

C. M. MERSCH.

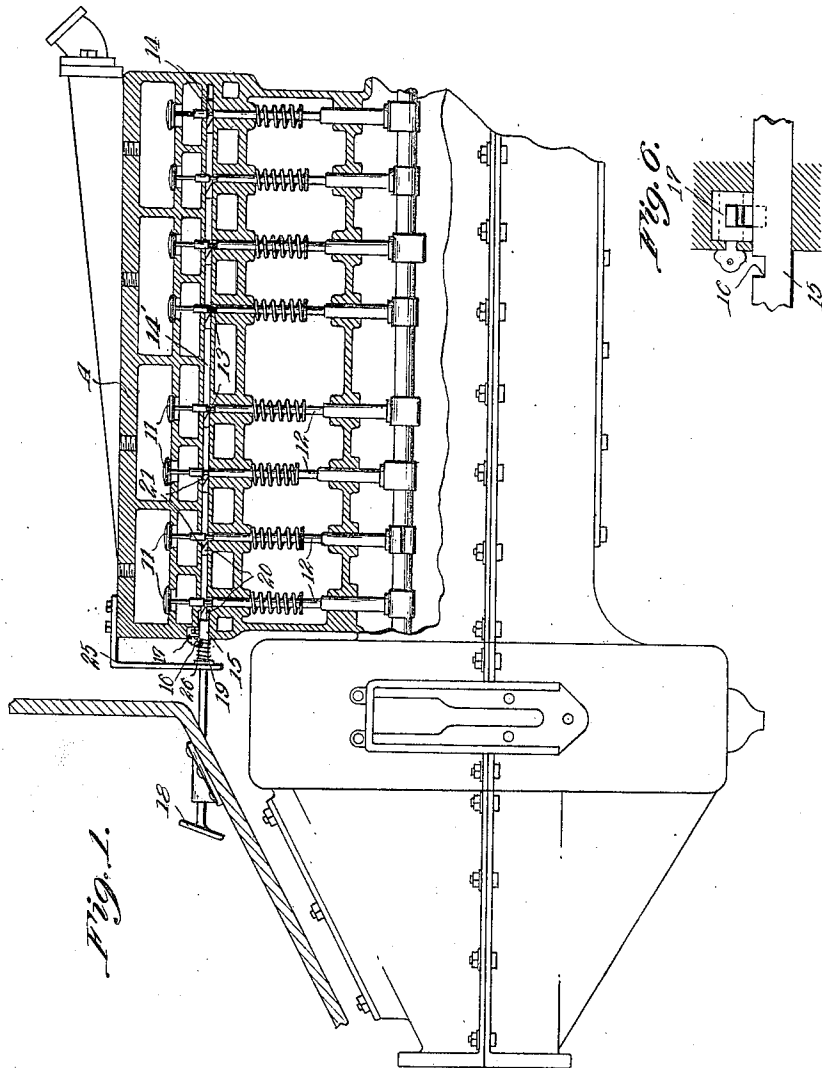
LOCK.

APPLICATION FILED MAR. 31, 1922.

1,435,124.

Patented Nov. 7, 1922.

2 SHEETS—SHEET 1.



J. M. Evans
E. J. Cooper

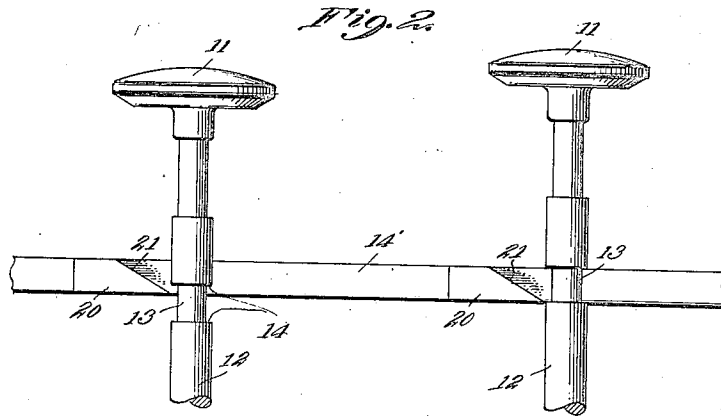
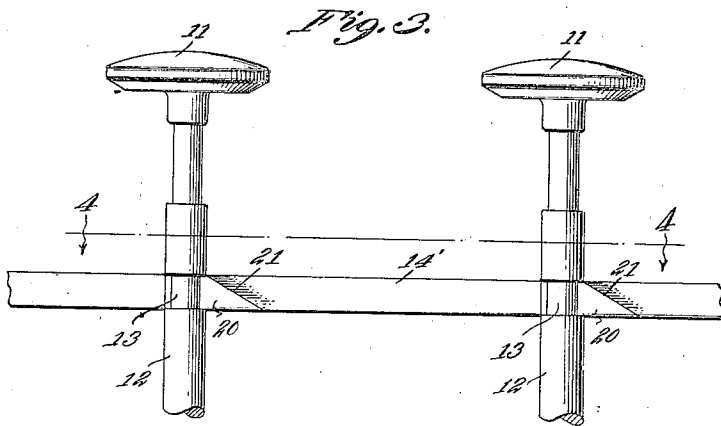
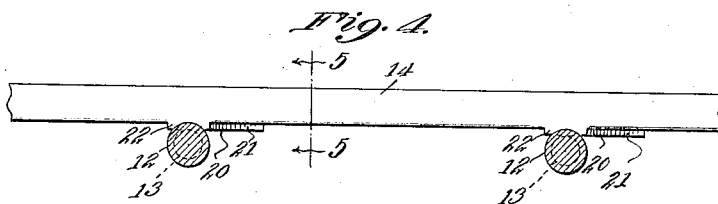
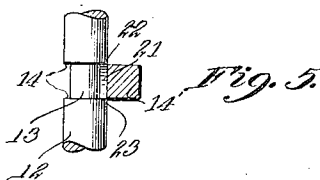
WITNESS:

C. M. Mersch
INVENTOR
BY *Victor J. Evans*
ATTORNEY

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2 SHEETS—SHEET 2.



