May 6, 1924. 1,493,336

G. GLENN

AUTOMOBILE LOCK

Filed Sept. 14, 1923 2 Sheets-Sheet 1

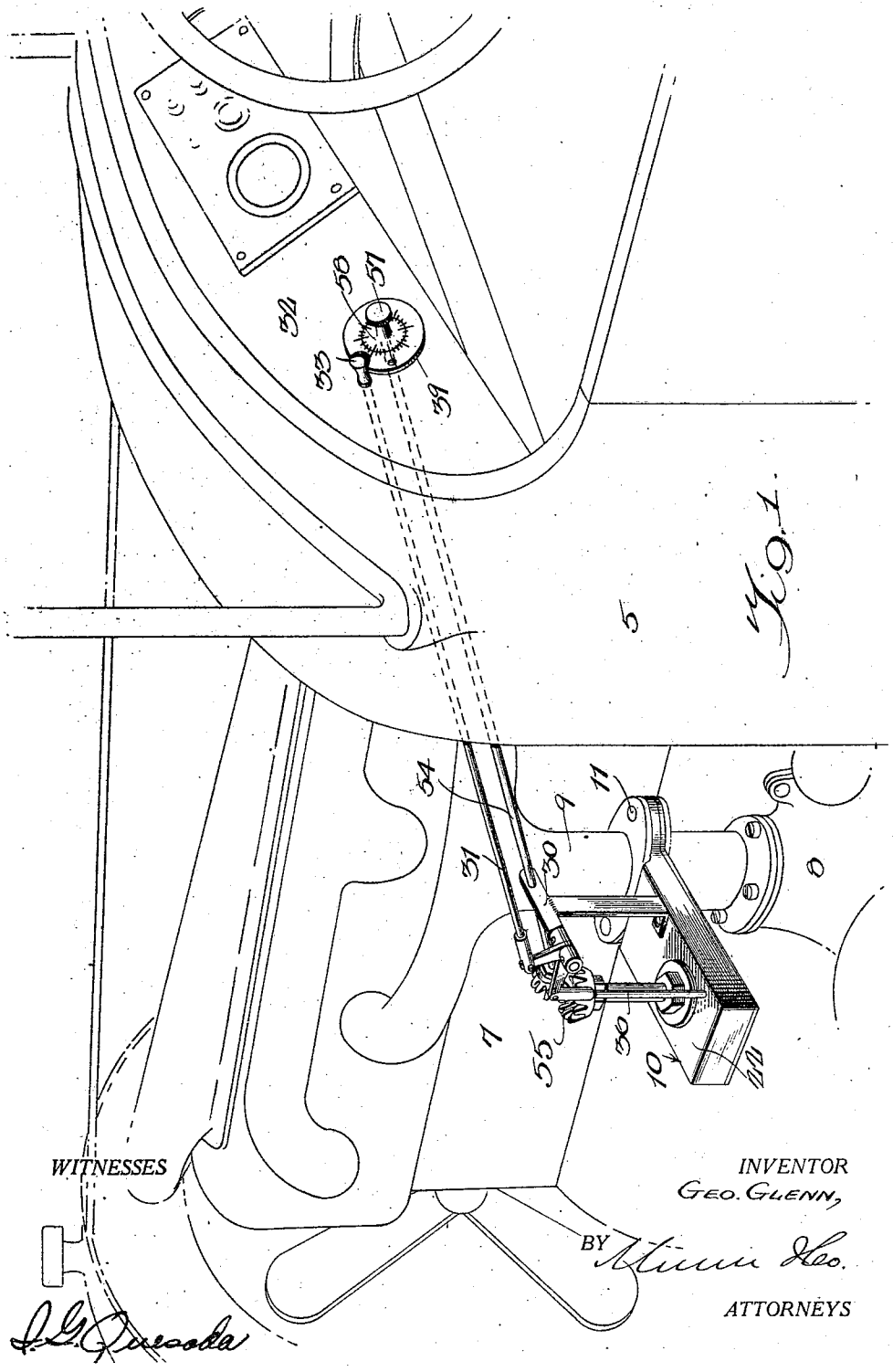


Fig. 1.

