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G. L. GUTHMULLER
 DEVICE FOR CONTROLLING THE GASOLINE SUPPLY
 TO INTERNAL COMBUSTION ENGINES
 Filed Dec. 30, 1929

1,829,276

Fig. 1.

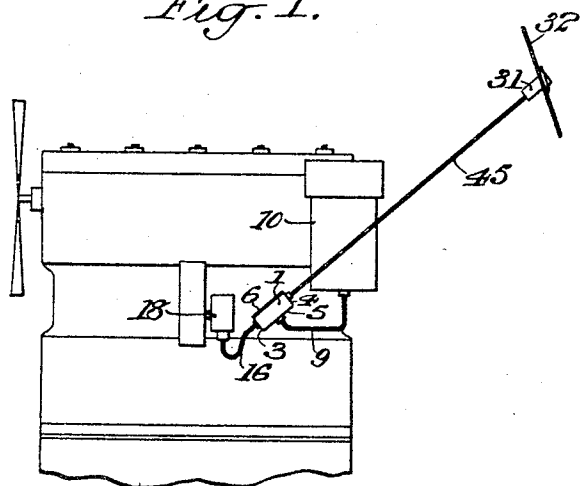


Fig. 2.

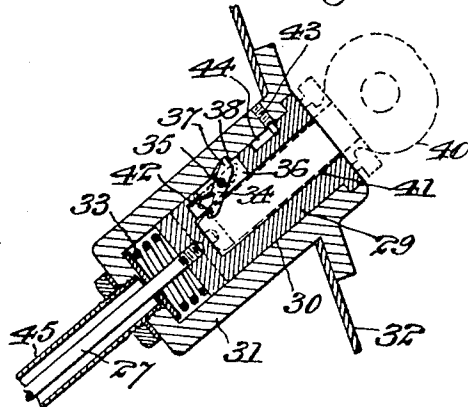


Fig. 3.

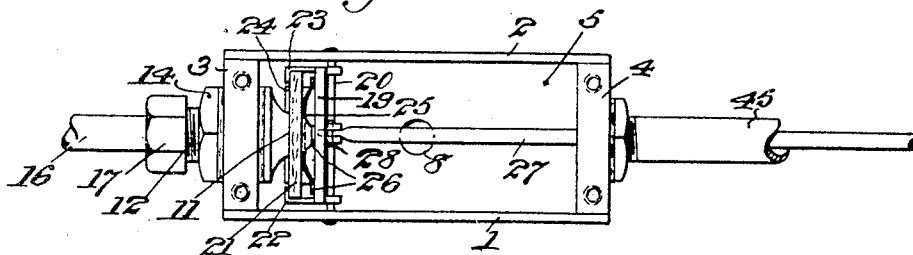


Fig. 4.

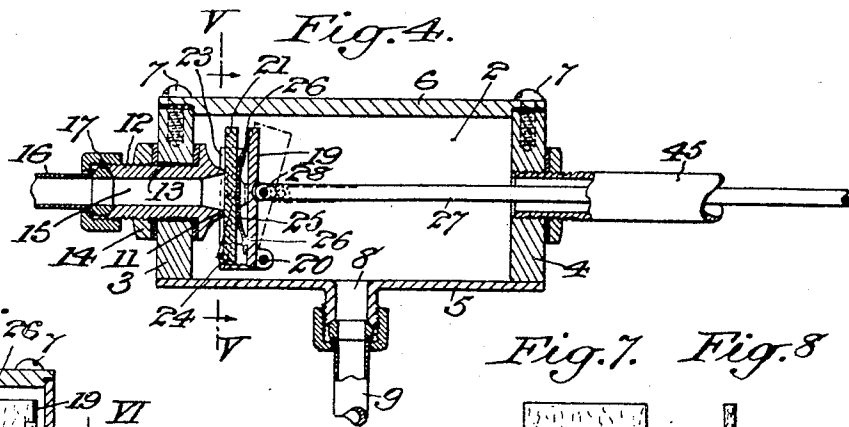


Fig. 5.

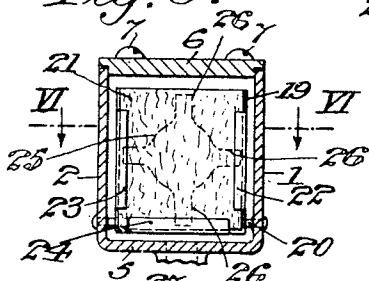


Fig. 6.

