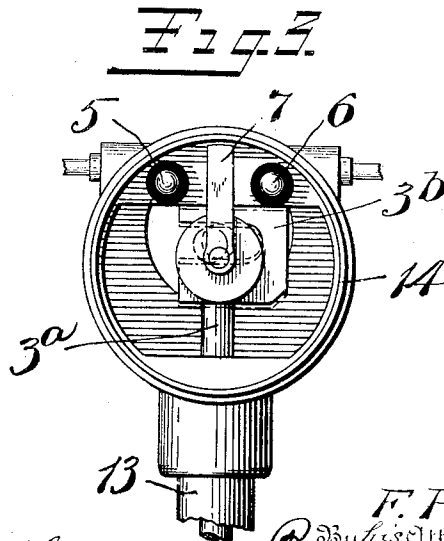
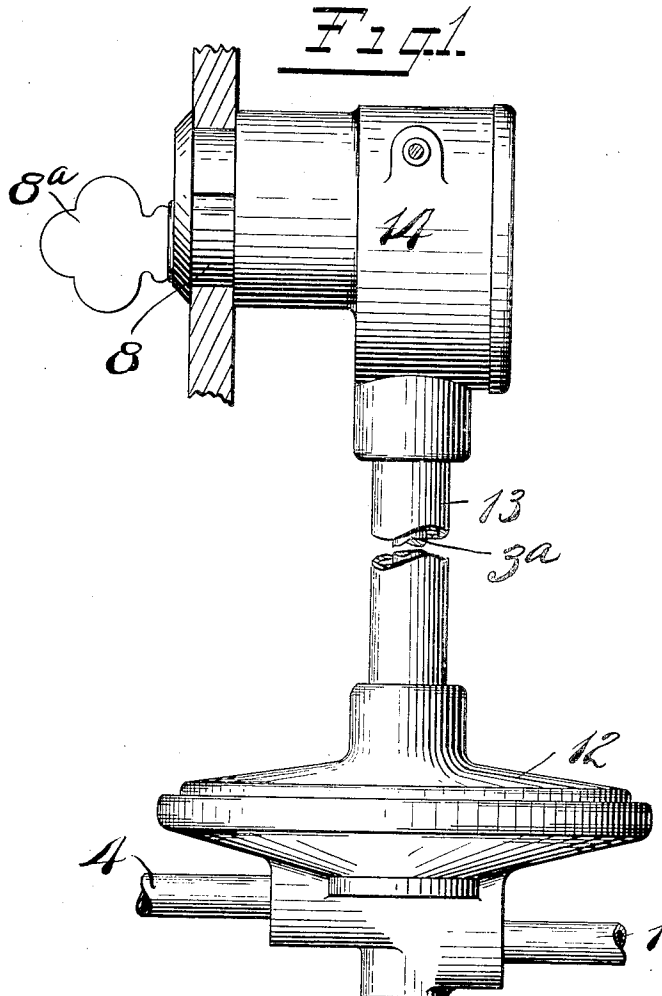


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MOTOR LOCK.
APPLICATION FILED OCT. 20, 1910.

1,000,523.

Patented Aug. 15, 1911.
2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 2.

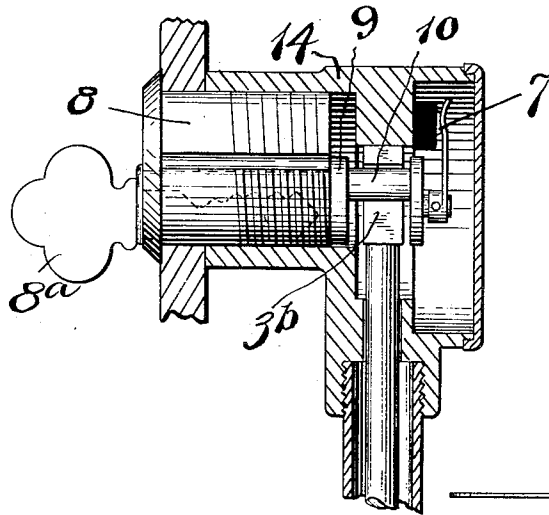


Fig. 5.