WITNESSES

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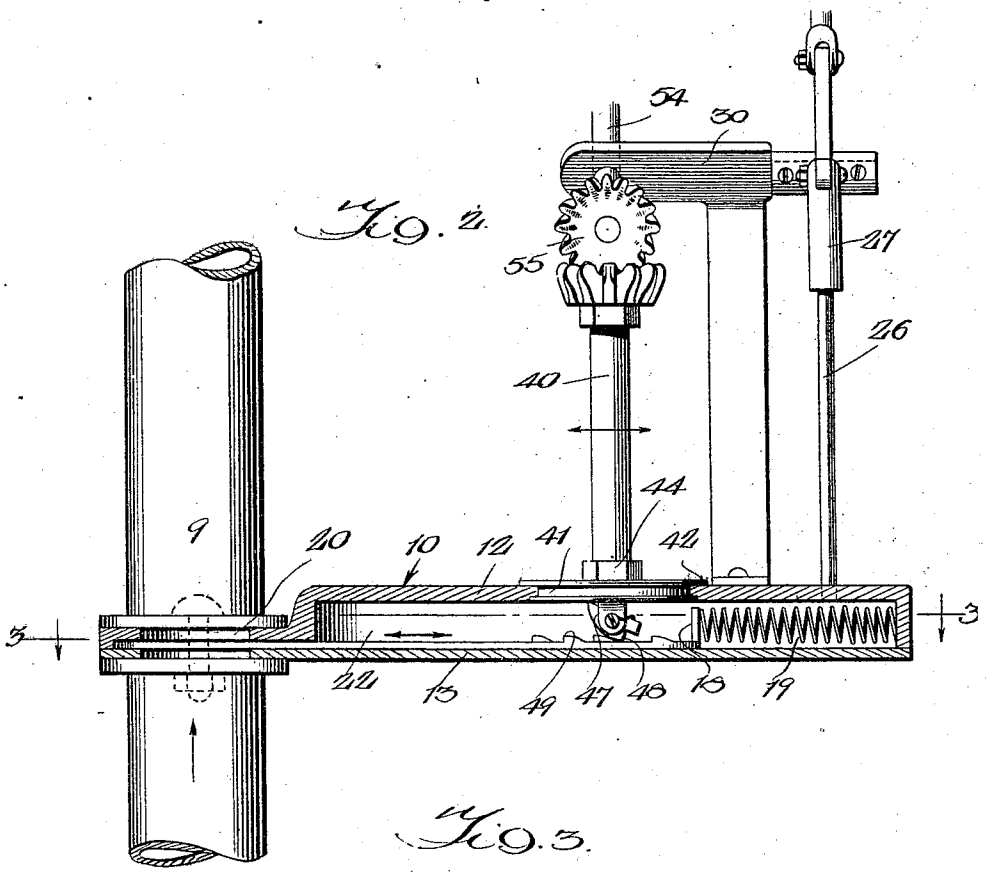
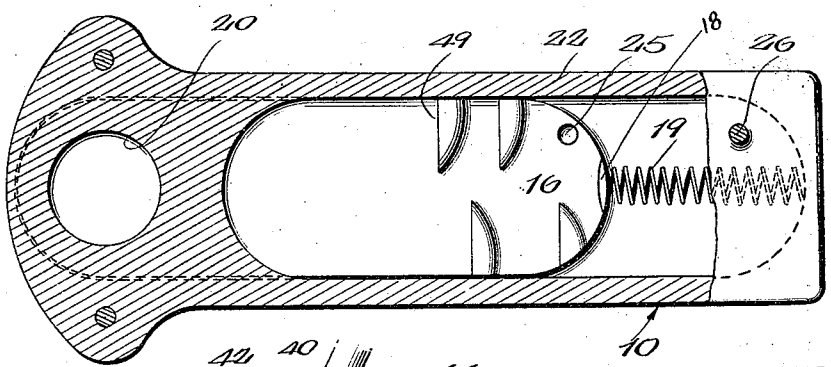


Fig. 2.

Fig. 3.



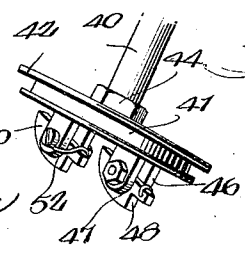


Fig. 4.

WITNESSES

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Patented May 6, 1924. 1,493,336

UNITED STATES PATENT OFFICE.

GEORGE GLENN, OF BUTTE, MONTANA.

AUTOMOBILE LOCK.

Application filed September 14, 1923. Serial No. 662,774.

To all whom it may concern:

Be it known that I, GEORGE GLENN, a citizen of the United States, and resident of Butte, in the county of Silver Bow and State of Montana, have invented certain new and useful Improvements in Automobile Locks, of which the following is a specification.

This invention relates to locks especially adapted to be used on automobiles.

Briefly stated an important object of this invention is to provide an automobile lock adapted to be interposed between the carbureter and the combustion chambers of the automobile engine and having a slide or barrel adapted to be positioned near the path of travel of the fuel so as to prevent the operation of the engine.

A further object is to provide novel means whereby to actuate a fuel controlling valve so that the operation of the engine by an unauthorized person is positively prevented.

A further object is to provide a lock of the character specified which may be conveniently applied to any type of automobile and which may be controlled from a point within convenient reach of the operator.

A further object is to provide a lock of the character specified which is of highly simplified construction, durable in use and cheap to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawing forming a part of this application and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a perspective of the improved lock applied.

