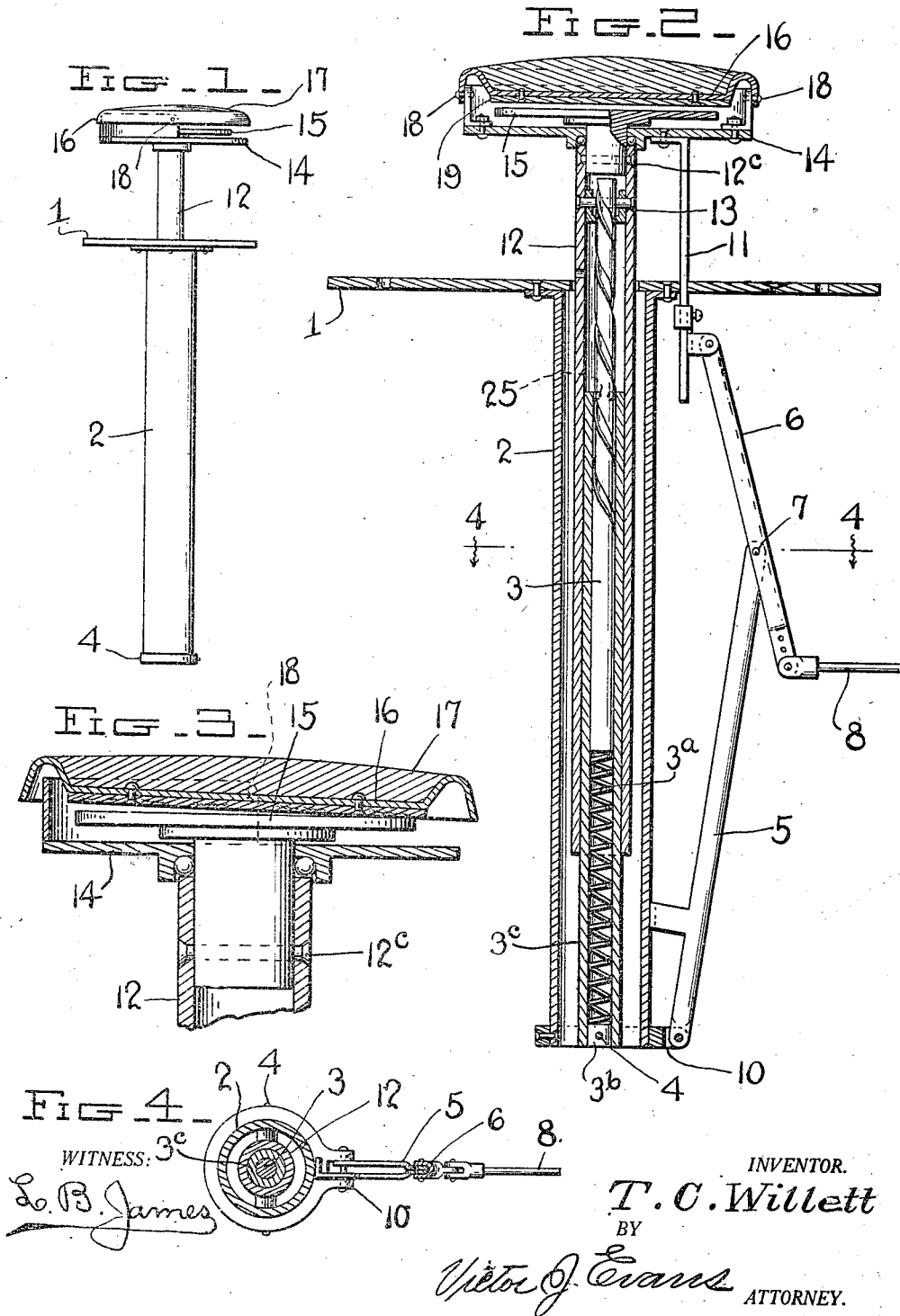


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ACCELERATOR FOR INTERNAL COMBUSTION ENGINES.
APPLICATION FILED MAR. 7, 1919. RENEWED OCT. 31, 1919.

1,325,430.

Patented Dec. 16, 1919.



WITNESS:
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ACCELERATOR FOR INTERNAL-COMBUSTION ENGINES.

1,325,430.

Specification of Letters Patent.

Patented Dec. 16, 1919.

Application filed March 7, 1919, Serial No. 281,114. Renewed October 31, 1919. Serial No. 334,822.

To all whom it may concern:

Be it known that I, THOMAS C. WILLETT, a citizen of the United States, residing at Adams, in the county of Robertson and State of Tennessee, have invented new and useful Improvements in Accelerators for Internal-Combustion Engines, of which the following is a specification.

The object of my present invention is to provide an accelerator of the kind stated that is simple and compact in construction, reliable in action, and is provided with means calculated to effectually brake or stop the accelerator pedal at any desired point within the limit of its movement and this while permitting of the foot of an automobile driver being comfortably supported in position for quick operation of the accelerator.

With the foregoing in mind, the invention will be fully understood from the following description and claims when the same are read in connection with the drawings accompanying and forming part of this specification, in which:

Figure 1 is a view showing my novel accelerator in side elevation.