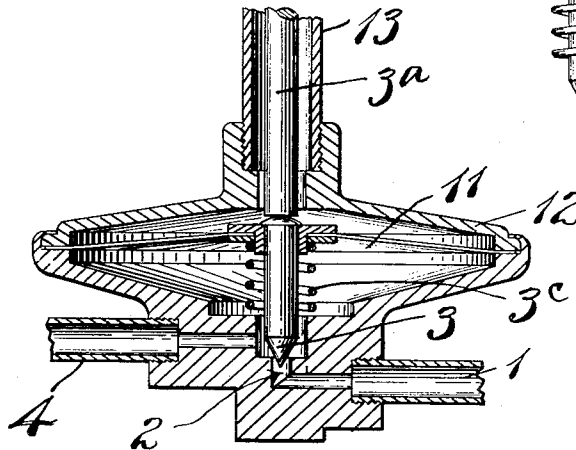
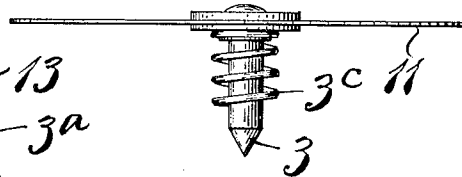
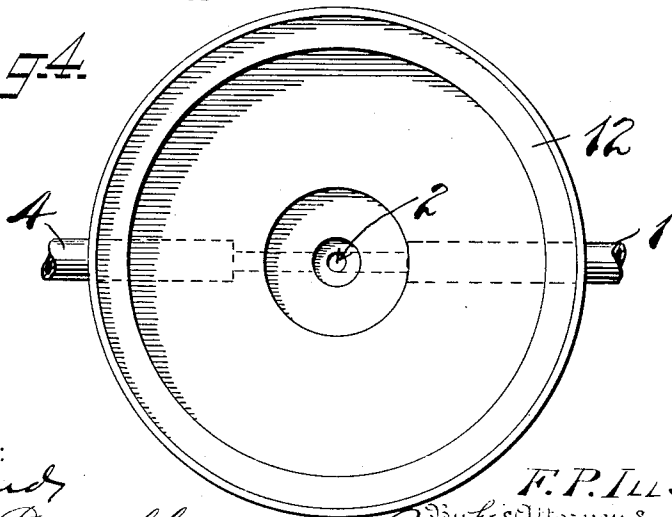


Fig. 4.



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UNITED STATES PATENT OFFICE.

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MOTOR-LOCK.

1,000,523.

Specification of Letters Patent. Patented Aug. 15, 1911.

Application filed October 20, 1910. Serial No. 588,056.

To all whom it may concern:

Be it known that I, FRANK PORTER ILLSLEY, a citizen of the United States, residing at Evanston, Cook county, Illinois, have invented certain new and useful Improvements in Motor-Locks, of which the following is a full, clear, and exact description.

My invention relates to improvements in locks for internal combustion motors, the object of the invention being to provide a simple and effective mechanism whereby, by a single device, the fuel circuit which furnishes fuel for the motor and the electric circuit which causes the spark for ignition may be positively controlled in such a manner that when the owner of a machine wishes to leave the same, he may lock it in such a manner as to make it impossible to start or run the motor.

In the accompanying drawings I have illustrated my invention in one form, this particular construction being best adapted to use in connection with motors in which the fuel in the tank is fed to the carbureter by pressure, although, of course, it may be used in connection with the so-called gravity fuel feed.

In said drawings, Figure 1 is a side elevation of my invention. Fig. 2 is a longitudinal vertical section of the same, showing certain parts in elevation. Fig. 3 is a view of the rear side of the upper part of the apparatus shown in Fig. 1. Fig. 4 is a plan view of the lower section of the diaphragm casing and certain associated parts. Fig. 5 is a side elevation of certain details detached.

In the apparatus as illustrated herein I have shown the same as applied to a pipe line for conveying fuel, also two independent electric circuits which lead to independent sources of electrical energy, for example, two batteries, the apparatus being so constructed that the gas and ignition circuits may be simultaneously rendered ineffective whenever desired.