Figure 2 is a vertical sectional view through the same, the manifold or fuel conduit being shown in elevation.

Figure 3 is a horizontal sectional view taken on line 3—3 of Figure 2.

Figure 4 is a fragmentary perspective illustrating the control head for a valve embodied in the invention.

In the drawing wherein for the purpose of illustration is shown a preferred embodiment of the invention the numeral 5 designates a vehicle having an engine 7 provided with a carbureter 8 and an intake manifold 9. The invention forming the subject matter of this application comprises a housing 10 having a reduced attaching portion adapted to be confined between the carbureter and the manifold by means of fastening devices 11.

More specifically the housing 10 consists of upper and lower sections 12 and 13 respectively adapted to be joined by fastening devices of any suitable kind and by reference to Figure 2 it will be seen that the upper portion 12 of the housing is reduced in thickness at one end portion and is confined between the carbureter and the intake manifold. However, the housing may be located at any point between the carbureter and the combustion chamber of the engine so that the supply of fuel to the engine may be cut off when desired.

With further reference to Figure 2 it will be observed that a flat valve plate 16 of elongated formation is confined between the upper and lower sections 12 and 13 and is adapted to be extended across the path of travel of the fuel so as to absolutely cut off the movement of the fuel to the engine. The rear end of the elongated valve plate 16 is provided with an upwardly directed stop 18 with which one end of a retractile coil spring 19 is engaged. The other end of the coil spring is engaged with the rear end wall of the top section 12.

It is thus seen that the spring 19 urges the elongated valve plate 15 across the aligned openings 20 in the upper and lower plates so that the supply of fuel is cut off. The upper and lower sections of the housing 12 when assembled are formed with a chamber for the reception of the spring 19 and the operating means for the valve plate 16. More specifically the top section 12 is provided with side walls 22 which are flatly secured to the lower section 13 so that the top wall of the section 12 is maintained in spaced relation to the lower section 13 whereby the chamber is formed.

When the elongated valve plate 16 is in its advanced position it cuts off the supply of fuel and when it is in its rear position or retracted position the fuel may flow into the engine. The elongated valve plate 16 is formed with a rather small transverse opening 25 for the reception of a locking pin 26 having connection with a bell crank 27. The forward portion of the pin 26 is slidable through the upper section 12 and is adapted to be received in said opening 25 so as to hold the elongated valve plate 16 in its advanced position.

The bell crank 27 is mounted upon one

branch of a T-shaped standard 30 and is provided with an operating rod 31 extending through the dash 32 of the vehicle and having a knob 33 by means of which the rod may be manually operated. When the knob 33 is drawn rearwardly the pin 26 is elevated so as to allow the valve plate 16 to move to its advanced position under the influence of the spring 19. On the other hand when the knob 33 is advanced the pin 26 is moved into locking engagement with the valve plate 16 so as to hold the valve plate against advancement.

The valve plate 16 is retracted by the rocking of an operating shaft 40 having a disk-shaped head 41 provided with annular extensions 42 which engage opposite sides of the top wall of the section 12. More specifically the disk-shaped head 41 is threaded or otherwise secured on the lower portion of the shaft 40 and a lock nut 44 is threaded on the shaft and engaged with the head 41 so as to hold the same securely in position. Figure 4 illustrates that pairs of ears 46 are carried by the under side of the head 41 and are provided with pawls 47. The pawls 47 are pivotally connected intermediate their ends to the ears by suitable pivot elements and have their rear portions cut away to provide shoulders 48 adapted to be engaged with transverse ribs 49 on the upper side of the valve plate 16.

Of course the head 41 is rotatably connected to the housing and when the shaft 40 is rotated by means to be fully described the shoulders 48 or one of them in fact will be engaged with the adjacent rib 49 so as to retract the valve plate 16 one step. The movement of the shaft in the other direction will result in the engagement of the other shoulder 48 with the rib 49 so as to retract the valve plate 16 another step. If the shaft 40 is rocked or turned in the wrong direction the rounded surfaces 49 of the pawls will be engaged with the ribs and the plate will be allowed to return to its closed position to thereby cut off the supply of fuel.

It will be seen that it is necessary to know the exact extent the shaft 40 is to be turned in order to fully retract the valve plate. A spring 52 is carried by the ears and is engaged with the adjacent pawl so as to urge the shoulder 48 downwardly as illustrated in Figure 2.

The upper portion of the shaft 40 and the lower portion of an operating rod 54 are provided with ears 55 by means of which motion of the rod 54 is transmitted to the shaft 40. Figure 1 illustrates that the rear portion of the operating rod 54 is extended through the dash and is provided with a knob 57 and with an annular flange 58 having calibrations cooperating with the calibrations on a dial 59. The coacting calibrations of the dials 58 and 59 indicate the extent of turning of the shaft 40 and the operator is of course acquainted with the proper extent to which the shaft 40 is turned or rocked to operate the lock and others will not be acquainted with the combination so that the unauthorized operation of the lock is impossible.