Fig. 2 is a vertical central section of the same.

Fig. 3 is an enlarged detail view showing the pedal and the parts adjacent thereto.

Fig. 4 is an enlarged transverse section taken in the plane indicated by the line 4—4 of Fig. 2.

Similar numerals of reference designate corresponding parts in all of the views of the drawings.

I show my improved accelerator in combination with a plate 1 that is designed to be screwed or otherwise fixedly attached to the foot board of an automobile.

In furtherance of my invention I fixedly attach a cylinder 2 at its upper end to the under side of the plate 1, and in the said cylinder I arrange a longitudinal central spirally grooved spindle 3, the said spindle 3 being superimposed upon a spring 3^a, which, in turn, bears against a support 3^b which together with a guide tube 3^c is affixed to the lower end of the cylinder 2 through a pin 4 or other suitable means.

5—6 are levers, pivotally connected together at 7, and designed to be connected through the medium of a rod 8 with the valve of a carbureter. The spring 3^a has for its function to maintain the levers in

and restore the same to the positions illustrated in Fig. 1. The lever 5 is pivotally connected at its lower end to a lateral bracket 10, on the lower end of the cylinder 2 and the lever 6 is connected at its upper end to a vertically movable rod 11 which is designed to reciprocate freely through an aperture in the plate 1.

Extending downwardly into the cylinder 2 is a revoluble and vertically movable plunger 12 which is tubular in form to receive the spindle 3 and tube 3^c and connected by a diametrical pin 13 with said spindle.

Supported by anti-friction balls upon the plunger 12 is a disk 14 to which the upper end of the rod 11 is fixedly connected.

Connected at 12^c the upper portion of the plunger 12 and disposed above the disk 14 is a disk 15.

Disposed above the disk 15 is a pedal 16 which may be and preferably is provided at its upper side with a layer 17, of rubber or equivalent material, designed to prevent slipping of the foot of the driver. The said pedal 16 is pivotally connected at diametrically opposite points 18 to a flange on the disk 14, and hence said pedal 16 is held against rotation about the axis of the spindle 2, and is adapted to be tilted or canted from left to right and vice versa.

Riveted or otherwise connected to the inner side of the pedal 16 is a section 19 of leather or equivalent material. This section or piece of leather is adapted to serve as a brake shoe against the revoluble disk 15.

The tube 3^c is provided at 25 with one or more projections, disposed in the spiral groove of spindle 3.

In practice, when downward pressure of the foot is exerted upon the pedal 16, the plunger 12 and the parts connected therewith will be depressed for accelerating purposes. It will also be observed that incidental to the said downward movement of the plunger the same will be rotated together with the disk 15 about the axes thereof. At any desired point within the limit of the downward movement of the plunger 12, the driver is enabled through the medium of his foot to tilt the pedal 16, whereupon the brake shoe 19 of the pedal will act against the disk 15 as a brake and thereby effectually lock or stop the accelerating movement. From this, it follows that in addition to affording a perfect rest for the foot of the driver, my novel accelerator is

calculated to save explosive mixture, especially when an automobile is traversing a rough road, and consequently shocks and strains on the gearing of the automobile will be avoided.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

1. In an accelerator for internal combustion engines, the combination of a cylinder, a spirally grooved spindle occupying the longitudinal center of the cylinder, a vertically movable revoluble tubular plunger connected to the spindle, a stationary stud disposed in the spiral groove of the spindle, a disk loosely mounted upon said plunger, a rod fixed to and depending from said plunger, levers pivotally connected together and pivotally connected to the cylinder and the rod, respectively, and adapted to have connection with a valve of an engine, a disk fixed to the plunger and disposed above the first named disk, and a pedal mounted to be tilted upon the first named disk and provided with a brake shoe arranged to cooperate with the second named disk.

2. In an accelerator for internal combustion engines, the combination of an element mounted for rectilinear movement and revoluble movement, and a pedal movable relatively to the said element and having a brake shoe for cooperation with the same, said pedal being adapted to have connection with the throttle of an engine.

3. In an accelerator for internal combustion engines, the combination of a plunger,

means for turning said plunger about its axis incidental to endwise movement thereof, a disk loosely mounted upon the plunger and adapted for connection with a valve of an engine, a disk fixed to the plunger and disposed above the first named disk, and a pedal disposed above the second named disk and mounted to be tilted upon the first named disk and having a brake shoe to act against the second named disk.

4. An accelerator for internal combustion engines, comprising a plunger, means for turning the said plunger about its axis incidental to the endwise movement thereof, a disk loosely mounted upon the plunger and adapted to have connection with the throttle of an engine, said disk having supporting means fixed thereto, a disk fixed to the plunger and disposed above the first named disk, and a pedal pivotally mounted upon said supporting means and disposed above the second named disk and adapted when tilted to brake said disk.

5. An accelerator for internal combustion engines comprising a plunger, means for rotating the plunger about its axis incidental to endwise movement thereof and said plunger being adapted for connection with a valve of an engine, a tiltable pedal connected with the plunger and mounted independent of the revoluble movement thereof, and means whereby tilting of the pedal will be attended by the braking of the plunger.

It testimony whereof I affix my signature.
THOMAS C. WILLETT.