Feb. 6, 1923. 1,444,083

R. C. PORTEOUS ET AL.
COMBINATION GASOLINE SAFETY LOCK.
FILED MAR. 16, 1922.

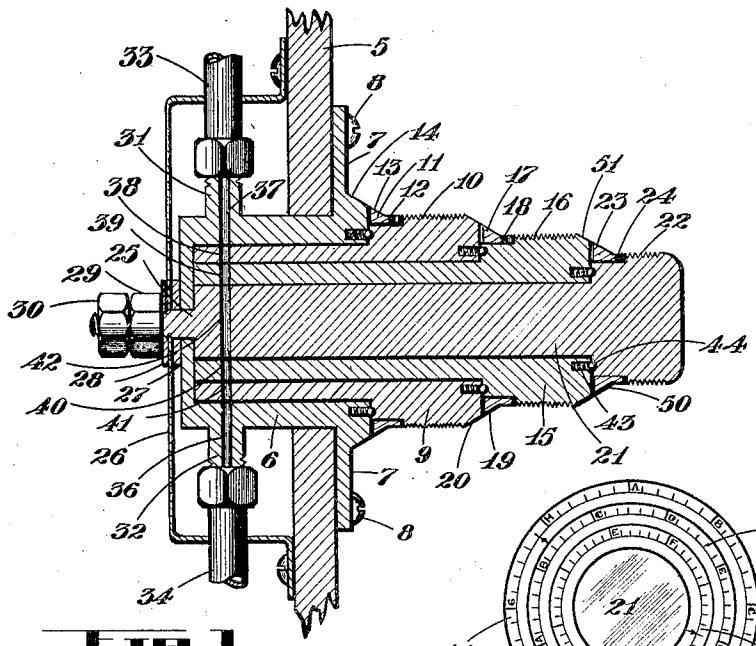


Fig. 1.

Fig. 3.

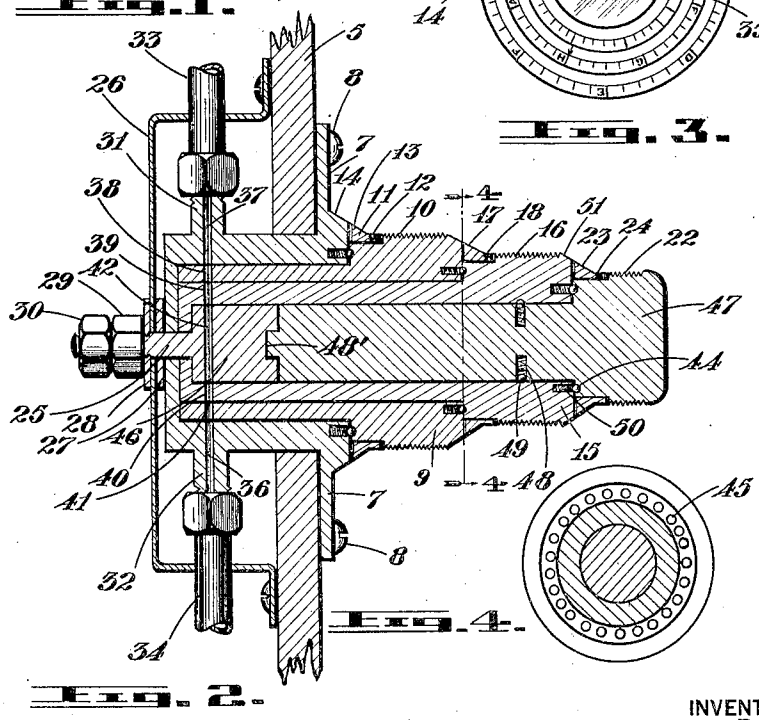


Fig. 4.

Fig. 2.

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UNITED STATES PATENT OFFICE.

ROBERT C. PORTEOUS AND JAMES A. TANNAHILL, OF MONTREAL, QUEBEC, CANADA.

COMBINATION GASOLINE SAFETY LOCK.

Application filed March 16, 1922. Serial No. 544,324.

To all whom it may concern:

Be it known that we, ROBERT C. PORTEOUS and JAMES A. TANNAHILL, citizens of the Dominion of Canada, and residents of Montreal, in the county of Hochelaga and Province of Quebec, have invented certain new and useful Improvements in Combination Gasoline Safety Locks, of which the following is a specification.