With reference to the foregoing description taken in connection with the accompanying drawings it will be seen that the improved lock may be applied either during the construction of the vehicle or at any time thereafter without the exercise of unusual skill and without marring the appearance of the vehicle. When it is desired to cutoff the supply of fuel it is merely necessary to draw the knob 53 rearwardly so that the spring actuated valve plate 16 moves to its advanced position.

When it is desired to again establish communication between the carbureter and the combustion chamber it is merely necessary to rock the shaft 54 in the direction and to the extent known only to the proper party or parties. The unauthorized operation of the lock is prevented by the fact that only the proper parties are acquainted with the combination.

Any attempt by an unauthorized party to remove the lock and connect the carbureter directly to the manifold will be frustated by the fact that the flange on the carbureter will not meet and establish a gas tight connection with the flange on the manifold as suitable means may be provided to make this impossible.

Having thus described the invention, what is claimed is:

1. A lock of the character described comprising a housing having an opening, a valve plate of elongated formation received in said housing and adapted to be extended across said opening, a spring urging the valve to its advanced position, said valve plate being formed on its upper side with a plurality of transverse ribs, and a rotatable head having pivoted pawls provided with shoulders adapted to be engaged with said ribs.

2. A lock of the character described comprising a housing having an opening, a valve plate of elongated formation received in said housing and adapted to be extended across said opening, a spring urging the valve to its advanced position, said valve plate being formed on its upper side with a plurality of transverse ribs, and a rotatable head having pivoted pawls provided with shoulders adapted to be engaged with said ribs, and spring means for urging the shoulders of said pawl into engagement with said ribs.

3. A lock of the character described comprising a housing having an opening, a valve plate of elongated formation received in

said housing and adapted to be extended across said opening, a spring urging the valve to its advanced position, said valve plate being formed on its upper side with a plurality of transverse ribs, a rotatable head having pivoted pawls provided with shoulders adapted to be engaged with said ribs, spring means for urging the shoulders of said pawl into engagement with said ribs, a shaft having connection with said head, an operating rod having connection with said shaft, and manually controlled means mounted on said rod for operating the rod and the shaft, and a pin slidably carried by said housing and adapted for locking connection with said valve plate whereby to hold the same in a retracted position.

4. A lock of the character described comprising a housing having an opening, a valve plate of elongated formation received in said housing and adapted to be extended across said opening, a spring urging the valve to its advanced position, said valve plate being formed on its upper side with a plurality of transverse ribs, a rotatable head having pivoted pawls provided with shoulders adapted to be engaged with said ribs, spring means for urging the shoulders of said pawl into engagement with said ribs, a shaft having connection with said head, an operating rod having connection with said shaft, manually controlled means mounted on said rod for operating the rod and the shaft, a pin slidably carried by said housing and adapted for locking connection with said valve plate whereby to hold the same in a retracted position, a bell-crank connected to said pin, and a manually controlled rod connected to said bell-crank.

5. An automobile lock comprising a housing consisting of upper and lower sections, one of the sections being provided with side walls engaging the other section whereby the upper and lower walls of the housing are maintained in spaced relation to define a chamber, said sections being provided with aligned openings, an elongated valve plate slidable in said housing and adapted to extend across said openings, a spring arranged within said housing and urging the valve plate to its advanced position, the top of said valve plate being provided with transverse ribs terminating adjacent the longitudinal center of the valve plate, a disk-shaped head rotatably connected to one of the sections of said housing and having pairs of ears, pawls pivotally connected intermediate their ends to said ears and having shoulders adapted to engage said ribs whereby to operate the valve plate in a step by step manner, the lower edges of said pawl being rounded for engagement with said head, and means whereby to operate said disk-shaped head.

6. An automobile lock comprising a housing consisting of upper and lower sections, one of the sections being provided with side walls engaging the other section whereby the upper and lower walls of the housing are maintained in spaced relation to define a chamber, said sections being provided with aligned openings, an elongated valve plate slidable in said housing and adapted to extend across said openings, a spring arranged within said housing and urging the valve plate to its advanced position, the top of said valve plate being provided with transverse ribs terminating adjacent the longitudinal center of the valve plate, a disk-shaped head rotatably connected to one of the sections of said housing and having pairs of ears, pawls pivotally connected intermediate their ends to said ears and having shoulders adapted to engage said ribs whereby to operate the valve plate in a step by step manner, the lower edges of said pawl being rounded for engagement with said head, means whereby to operate said disk-shaped head, and a locking pin slidable in said housing and adapted for engagement with said valve plate to hold the valve plate in a retracted position.

GEORGE GLENN.