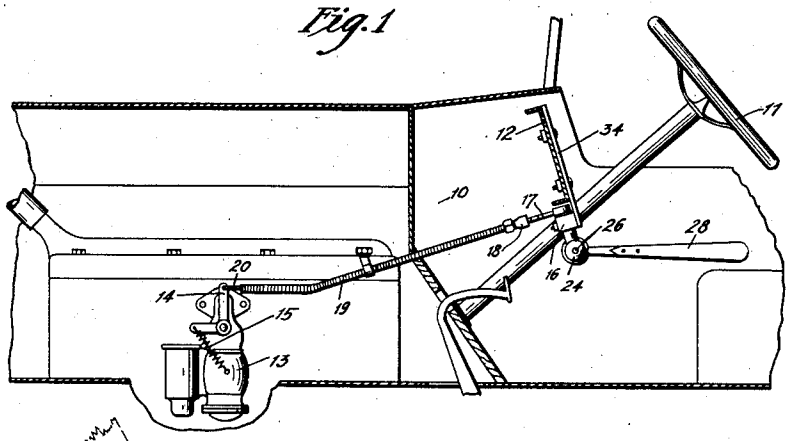
Dec. 12, 1933. P. G. FRAZIER 1,938,897

AUTOMOBILE ACCELERATOR

Filed July 11, 1932

Fig. 1



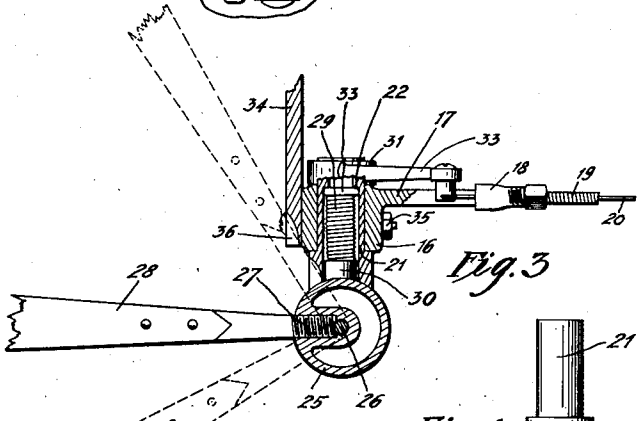




Fig. 3

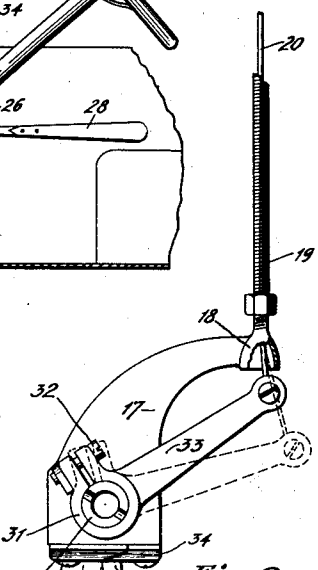



Fig. 2

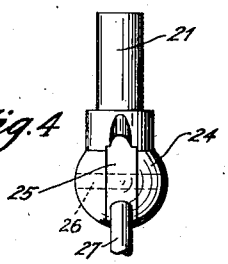



Fig. 4

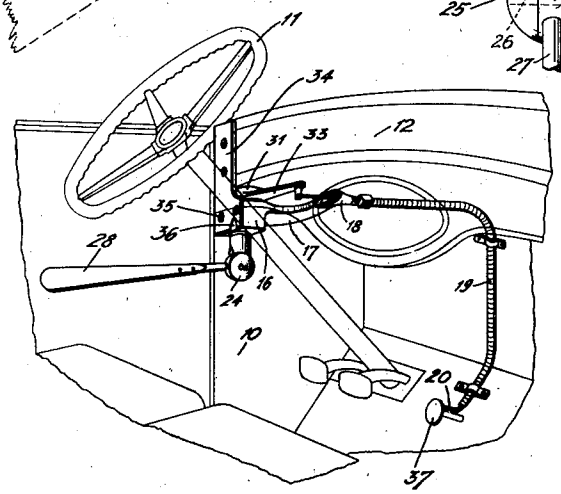
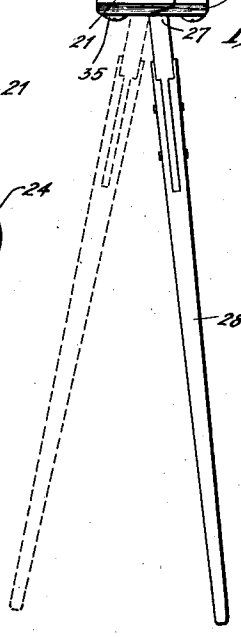



Fig. 5




Inventor

Pearl G. Frazier

by Orwig & Hague Attys.

Patented Dec. 12, 1933 1,938,897

# UNITED STATES PATENT OFFICE

1,938,897

## AUTOMOBILE ACCELERATOR

Pearl G. Frazier, Ankeny, Iowa

Application July 11, 1932. Serial No. 621,835

6 Claims. (Cl. 74—81)

This invention relates to that class of automobile accelerators illustrated and described in my Patent No. 1,857,448, issued May 10, 1932, and in which the carburetor may be accelerated by lateral pressure of the operator's leg.

The object of my present invention is to provide a simpler, more durable and less expensive accelerator, and specifically to provide an accelerator of this class which may be readily, quickly and easily applied without alterations to automobiles of different makes.

Another object is to provide improved means for yieldably supporting the accelerator arm in various positions of its adjustment for the convenience of the operator, and to provide means whereby it may be readily and easily moved to an elevated position out of the way, so it will not be accidentally moved by the operator in getting into and out of the automobile; and

Further in this connection it is my object to provide automatic means whereby when the operating arm is so elevated it will be held in position for permitting the accelerator to cause the motor to idle and be so held that it is not likely to be operated to accelerate the motor when the operator is getting into and out of the automobile, and also to hold the carburetor in proper position for cranking the automobile.

