L. PETERS.

VALVE LOCK.

APPLICATION FILED DEC. 5, 1919.

1,339,412. Patented May 11, 1920.

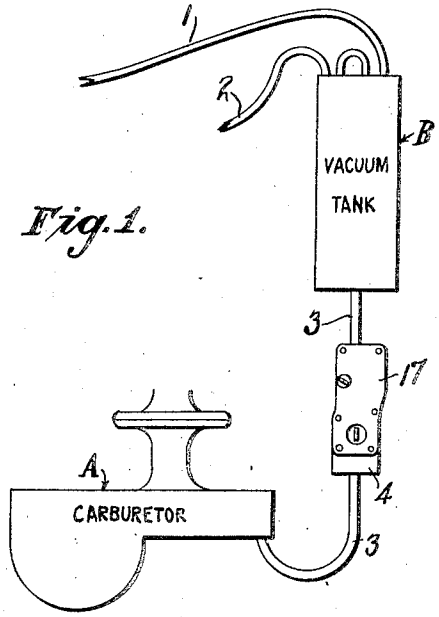


Fig. 1.

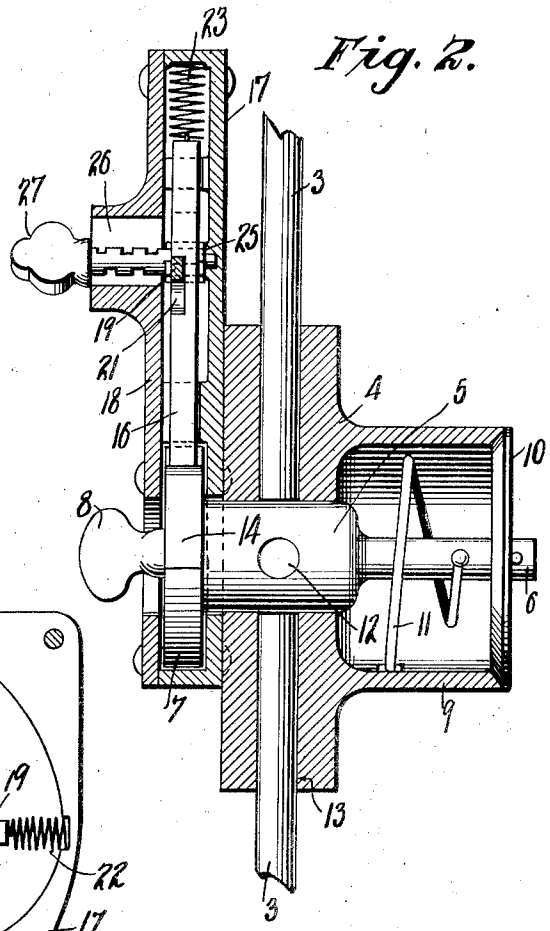


Fig. 2.

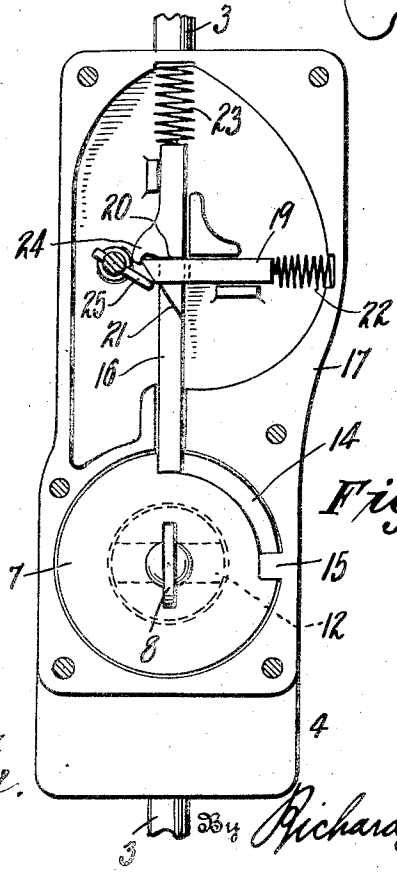


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

LYLE PETERS, OF DENVER, COLORADO.

VALVE-LOCK.

1,339,412. Specification of Letters Patent. Patented May 11, 1920.

Application filed December 5, 1919. Serial No. 342,804.

To all whom it may concern:

Be it known that I, LYLE PETERS, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Valve-Locks, of which the following is a specification.

The primary purpose of this invention is to control the supply of fuel to the carbureter of internal combustion engines whereby when the engine is at rest and unattended, the supply of fuel thereto may be cut off and the valve locked, thereby preventing the surreptitious operation of the valve and the unauthorized use of the machine embodying the invention.

The drawings illustrate a preferred embodiment of the invention. However, I desire it to be understood that in adapting the same to meet various conditions, changes may be made in the form, proportion and minor details of construction without departing from the nature of the invention as claimed hereinafter.

Referring to the drawings:—

Figure 1 is a detail view of a lock valve embodying the invention, showing the same in the feed pipe between a carbureter and the supply or vacuum tank.

Fig. 2 is a vertical transverse section of the valve and lock showing the parts on a larger scale and the valve in closed and locked position.

Fig. 3 is a front view of the valve and lock, the front plate being removed to show the arrangement of the internal structure, the parts being on the same scale as illustrated in Fig. 2.

Corresponding and like parts are referred to in the following description and indicated in the several views of the drawings by like reference characters.