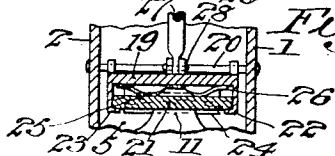
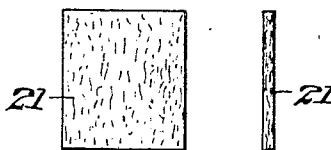


Fig. 7. Fig. 8



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DEVICE FOR CONTROLLING THE GASOLINE SUPPLY TO INTERNAL COMBUSTION ENGINES

Application filed December 30, 1929. Serial No. 417,402.

My invention relates to improvements in devices for controlling the gasoline supply to internal combustion engines, and has for an object to provide means controlled and operated from the instrument board or other convenient place for stopping the supply of gasoline between the vacuum tank and the carbureter to prevent unauthorized use of the engine or, if installed in connection with an internal combustion engine of a motor vehicle will prevent the use or theft of same.

Another object is to provide a device which is simple, economical to manufacture, readily applicable to internal combustion engines now in common use, and efficient in operation.

Another object is to provide a device having certain of its parts removable for purposes of replacement.

Another object is to provide certain improvements in the form, construction and arrangement of the several parts whereby the above named and other objects may effectively be attained.

A practical embodiment of my invention is represented in the accompanying drawings, in which

Fig. 1 represents a detail side elevation of an internal combustion engine and adjacent parts of a motor vehicle having my improved device included therein;

Fig. 2 represents a detail longitudinal section, on an enlarged scale of the means for locking and releasing the device;

Fig. 3 represents a detail plan view of my device having the cover removed to show parts within;

Fig. 4 represents a central longitudinal section through the device;

Fig. 5 represents a vertical section taken in the plane of the line V—V of Fig. 4 looking in the direction of the arrows;

Fig. 6 represents a detail longitudinal section taken in the plane of the line VI—VI of Fig. 5 looking in the direction of the arrows; and

Figs. 7 and 8 represent front and side elevations respectively, of the valve face piece removed from its holder.

The application of my improved device is

shown in Fig. 1 in connection with an internal combustion engine of a motor vehicle, and the device comprises a hollow casing having side walls denoted by 1, 2, end walls by 3, 4, a bottom by 5, and a cover by 6, which cover is fitted to the end and side walls to form a liquid tight joint therebetween and is removably secured to the walls by screws 7. The bottom 5 has an inlet 8 to which is secured, by any well known or approved means, one end of a gasoline feed pipe 9. The other end of the feed pipe 9 is fixed to a vacuum tank 10 in the usual manner.

A valve seat 11 is provided with a screw-threaded shank 12 arranged to extend through a hole 13 in the wall 3 and receive a nut 14 to secure the seat in position on the interior of the wall 3. A passage 15 is formed in the seat and shank and the end of the shank 12 disposed in position to be connected with one end of a gasoline feed pipe 16, by means of a compression coupling 17, which engages the end of the screw-threaded shank 12. The other end of the feed pipe 16 is coupled to a carbureter 18 in the usual manner.

The valve seat 11 is arranged to coact with a valve 19 hinged on a pintle 20 fixed in the side walls 1, 2 of the casing so as to be oscillated toward and away from the seat. The valve 19 is provided with a face piece 21, of leather or other similar material, which is removably held in position between guides 22, 23, 24 carried by the valve 19. This face piece 21 is yieldingly held at the limit of its outer movement by a disc 25 which contacts with the back of the face piece 21 and has a series of spring actuated fingers 26 which rest against the valve 19. By this means the face piece of the valve 19 may be yieldingly held in engagement with the seat 11 and thereby insure the proper closing of the passage 15 in the seat and shank.

The valve 19 is controlled and operated by means of a rod 27, one end of which is pivotally mounted on the valve 19 at 28, while the other end is secured to a plunger 29 mounted to slide in a tubular recess 30 formed in a housing 31, which is fixed to an instrument board 32 or other convenient place. The plunger 29 and rod 27 are moved outwardly

by means of a spring 33 located between the bottom of the recess 30 and the plunger 29, which movement tends to rock the valve 19 and move the face piece away from the seat 11, thereby opening communication between the inlet 8 of the casing and the outlet passage 15 to the carburetor.

The plunger 29 is held in the recess 30 of the housing 31 against the tension of the spring 33 by means of a spring actuated latch 34 pivoted at 35 in a slot 36 formed in the plunger, the outwardly projecting end 37 of which latch is arranged to be brought into and out of engagement with a notch 38 disposed in the wall of the tubular recess 30 of the housing. Thus, by moving the plunger inwardly in the recess, the rod will rock the valve 19 on its pintle so that the face piece 21 will be brought into contact with the seat and press thereon against the tension of the disc 25 and spring fingers 26 thereby closing the passage 15 to the carburetor. This movement of the plunger in the recess will bring the end 37 of the latch 34 in position to enter the notch 38 and hold the plunger, rod and the valve in close position until released.

