

Jan. 13. 1925.

1,522,764

O. B. WELKER

ACCELERATOR

Filed Nov. 20, 1922

Fig. 1.

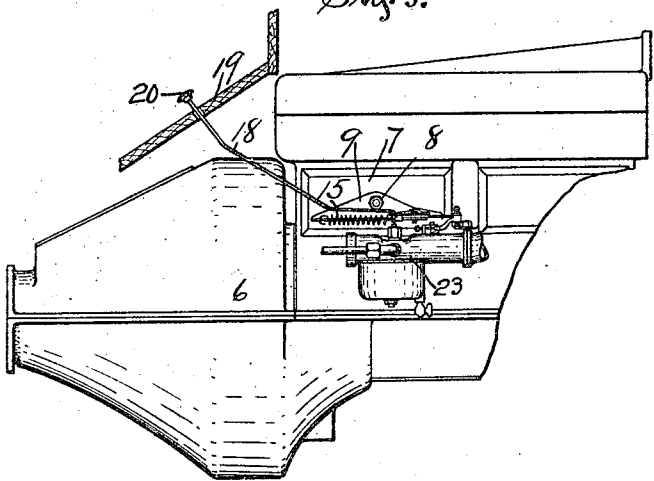


Fig. 2.

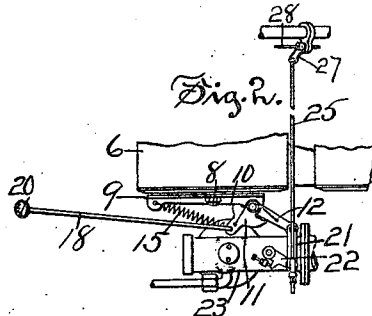


Fig. 3.

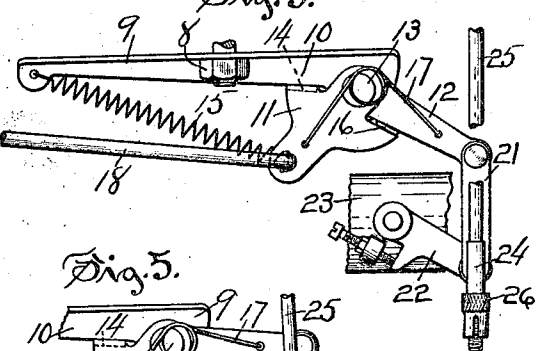


Fig. 4.

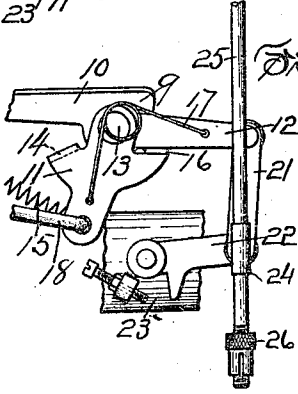
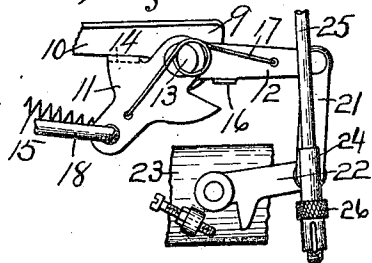


Fig. 5.



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OSCAR B. WELKER, OF MIDDLETOWN, CONNECTICUT, ASSIGNOR TO THE WELKER-HOOPS MANUFACTURING COMPANY, OF MIDDLETOWN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

ACCELERATOR.

Application filed November 20, 1922. Serial No. 602,094.

To all whom it may concern:

Be it known that I, OSCAR B. WELKER, a citizen of the United States, and a resident of Middletown, in the county of Middlesex and State of Connecticut, have invented new and Improved Accelerators, of which the following is a specification.

My invention relates to the class of devices for operating the throttle, especially of a gas engine, and by means of a foot of the operator, and an object of my invention, among others, is to provide a device of this class that shall be particularly simple in its construction and effective in its operation.

One form of accelerator embodying my invention and in the construction and use of which the objects herein set out, as well as others, may be attained, is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a portion of an internal combustion engine showing my improved accelerator attached thereto.

Figure 2 is a top view of the carbureter and a portion of the engine casing shown in Figure 1 with my improved accelerator attached thereto.

Figure 3 is a detail view, scale enlarged, showing the accelerator dismounted but the parts operatively arranged.

Figure 4 is a view of a portion of the accelerator parts showing the method of operation by the foot.

Figure 5 is a view similar to Figure 4, but showing the method of operation by hand.

In the accompanying drawings the numeral 6 indicates generally an engine case that in one form and as shown herein includes a cover 7 for a recess in which valve rods are located, said cover being secured in place as by a bolt and a nut 8, and I make use of this nut in the arrangement illustrated and described herein by forming a bracket 9 to fit upon the bolt and be held in place by the nut 8, the latter, therefore, serving the double purpose of holding the bracket 9 and the cover 7.

