

E. F. CALIFF.
MOTOR VEHICLE LOCK.
APPLICATION FILED SEPT. 12, 1919.

1,384,233.

Patented July 12, 1921.

Fig. 1.

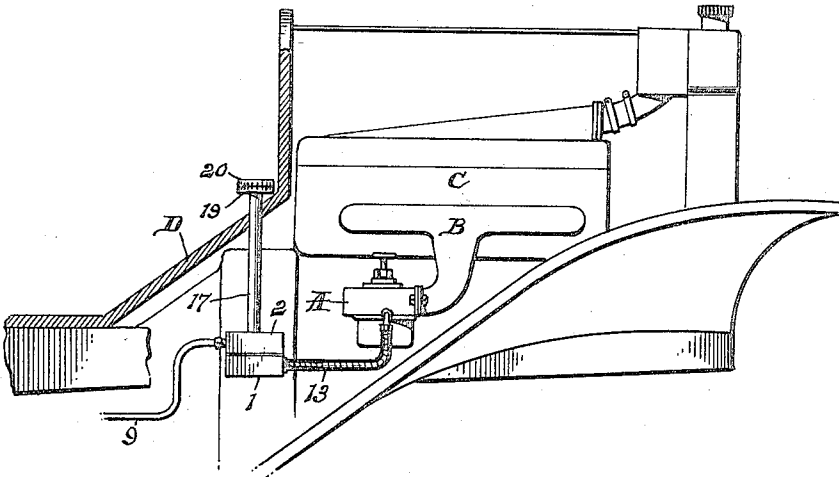


Fig. 2.

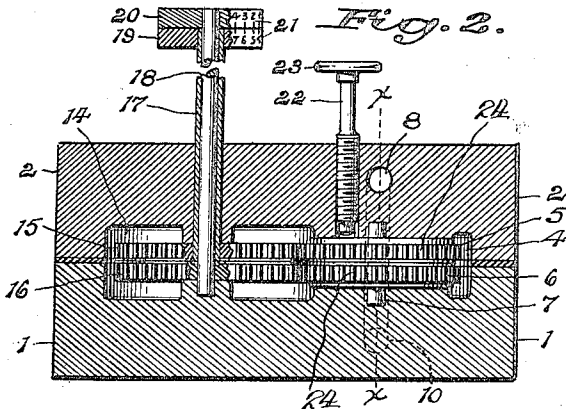


Fig. 3.

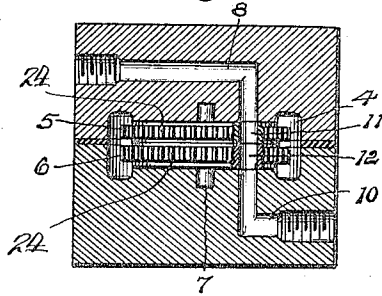
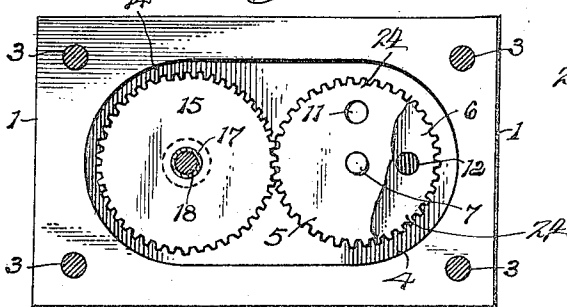


Fig. 4.



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UNITED STATES PATENT OFFICE.

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MOTOR-VEHICLE LOCK.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EMERY F. CALIFF, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Motor-Vehicle Locks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to locking devices adapted to control the supply of fuel to engines of motor vehicles for the purpose of preventing the unauthorized use of the vehicle, and its object is to provide a simple and compact construction which may be cheaply manufactured and readily installed upon motor vehicles as they are commonly constructed.