To release the latch from engagement with the notch 38, I provide a key 40, shown in dotted outline in Fig. 2, arranged to be inserted in a longitudinal slot 41, so that one edge of the key will be brought into position to engage the inwardly projecting end 42 of the latch 34 which extends into the slot 41, and rock the latch on its pintle 35 so as to withdraw the projecting end 37 from its position in the notch 38. When the end 37 of the latch 34 is free of the notch 38, the plunger will then be actuated by the spring 33 and moved outwardly to the position shown in the dot and dash outline in Fig. 2. The longitudinal movement of the plunger is controlled by a pin 43 screw threaded in the housing 31, the inner end of which pin is arranged to enter a slot 44 in the outer surface of the plunger.

The rod 27 is protected from being tampered with by means of a tube 45, one end of which is fixed in the wall 4 of the casing, while the other end is secured to the closed end of the housing 31.

From the foregoing it will be seen that the gasoline supply from the vacuum tank to the carburetor may be cut off by pressing the plunger inwardly in the housing until the latch engages the notch in the housing and locks the plunger in position. This movement of the plunger will cause the rod to rock the valve on its pintle and force the face piece into engagement with the valve seat thereby closing the passage of the gasoline to the carburetor. It will be understood that while the internal combustion engine may be started, it will only run until the gasoline supply in the carburetor alone is exhausted.

In order to release the gasoline from the

vacuum tank to the carburetor, it is necessary to insert the key in the slot in the plunger, which insertion will cause the latch to be rocked to remove the projecting end from the notch in the housing, whereupon the spring 33 will move the plunger outwardly to the limit of the slot 44 and its engagement with the pin 43 in the housing. This outward movement of the plunger, as previously stated, will rock the valve on its pintle and move the face piece 21 away from the seat 11 thereby allowing a supply of gasoline to pass from the vacuum tank through the feed pipe 9 and inlet 8 to the casing, thence through the passage 15 in the seat and shank to the feed pipe 16 and carburetor 18.

It is obvious that various changes may be resorted to in the form, construction and arrangement of the several parts without departing from the spirit and scope of my invention, and hence I do not intend to be limited to the details herein shown and described except as the same are set forth in the claims.

What I claim is:—

1. A valve for controlling the supply of gasoline to an internal combustion engine, comprising a chamber having an inlet and outlet for the passage of gasoline through said chamber, a valve seat adjustably secured in said outlet, a flat valve hinged in the chamber in position to move toward and away from said seat, a removable face piece loosely mounted on said valve and arranged to coact with the seat, a resilient means interposed between the valve and face piece, a rod pivoted to the valve and movable longitudinally in the chamber, and a spring actuated means connected with the rod for moving the valve and face piece away from its seat, said means being manually controlled to close the valve on the seat.

2. A valve for controlling the supply of gasoline to an internal combustion engine, comprising a chamber having an inlet and outlet for the passage of gasoline through said chamber, a valve seat adjustably secured in said outlet, a flat valve hinged in the chamber in position to move toward and away from said seat, a yielding face piece loosely mounted on said valve and arranged to coact with the seat, means on the valve for slidably mounting said face piece thereon, a rod pivoted to the valve and movable longitudinally in the chamber, and a spring actuated means connected with the rod for moving the valve away from its seat, said means being manually controlled to close the valve on the seat.

3. A valve for controlling the supply of gasoline to an internal combustion engine, comprising a chamber having an inlet and outlet for the passage of gasoline through said chamber, a valve seat adjustably secured in said outlet, a flat valve hinged in the chamber in position to move toward and away

from said seat, guides on said valve, a removable yielding face piece slidably mounted in said guides in position to coact with the seat, a rod pivoted to the valve and movable longitudinally in the chamber, and a
5 spring actuated means connected with the rod for moving the valve away from its seat, said means being manually controlled to close the valve on the seat.

10 4. A valve for controlling the supply of gasoline to an internal combustion engine, comprising a chamber having an inlet and outlet for the passage of gasoline through
15 said chamber, a valve seat adjustably secured in said outlet, a flat valve hinged in the chamber in position to move toward and away from said seat, guides on said valve, a removable face piece slidably mounted in said
20 guides in position to coact with the seat, a resilient means interposed between the face piece and valve, a rod pivoted to the valve and movable longitudinally in the chamber, and a spring actuated means connected with
25 the rod for moving the valve away from its seat, said means being manually controlled to close the valve on the seat.

In testimony, that I claim the foregoing as my invention, I have signed my name this
27th day of December, 1929.

30 GEORGE L. GUTHMULLER.

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