A further object is to provide an accelerator of this character which may be adapted for use in connection with automobiles of widely different sizes and shapes without any change in the major portion of the accelerator, and by detachably connecting with the body of the accelerator various attaching plates which may be adapted for certain sizes and shapes of automobiles.

A further object is to provide a device of this character which may be readily and quickly attached to automobiles of different makes by directly connecting it to the usual foot accelerator.

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

Figure 1 shows a vertical sectional view of a portion of an automobile and a carburetor and steering wheel and my improved automobile accelerator applied thereto as in actual use.

Figure 2 shows a top or plan view on an enlarged scale of my improved accelerator, the dotted lines showing the position of the operating arm when moved laterally and the corresponding position of the carburetor moving arm and rod.

Figure 3 shows a vertical, central, sectional view through the body of my improved accelerator with the operating arm shown by dotted lines in various positions, the upwardly extended position as shown by dotted lines illustrating the manner in which it is locked in idling position against accidental acceleration.

Figure 4 shows a rear elevation of the hollow shaft with a spherical lower end and a disk shaped head pivotally mounted therein, and with a portion of the operating arm attached to said head; and

Figure 5 shows an isometric view of a modified form of my improved accelerator in which the carburetor adjusting rod operates upon the foot accelerator instead of being directly attached to the carburetor. In this figure the adjacent portions of the automobile are shown by dotted lines for the purpose of illustrating the position of my accelerator relative to the adjacent portions of the automobile.

Referring to the accompanying drawing, I have used the reference numeral 10 to indicate that portion of the body of an automobile shown, 11 the steering wheel, 12 the instrument board, and 13 the carburetor. The carburetor is provided with the usual bell crank lever 14 held to closed position by the spring 15.