A further object is to provide a construction wherein the means for controlling the flow of fuel performs the function of a lock thereby obviating the necessity for a key operated lock or other separate and distinct locking means, and also to arrange the controlling means so that members thereof may be operated independently to function similarly to rotatable members of a combination lock. It is also an object of the invention to provide certain other new and useful features in the construction, arrangement and combination of parts, all as hereinafter more fully described.

With the above and other ends in view, the invention consists in directly controlling the flow of fuel by the interposition in the line of flow, of independently operable members, and also consists in other matters hereinafter more fully set forth and particularly pointed out in the appended claims, reference being had to the accompanying drawing, in which—

Figure 1 is a sectional side elevation of a portion of a motor vehicle illustrating the application thereto of a device embodying the invention;

Fig. 2 is a transverse vertical section through the device;

Fig. 3 a section substantially upon the line X—X of Fig. 2, and

Fig. 4 a plan view of the bottom half of the device showing the gear members in place thereon.

While the locking or controlling device embodying the invention has been shown in the accompanying drawing as embodied in a particular construction, it will be under-

stood that the construction shown is merely illustrative of the invention and that changes may be made therein without departing from the spirit of the invention.

Further, the locking or controlling device has been shown in Fig. 1 of the drawing as inserted in the gasoline supply line adjacent the carbureter A which is connected by a manifold B to the engine C in the usual manner, but it will be understood that this device may be applied to a motor vehicle at any convenient point in the gasoline supply line to control the flow of gasoline to the carbureter.

As shown in detail in the accompanying drawing, the locking or controlling device comprises a rectangular block or casing made up of a lower part 1 and an upper part 2 which parts are recessed in their adjacent faces to provide a chamber for gear members, hereinafter described. The chambered blocks or parts 1 and 2 are secured together in any suitable manner as by bolts or rivets 3 so that they can not be readily taken apart, and within the chamber 4 formed between the adjacent faces of the blocks, are placed disks 5 and 6 which are rotatable upon a pin 7 set in bearing recesses in the faces of the blocks. These disks 5 and 6 are of such width that they fit closely between the adjacent inner faces of the blocks and are in close contact with each other and with said faces, and an inlet channel 8 is provided in the upper part 2 of the block or casing by boring laterally inward from one side of the block transversely of the disks 5 and 6 and above the same, or otherwise forming or providing a passage in the top part of the casing, to the outer end of which passage the fuel pipe 9 leading from the fuel supply (not shown) is connected. The inner end of this passage 8 extends downwardly and opens through the inner face of the block against which face the disk 5 contacts. The inner end of this passage 8 opens through the face of the wall at a point adjacent the periphery of the disk 5 and an outlet passage 10 opens through the opposite or forward side of the block with its inner end opening through the inner face of the lower half 1 of the block directly opposite the inner end of the passage 8. In the disks 5 and 6 are transverse openings 11 and 12 respectively, which are so located that upon turning of the disks upon their axis pin 7, these openings may

be brought into alinement with each other and also into alinement with the passages 8 and 10, as shown in Fig. 3.

To the outer end of the passage 10 a pipe 13 is connected leading to the carbureter A and this pipe, if found desirable, may be jacketed as indicated in Fig. 1, so that it may not be readily severed or disconnected and permit of by-passing the shut-off device by connecting the pipe 9 with the carbureter by means of a rubber tube or other suitable connection. To rotate the disks 5 and 6 so that the openings therein may be brought out of alinement with the passages 8 and 10 and thus shut off the flow of fuel therethrough, said disks are provided with peripheral gear teeth 24, and supported within an adjacent chamber 14 of the block or casing are suitable gears 15 and 16 in mesh with the peripheral gear teeth 24 of the disks 5 and 6. The gear 15 is secured upon a tubular stem 17 and the gear 16 is secured upon a rod or stem 18 extending upwardly through the sleeve 17. Upon the upper end of the sleeve 17 is a disk 19 and adjacent thereto is a like disk 20 secured upon the rod 18. Upon the peripheries of these disks are numbered lines or markings, as indicated at 21, so that each of the gears 15 and 16 may be turned independently of the other by means of these indicating disks or dials 19 and 20, which may be set upon their sleeve and rod so that when certain numbers are opposite each other, the disks 5 and 6 will be turned to a position to bring the openings 11 and 12 into alinement with each other and with the fuel passages, and permit the fuel to flow through the casing.