The reference letter A, designates a conventional type of carbureter, and B a supply tank from which the carbureter draws its supply, said tank being of the vacuum type and connected with a main or fuel tank by means of a pipe 1. A pipe 2 connects the vacuum tank B with the intake manifold in a manner well understood. The pipe 3 connecting the tank B with the carbureter A is provided in its length with the valve and coöperating lock therefor.

The valve comprises a casing 4 and a plug 5, the latter being rotatably mounted in the casing and embodying a stem 6, head 7 and button or hand piece 8. A collar 9 projects from the rear side of the casing 4 and is closed by means of a plate 10. The stem 6 is mounted in the plate 10 and a spiral spring 11 normally holds the valve in closed position, one end of the spring being connected to the stem 6 and the other being attached to the collar 9 of the valve casing. A transverse opening 12 is formed in the body 5 of the valve and adapted to register with a passage 13 formed in the casing 4. When the valve is closed as indicated in Fig. 2, the opening 12 is crosswise of the passage 13. A groove 14 is formed in the outer edge of the head 7 and extends one fourth the circumference thereof. A lug 15 enters the groove 14 and limits the turning of the valve in each direction. As shown most clearly in Fig. 3 of the drawings, the valve is closed and held against movement in one direction by means of the lug 15 and is prevented from turning in the reverse direction by means of a bolt 16. When the bolt is withdrawn from engagement with the groove 14 the valve is drawn into open position by means of the spring 11.

The lock comprises a casing 17 which is closed at its front by means of a plate 18. Within the casing is disposed the bolt 16 and a coöperating bolt 19 both bolts being directed in their movements and retained in place by lugs, preferably forming a part of the casing 17. The bolt 19 is disposed at a right angle to the bolt 16 and is adapted to project through an opening 20 formed therein. The lower end wall of the opening 20 is inclined as indicated at 21 for the beveled end of the bolt 19 to ride upon. The bolt 19 is held projected by means of an expansible helical spring 22. The bolt 16 is held projected by means of an expansible helical spring 23. When the bolt 16 is projected into locking position it is held in such position by means of the bolt 19 as indicated most clearly in Fig. 3. A projection 24 extends laterally from the bolt 16 and constitutes a stop to limit the forward movement of the bolt 19 and is also adapted to be engaged by the nib 25 of the key operated spindle or hub 26 which is rotatably mounted in a boss formed as a part of the front plate 18. The key spindle or hub 26 may be of any construction common to locks and is adapted to receive the key 27 by means of which the lock is opened.

It is to be understood that the valve cas-

ing and the lock casing may be of any relative formation and for convenience the same are indicated as being separately formed and adapted to be secured in any manner. Obviously, these parts may be of ordinary structure. The combined lock and valve is located in the line of pipe supplying fuel to the carbureter. When the engine is at rest and the machine unattended, the valve 5 is closed and is locked against unauthorized operation by means of the lug 15 and the bolt 16. When the key 27 is introduced into the lock and turned to the left the first movement is to shift the bolt 19 to the right by the end of the nib 25 riding upon the beveled extremity of the bolt 19. The next operation is a longitudinal movement of the bolt 16 by engagement of the nib 25 with the projection 24. The bolt 19 is held during the entire movement of the bolt 16 until the beveled end 21 engages the beveled end of the bolt 19 and a continuing movement of the bolt 16 causes the beveled end of the bolt 19 to ride upon the beveled end 21 of the bolt 16 whereby the bolt 19 is moved so as to admit of disengagement of the bolt 16 from the valve and after the bolt 16 has cleared the groove 14 the valve 5 is drawn into open position by the action of the spring 11 which holds the same open until the valve is again closed by positive manipulation thereof. The lug 15 besides serving as means to lock the valve against movement in one direction, also serves as means to limit the throw of the valve in each direction.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent, is:—

1. In combination with a bolt, a second bolt normally in locking engagement with the main bolt, and a key operated member having a nib for engaging the secondary bolt and imparting an initial movement thereto and subsequently engaging the main bolt for throwing the same, the secondary bolt being continued in its movement by engagement with the main bolt.

2. Valve locking means of the character specified comprising a main bolt, a secondary bolt adapted to lockingly engage the main bolt, coacting inclined surfaces between the two bolts, and a key operated member having a projection for imparting an initial movement to the secondary bolt, and a releasing movement to the main bolt whereby the coacting inclines of the two bolts are brought into active operation to continue the movement of the secondary bolt by the movement of the main bolt when said secondary bolt is free of the projecting part of the key operated member.

3. In locking means of the character specified, a main bolt having a lateral projection, a secondary bolt in locking engagement with the main bolt and limited in its forward movement by said lateral projection, coacting inclines between the two bolts and a key operated member having a projection to impart an initial movement to the secondary bolt to bring it into position to be engaged by the incline of the main bolt when the latter is moved by said key operated member.

4. In locking mechanism of the character specified, a main bolt having a transverse opening and having one end of the opening inclined, a lateral projection on the main bolt adapted to overhang the opening thereof, a secondary bolt adapted to pass through the opening of the main bolt and limited in its movement by the lateral projection, and a key operated member having a nib to move the secondary bolt and subsequently impart movement to the main bolt whereby the same may be disengaged from the part to be locked.

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

LYLE PETERS.

Witnesses:
C. B. McCoy,
C. E. Busey.