My improved accelerator device comprises a body portion 16, which is preferably substantially rectangular in outline, formed with a circular opening at its central portion and having an integral arm 17 extended forwardly and laterally.

This arm is provided with a cup shaped outer end portion 18 to which is fixed a flexible hollow cable 19. This flexible hollow cable is extended to a point adjacent to the carburetor crank 14, and a flexible rod 20 is extended through it and attached to the crank 14.

Extended upwardly through the opening in the body 16 is a hollow shaft 21 having a shoulder 22 near its upper end and a disk 23 below the shoulder with its upper movement limited by the shoulder. The lower end of the shaft 21 is in the form of a sphere 24 provided with a central slot. Mounted in this central slot is a disk shaped head 25 held in position by a pivot pin 26, and this pivot pin is held in position by the screw threaded end 27 of the carburetor controlling arm 28, which is screwed into a screw threaded opening in the head 25 to engage said pivot pin, as clearly shown in Figure 3.

Before the head 25 is placed in position within the spherical body 24, an extensible coil spring 29 is extended upwardly through the hollow shaft

to engage the washer 23 and then a flexible block 30 is forced upwardly against the spring 29, and then when the head 25 is placed in position, the spring and block 30 will form a friction brake to limit the pivotal movement of the head 25 within the spherical portion of the hollow shaft. The head 25, however, may be easily moved to any desired position by simply grasping the outer end of the arm 28 and moving it up and down to the desired position. In Figure 3 this movement is illustrated by dotted lines.

At the upper end of the hollow shaft 21 I have mounted on said hollow shaft a split ring 31 having a tightening screw 32 extended through it for adjustably fixing it in position. At the upper end of the hollow shaft 21 and extending laterally from the split ring 31 is an arm 33 fixed to the flexible rod 20. Obviously, by means of this split ring 31 and its tightening screw the hollow shaft may be assembled in the body, the arm 33 may be extended to the desired angle, and the shaft firmly assembled in the body against up and down movement and yet permitted to rotate.

The attaching plate is indicated generally by the reference numeral 34, and is detachably connected to the body 16 by the bolts 35. This attaching plate is provided near its lower end with a notch 36 so shaped and positioned that when the arm 28 is moved to a substantially upright position, as shown in Figure 3, it will enter said notch and thereby be held against accidental lateral movement such as might occur when the operator was getting into or leaving the driver's seat. This notch is so positioned with relation to the other parts of the accelerator that when the arm 28 is in it, the accelerator will be in position for cranking the automobile and for idling.

In the modified form illustrated in Figure 5, I have illustrated my improvement as applied to the foot accelerator 37, and in this modified form the flexible rod 20 is extended under the head of the foot accelerator 37 and attached thereto, so that when the arm 28 is moved to position for acceleration, the rod 20 will pull the foot accelerator 37 downwardly and open the carburetor. With this form of the invention the device may be readily and easily applied to automobiles of all makes because the parts of the foot accelerator are substantially the same in all.

In practice it will be seen that with my improvement the accelerator may be readily, quickly and easily attached by unskilled workmen to automobiles of various sizes and shapes. The attaching plates 34 are so constructed and shaped that when applied to a certain make of automobile, the bolt openings therein will fit accurately with the bolt openings that are usually extended through the instrument board 12, so that it is only necessary to remove the bolts that are in position and pass them through the attaching plate 34. The dealer may carry attaching plates 34 of various sizes and shapes to fit automobiles of different makes, but the remainder of the device can be used in connection with automobiles of any size or shape, and these attaching plates are connected with the body of the device by bolts which can be easily removed.

After the device is secured to the automobile by means of the attaching plate, it is only necessary to adjust the length of the accelerator push rod 20 and attach it to the bell crank of the carburetor. No other adjustments, modifications or changes need be made in adapting my device to automobiles of various makes.