Obviously, any desired number of shut-off disks may be employed in superposed relation and independently rotated in any suitable manner, the independent turning of these disks serving the purpose of rotatable members of a combination lock, and thus, while the disks 5 and 6 perform the function of opening and closing the fuel passage, they also perform the function of a lock in that they are concealed within the casing and their relative position must be known before they can be turned to bring their openings 11 and 12 into alinement with each other and with the fuel passage.

As a simple and convenient means for turning the disks 5 and 6, the gears 15 and 16, with their sleeve and rod and indicating dials, are shown, but it is obvious that any other suitable means for turning the disks and indicating their position, may be employed. By locating the block or casing below the floor board D, the rod 18 and its sleeve may be extended upwardly through this board, thus locating the dials 19 and 20 inside the dash board of the vehicle where they are accessible to the operator. How-

ever, the casing comprising the blocks 1 and 2 may be located at any convenient point within the fuel supply line and any suitable indicating means may be supported upon the dash or other part of the vehicle convenient to the operator's seat, and suitable connections provided therefrom to the gears 15 and 16 or the disks 5 and 6.

To prevent accidental turning of the disks 5 and 6 during the operation of the vehicle, a set screw 22 having a head 23 for turning the same, may be provided in the upper half 2 of the casing in a position to engage at its inner end the upper disk 5. By turning the screw inwardly, its inner end is brought against the disk and will thus lock the disk against turning and at the same time force it into firm frictional contact with the disk 6, which disk will thus be seated firmly against the contact surface of the casing, and, when the opening 12 therein is out of alinement with the passage 10, the passage will be closed and any leakage past the disk will be prevented.

What I claim is:—

1. In an automobile lock, the combination with a vehicle having a driver's compartment and dashboard and a fuel supply line, of a casing within the fuel supply line forming a chamber and provided with a passage for fuel communication with the supply line and opening at its inner ends through faces of the chamber at opposite points thereof, a plurality of disks in said chamber with their faces in firm contact with the faces of the walls of the chamber and their opposed faces in firm contact with each other, said disks having openings therein transversely thereof adapted to be alined with the fuel passage in the casing by a turning movement of the disks, said disks being also provided with peripheral teeth, gears in the casing in engagement with the peripheral teeth on the disks, means for turning the gears extending from the casing to a point within the driver's compartment inside the dashboard, and indicating means carried by said means for turning the gears, said indicating means being also located at the inner side of the dashboard.

2. In a device of the character described, the combination of a casing forming a closed chamber and having a fuel passage in the casing with the inner ends of the fuel passage opening through the wall of the casing into the chamber at opposite sides thereof, a plurality of disks in the chamber in close contact with each other and with the adjacent faces of the walls of the casing, said disks being also provided with peripheral teeth, gears in the chamber in mesh with the teeth on the disks, there being a gear for each disk, means extending through one side of the casing and secured to said gears for turning each gear inde-

pendently of the other or others, indicating means upon the outer end of said means for turning the gears to indicate the position of the disks, said disks being formed
5 with transverse openings adapted by a turning movement of the disks to be alined with the ends of the fuel passage opening through the wall of the casing, and means for locking the disks against accidental turning and for forcing said disks into firm contact with 10 each other and with a wall of the casing.

In testimony whereof I affix my signature in the presence of two witnesses.

EMERY F. CALIFF.

Witnesses:

ANNA M. DORR,

LEWIS E. FLANDERS.