm and engageable at one end with the pedal, a leaf spring secured to said arm adjacent said aperture and including a portion extending obliquely from said arm into engagement with said rod, the aperture in said arm being of a shape to permit sliding movement of said rod and limited pivotal movement thereof about a transverse axis, and adjusting means operatively disposed between said foot and said rod and arranged to pivot said rod about said transverse axis, said spring being effective to establish resilient engagement between said rod and said adjusting means.

17. In a tool for use with a pedal mounted resiliently on a vehicle body having a forwardly extending projection adjacent the pedal, a bracket having a rearwardly opening recess adjacent one end thereof adapted to receive the projection to pivotally support the bracket from the vehicle body in a downwardly extending position, a rod received adjustably in a hole in said bracket adjacent the other end thereof and arranged to be brought to bear with one end against the pedal, said rod having a plurality of axially spaced grooves therein, rod adjusting means on said bracket, said grooves being adapted to hold said rod in selected axial adjustment in said hole relative to said bracket upon engagement of said rod with the pedal thereby applying a continuing force on said rod tending to turn said rod pivotally about a point of engagement thereof in said hole and toward said rod adjusting means.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

December 30, 1958

Patent No. 2,866,356

Jess L. Elam

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 1, line 41, for "reguating" read -- regulating --; column 2, line 49, for "patrially" read -- partially --; column 4, line 13, for "partially of completely" read -- partially or completely --; column 5, line 49, for "non-ginding" read --- non-binding --; column 6, line 56, for "point 127 with the pedal" read -- point 128 with the pedal --; column 4, line 13, for "despressed" read -- depressed --.

Signed and sealed this 22nd day of March 1960.

(SEAL)

Attest:

KARL H. AXLINE
Attesting Officer

ROBERT C. WATSON
Commissioner of Patents