W. Evans
E. Yeager

WITNESS:

C. M. Mersch
INVENTOR
BY *Victor J. Evans*
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UNITED STATES PATENT OFFICE.

CHRIS M. MERSCH, OF LITCHVILLE, NORTH DAKOTA.

LOCK.

Application filed March 31, 1922. Serial No. 548,549.

To all whom it may concern:

Be it known that I, CHRIS M. MERSCH, a citizen of the United States, residing at Litchville, in the county of Barnes and State of North Dakota, have invented new and useful Improvements in Locks, of which the following is a specification.

This invention relates to automobile locks, and comprehends a construction of means whereby the valves of the motor can be maintained in an opened position while the car is at rest, thereby making it impossible for the motor to be put in operation by unauthorized persons.

More specifically stated, the invention makes use of a sliding rod adapted to be arranged in the engine casing, and designed to cooperate with especially designed valve stems, so that when the said rod is moved in one direction, they engage said stems and hold the latter in elevated positions with the valves opened, means being provided to lock the rod in its active position.

The nature and advantages of the invention will be better understood when the following detailed description is read in connection with the accompanying drawings, the invention residing in the construction, combination, and arrangement of parts as claimed.

In the drawings forming part of this application, like numerals of reference indicate similar parts in the several views, and wherein:—

Figure 1 is a fragmentary sectional view of a motor showing the manner of using the invention.

Figure 2 is a detail view showing the normal position of the locking rod with respect to the valve,

Figure 3 is a detail view showing the active position of the locking rod with respect to the valve.

Figure 4 is a sectional view taken approximately on the line 4—4 of Figure 3.

Figure 5 is a sectional view taken on line 5—5 of Figure 4.

Figure 6 is a detail view of the locking means.

Referring to the drawings in detail, A indicates generally a portion of an internal combustion engine or the like, wherein the valves are indicated at 11, and the stems of which are indicated at 12. Each stem 12 is reduced as at 13 to provide opposed spaced shoulders 14 for a purpose to be presently

described. Arranged to slide through the appropriate part of the engine casing is a locking rod 14 which is of rectangular formation in cross section, and which rod is enlarged at one end as at 15. This enlarged end 15 is provided with a notch 16 which is adapted to receive a spring pressed locking element 17, to hold the rod in its active position, the locking element 17 moving into the notch 16 when the latter is brought beneath the locking element as will be readily understood. The rod is associated with a foot operated pedal 18, which when depressed, moves the rod into an active position against the tension of a spring 19, the latter operating to return the rod to normal subsequent to its release from the locking element. Arranged at one side of the locking bar are spaced projections 20, each of which has an inclined upper surface 21 which merges into a flat surface 22 along the upper edge of said projection while the lower edge of each projection is flat as at 23. When the locking bar is moved to an active position, the inclined surface 21 of each projection passing beneath one of the shoulders of one of the valve stems, causes the valve stem to be elevated, opening the valves, and holding the latter opened so that the engine cannot be operated by unauthorized persons. In the final position of the locking bar, the shoulders of each valve stem engage the flat surfaces 22 and 23 of the projections as illustrated.

The movement of the rod to an active position is limited by the locking means above referred to. The rod also slides through a bracket arm 25, and carries a collar 26 which contacts the bracket arm 25 limiting the outward movement of the locking bar against the tension of its spring, subsequent to the release of said locking bar from said locking means.

While it is believed that from the foregoing description, the nature and advantages of the invention will be readily apparent, I desire to have it understood that I do not limit myself to what is herein shown and described, and that such changes may be resorted to when desired as fall within the scope of what is claimed.

What I claim is:—

1. The combination with an internal combustion engine including valves, each valve having the stem formed with spaced shoulders, of a locking bar arranged to slide

across said valve stems, means for normally holding said bar in an inactive position, means for moving said bar to an active position, projections carried by one side of said bar including parallel flat surfaces, and an inclined surface merging into one of the said flat surfaces, said surfaces co-operating with said shoulders to elevate and hold said valves in opened positions, and means for locking said bar in its active position.

2. The combination with an internal combustion engine including poppet valves, a stem carried by each valve and provided with spaced shoulders, of a locking rod arranged to slide longitudinally through and beyond the engine, the projecting end being enlarged and provided with a notch on its top surface, a spring pressed locking element being associated with said notch to hold the rod in a locked position, a foot operated pedal secured to the extremity of said enlarged end to facilitate the slidable movement of said rod, a bracket arm having one

end secured to the engine and its opposite end having the enlarged end of said rod slidably secured therein, a coil spring having its end convolutions engaging the engine and the bracket respectively and being adapted to hold said rod in a normal position, a plurality of spaced projections integral with one side of the locking bar and one of said projections being arranged adjacent each pair of the shoulders of the valve stems, said projections having a portion of their upper surface inclined downwardly to the end of their bottom edge thereof and the remaining portion of said top surface being substantially flat and said inclination being adapted to engage the shoulders of said valve stems when said pedal is depressed to position said shoulders on the flat upper surface of the projections as and for the purpose specified.

In testimony whereof I affix my signature.

CHRIS M. MERSCH.