This bracket comprises a back that fits upon the bolt, as above described, and a shelf 10 arranged at an angle to the back, this shelf preferably being wider at one end than at the opposite end for the support of a sectional lever comprising a main section 11 and an idling section 12, both mounted

upon a pivot 13 upon the shelf. The main section 11 has a stop 14 comprising a downturned lip arranged to engage the edge of the shelf 10 and thus limit the movement of this section of the lever under the pull of a spring 15. This main section also has an upturned stop 16 to limit the movement of the idling section 12 of the lever under the influence of a spring 17.

A push rod 18, connected with the lever 11, extends through a floor board 19 of a vehicle to the upper side of said floor board where it is provided with a knob 20 as a means for operating it. The idling section 12 of the lever is preferably connected with a universal actuator 21 in the form of a bar, one end of this actuator being pivotally connected with the section 12 of the lever and the opposite end having a downturned stud engaging an opening in a throttle lever 22 forming part of a carbureter 23 of any well known form and construction and for which reason a further and detailed description is omitted herein. An actuator sleeve 24 is secured to or forms part of the actuator 21 and a connecting rod 25 extends through the sleeve, its threaded end bearing a stop 26 adjustably mounted thereon. The connecting rod 25 extends to a crank 27 secured to the lower end of a hand operated valve rod 28, the connection of the rod 25 with the crank and valve rod being of a well known construction, said rod being operated by a hand lever appurtenant to the steering wheel of the vehicle in a manner that will be readily understood.

From the above description, in connection with the accompanying drawing, it will be noted that when the hand lever appurtenant to the steering wheel is operated to turn the valve rod, a pull will be exerted upon the connecting rod 25, and this pull through the connection of the sleeve 24 and the actuator 21, will move the throttle lever 22 to open the throttle valve, and when the connecting rod 25 is moved in the opposite direction, as by the usual hand lever appurtenant to the steering wheel, the spring 17, acting through the idling section 12 of the lever and the actuator 21, will move the throttle lever in the opposite direction to close the throttle valve. In this movement of the rod 25 it will be noted that the idling

section 12 of the sectional lever will operate independently of the main section of said lever and without effecting any purpose except that of permitting the main section of said lever to remain stationary.

When pressure is exerted upon the knob 20, as by the foot of the operator, the push upon the rod 18 will swing the main section 11 of the sectional lever on its pivot, and the stop 16 on the main section of the lever engaging the edge of the idling section 12 of the lever will cause the latter to be swung on its pivot and this, through its connection with the universal actuator 21, will move said actuator and consequently the throttle lever 22 to open the throttle, the actuator sleeve 24 in this movement sliding freely upon the connecting rod 25, and the latter, therefore, remains stationary. When pressure upon the knob 20 is released the springs 15 and 17 will return the sections of the lever to their positions of rest and likewise the universal actuator, in which movement the sleeve 24 will slide free upon the rod into engagement with the stop 26 at the end thereof. In this operation the throttle lever 22 will be returned to its closed position by the spring in the manner above described.

I claim—

1. An accelerator comprising a bracket including a shelf, means for securing said bracket to an automobile structure, a jointed lever mounted on the shelf of said bracket and having one member connected with a throttle operating device and the other member connected with a carbureter valve, and a second operating device slidable relative to the last named lever member for operating the carbureter valve.

2. An accelerator comprising throttle actuating mechanism, the latter including a sectional lever including a main section and an idling section, the main section being a plate, a lug bent out of the plane of said plate to engage the idling section of the lever, and means for operating the main section of said lever.

3. An accelerator including a bracket comprising a ledge, a sectional lever including an idling section and a main section both mounted upon a single pivot on said ledge, a lug bent at an angle to the plane of the main section of the lever and located in the path of movement of the idling section of the lever, and a stop lug bent from the plane of the main part of the lever and adapted to engage said bracket to limit the movement

of the main section of the lever, means for operating the main section of the lever, a connection between the idling section and a throttle valve, and a resilient connection between the sections of said lever.

4. An accelerator including a two-part lever, the lever sections being pivotally connected and constructed for limited relative movement in one direction, operating means for one of the lever sections, a connection between the other lever section and a carbureter valve, and an independent operating means for the last named lever section, the last named operating means including a sliding rod carrying an abutment and a sleeve through which the rod extends being mounted between the last named lever section and carbureter valve.

5. An accelerator including a two-part lever, the lever sections being pivotally connected and constructed for limited relative movement in one direction, operating means for one of the lever sections, a connection between the other lever section and a carbureter valve, an independent operating means for the last named lever section, and a spring associated with the lever sections for normally holding the same at their limit of movement in one direction, the last named operating means including a sliding rod carrying an abutment and a sleeve through which the rod extends being mounted between the last named lever section and carbureter valve.

6. An accelerator comprising throttle actuating mechanism, the latter including a sectional lever having a main section and an idling section, the main section being a plate, a lug bent out of the plane of said plate to engage the idling section of the lever, means for operating the main section of said lever, a link connection between the idling section and the throttle and throttle operating means associated with the link connection.

7. An accelerator comprising throttle actuating mechanism, the latter including a sectional lever having a main section and an idling section, the main section being a plate, a lug bent out of the plane of said plate to engage the idling section of the lever, means for operating the main section of said lever, a link connection between the idling section and the throttle, a sleeve fixed to the link and an operating rod for the throttle slidable in the sleeve.

OSCAR B. WELKER.