The operating arm 28 may be readily and easily moved upwardly and downwardly to any desired angle to suit the requirements of the operator, and when the operator is going to get into or out of the automobile while the engine is running, the arm 28 may be moved to its upright position shown in Figure 3 and the arm will thereby be held against accidental lateral movement.

Attention is directed to the fact that the body 16, containing the arm 17 and adapted to receive the hollow shaft and its split ring 31 and arm 33, is of very simple and inexpensive construction and may be assembled quickly and easily and at the same time the angularity of the arm 33 relative to the hollow shaft may be changed to suit the requirements, and all of this may be readily and easily done by unskilled operators without any change in the structure of the parts.

I claim as my invention:

1. An automobile accelerator comprising a body, an attaching plate secured to the body, a hollow shaft rotatably mounted in the body and having a spherical lower end formed with a slot which is open to the hollow interior of the shaft, a disk shaped head pivotally supported in said slot, a spring within the hollow shaft to apply yielding pressure to said head to hold it in various positions to which it is moved, a manually movable arm fixed to the disk shaped head, an arm fixed to the hollow shaft, and a rod attached to the latter arm and designed to be connected to a carburetor.

2. An automobile accelerator comprising a body, an attaching plate secured to the body, a hollow shaft rotatably mounted in the body and having a spherical lower end formed with a slot which is open to the hollow interior of the shaft, a disk shaped head pivotally supported in said slot, and a spring and a flexible block within the hollow shaft to apply yielding pressure to said head to hold it in various positions to which it is moved, a manually movable arm fixed to the disk shaped head, an arm fixed to the hollow shaft, and a rod attached to the latter arm and designed to be connected to a carburetor.

3. An automobile accelerator comprising a body, an attaching plate secured to the body, a hollow shaft rotatably mounted in the body and having a spherical lower end formed with a slot which is open to the hollow interior of the shaft, a disk shaped head pivotally supported in said slot, a spring within the hollow shaft to apply yielding pressure to said head to hold it in various positions to which it is moved; a manually movable arm fixed to the disk shaped head, an arm fixed to the hollow shaft, and a rod attached to the latter arm and designed to be connected to a carburetor, said attaching plate being formed with a notch to receive the said manually movable arm when in an upwardly extending position for holding a carburetor partially open.

4. An automobile accelerator comprising a body, an attaching plate secured to the body, a hollow shaft rotatably mounted in the body and having a spherical lower end formed with a slot which is open to the hollow interior of the shaft, a disk shaped head pivotally supported in said slot, a spring within the hollow shaft to apply yielding pressure to said head to hold it in various positions to which it is moved an arm fixed to the disk shaped head, a pivot pin extended through the disk shaped head and the spherical lower end of the shaft for forming said pivotal

support, and said arm being screwed into the disk shaped head to engage and hold the pivot pin in position.

5. An automobile accelerator comprising a body, an arm extended laterally from the body, a flexible tube carried by the said arm, an attaching plate detachably secured to the body, a shaft rotatably mounted in the body, an arm adjustably fixed to the shaft, a flexible rod attached to the arm and extended through the flexible tube and designed to be operatively connected to a carburetor, an arm secured to said shaft and adapted for movement by an operator's leg for rotating said shaft, means for pivotally connecting said latter arm to said shaft to swing up and down, and means for yieldably holding it in various positions of its up and down movement.

6. An automobile accelerator comprising a body, an arm extended laterally from the body, a flexible tube carried by the said arm, an attaching plate detachably secured to the body, a shaft rotatably mounted in the body, an arm adjustably fixed to the shaft, a flexible rod attached to the arm and extended through the flexible tube and designed to be operatively connected to a carburetor, an arm secured to said shaft and adapted for movement by an operator's leg for rotating said shaft, means for pivotally connecting said latter arm to said shaft to swing up and down, means for yieldably holding it in various positions of its up and down movement and an element containing a notch adapted to receive said latter arm when in its upwardly extended position for limiting lateral movement thereof.

PEARL G. FRAZIER.