In the particular form of the invention which I have elected to illustrate and describe herein, 1 represents a pipe leading from a source of fuel supply to a valve-controlled passage 2; 3 is the valve therefor; 4 is the fuel pipe leading beyond said valve 3 to the destination (a motor not shown). 5 is one terminal of one of said electric cir-

cuits while 6 is one terminal of another electric circuit. 7 is a switch constituting the other terminal in common to both electric circuits. When the switch 7 is in contact with either of the independent circuit terminals 5 or 6, an electric current will be directed to its destination, for example, the spark apparatus of a motor. When said blade stands in an intermediate position, or free of both terminals 5 and 6, both electric circuits will be open or ineffective.

The mechanism for operating and controlling both the valve 3 and the switch 7 is so arranged that such parts will be operated simultaneously and with a view to causing the valve 3 to close whenever the electric circuits aforesaid are rendered ineffective, thereby at such times securely locking the motor with which said apparatus is installed. In the particular form shown of said mechanism the valve 3 carries a stem 3^a which leads up to a yoke 3^b.

8 represents one form of a key-operable-lock which may be employed as the means for permitting manual operation. In the form shown, the lock 8 is of the pin tumbler type and 8^a is a removable key therefor.

9 represents the rotatable key plug. The inner end of the plug 9 may carry an eccentric pin 10 which stands in the slot of the yoke 3^b. Beyond the eccentric pin 10 is concentrically mounted the switch 7. It follows that when the plug 9 is rotated, the valve 3 will be raised and lowered through the action of the eccentric 10 in the yoke 3^b. It also follows that simultaneously the switch 7 may be moved to engage one or the other of the circuit terminals 5 and 6 so that the holder of an appropriate key may, at will, turn the plug 9 to the proper position to secure the desired results or may restore the plug 9 to the neutral position and withdraw the key, whereupon the motor with which said apparatus is installed will be securely locked against meddlers. Further, in the particular form shown, I have provided a unique mounting for the valve, said mounting obviating the necessity for the usual stuffing box, a feature necessary where the fuel is fed to the motor under pressure. This novel construction comprises a diaphragm 11 mounted in the housing 12 which carries the upright tubular extension 13, the latter furnishing a support for the

case 14 in which the lock 8 and the circuit terminals are arranged. The diaphragm 11 is securely held entirely around its periphery in the housing 12 so that no fuel can escape past the joint. The valve 3 and stem 3^a are likewise secured to a yielding part of the diaphragm 11 in such a manner that no fuel can escape through said mounting or connection. By reason of this arrangement, should any fuel leak past the said valve into the space above the valve, such leakage would be limited to the capacity of the space below the diaphragm 11, which latter would operate to take the place of a stuffing-box in preventing the fuel from being forced up through the pipe 13.

3^c is a spring which may be employed to facilitate the unseating of the valve 3. When such a spring is used, it is not necessary to rigidly connect the stem 3^a to the valve 3 or to the diaphragm 11 since the said spring will tend to open said valve when the rod is merely raised, an opposite movement of the rod forcing the valve to its closed position against the tension of the spring 3^c.

It is obvious that many modifications may be resorted to without departure from the spirit or scope of this invention, and to that end it should be understood that in illustrating and describing said invention, I have shown and referred to only one of many forms that may be employed, and which would embody the fundamental features of my discovery.

I refer herein to the two sources of electrical energy as being batteries; obviously

from a broad standpoint it is not essential that both be batteries; one might be a magneto in which the effective and ineffective period of operation of said magneto is controlled by the shifting of the switch 11 onto the contact which is adapted to said magneto.

From the foregoing it is apparent that this lock during the idle period of the motor may be employed to prevent meddling therewith. On the other hand, during the active period of the magneto the lock combines the switch function in that it is within the power of the operator to instantly throw from battery to battery, or from battery to magneto and vice versa at will. Obviously, of course, from a broad standpoint there may be only one source of electrical energy, it not being essential to this invention that two separate sources be used.

What I claim is:

In a lock for an internal combustion motor, a fuel circuit, a valve therefor, an electric circuit, a switch therefor, means operatively connecting said valve and switch, a housing for said means to prevent access thereto, key controlled mechanism in operative engagement with said means and a removable key for controlling said key controlled mechanism and for moving said means to simultaneously open or close both of said circuits.

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