The present invention comprehends the provision of a new and useful combination lock adapted to be positioned on the gas communicating means intermediate the vacuum tank and carburetter of conventional types of motor vehicles, thus providing a means whereby the gasoline supply to the engine may be shut off and locked, thus making it impossible for unauthorized movement of the motor vehicle. In the method of locking automobiles now in vogue, locks used are operated by a key, with the result that the key often becomes lost and there is a possibility of the lock being picked by thieves.

In consideration of this inadequacy, we provide a lock of the character described, in which the number of parts are few, the construction simple and the cost of production low.

In the drawings:

Figure 1 is a vertical medial longitudinal section illustrating one form of lock.

Figure 2 is a similar view illustrating a modified form of lock.

Figure 3 is an elevation illustrating the graduation on the fistulas forming a portion of the lock and

Figure 4 is a section taken on line 4—4 of Figure 2.

Referring to the various drawings in detail, similar symbols of reference designate corresponding parts.

The device will be installed either in the instrument board of the motor vehicle or in a secluded location where it can be readily operated from the driver's seat. In the accompanying drawings, the numeral 5 indicates the instrument board provided with an aperture through which the housing 6 passes, which housing is provided with a flange 7. A plurality of screws 8 pass through the said flange and seat in the instrument board 5, thus securing the housing to the same. Rotatably positioned in the housing 6 is the fistula 9, which is provided with an enlarged terminal, the outer circumferential periphery of which is knurled as at 10. The numeral 11 indicates an annular ring which is seated in a recess in the enlarged terminal of the fistula 9 and this annular ring is held in position by a plurality of set screws, one of which is shown, being designated by the numeral 12. This annular ring 11 is provided with a bevelled face 13 which coincides with the bevelled face 14 formed on the housing 6.

Rotatably positioned in the fistula 9 is the fistula 15, which is also provided with an enlarged terminal, the outer circumferential periphery of which is knurled as at 16. Seated in the said enlarged terminal is the annular ring 17 which is held in position by means of a plurality of set screws 18, one of which is shown. This annular ring 17 is also provided with a bevelled face 19 which coincides with the bevelled face 20 formed on the fistula 9. The numeral 21 indicates a spindle rotatably positioned in the fistula 15. This spindle 21 is provided with an enlarged terminal, the outer circumferential periphery of which is knurled as at 22. Seated in this enlarged terminal is the annular ring 23 which is held in position by means of a plurality of set screws 24, one of which is shown. This annular ring 23 is also provided with a bevelled face 50 which coincides with the bevelled face 51 formed on the fistula 15. The numeral 26 indicates a casing covering the inner extremities of the locking elements. The numeral 27 indicates a washer which is positioned intermediate the inner terminals of the housing 6 and the casing 26. A shank 25 is formed on the opposite terminal of this spindle, which shank passes through the housing 6. The numeral 28 indicates a similar washer which is positioned on the exterior of the casing 26, which washer fits over the shank 25 of the spindle 21. The numeral 29 indicates a nut which is positioned on the shank 25 and this nut 29 is locked in position by means of a secondary nut 30. Nipples 31 and 32 extend oppositely from the housing

6 and have connected on their outer terminals the conducting tubes 33 and 34, which pass through the housing 26 as illustrated.

Referring now particularly to Figure 3, for the purpose of illustration, each bevelled surface 14, 20 and 35 is divided octahedrally and each division being subdivided. The octahedral divisions will be hereinafter termed the primary divisions and the subdivisions the secondary divisions. Each primary division is designated by a letter of the alphabet, the letters being in sequence to facilitate reading of the combination. Each bevelled face of the annular rings 13, 17 and 23 is provided with an indicating arrow.

Referring again to Figure 1, the nipples 31 and 32 are provided with oppositely positioned apertures 36 and 37 and the fistula 9 is provided with oppositely positioned apertures 38 and 41. The fistula 15 is provided with oppositely positioned apertures 39 and 40 and the spindle 21 is provided with an aperture 42. It will be readily understood that when these apertures are in alignment as illustrated, the same provide a free passage to allow the gasoline to pass from the vacuum tank to the carburetter. When it is desired to lock the supply of gas, the fistulas and the spindle are turned so that the apertures hereinbefore described are not in alignment. It will be readily perceived that this will not permit the feed of gasoline. It will be understood, however, that these fistulas and spindles will have a sufficiently tight connection to prevent the gas from passing around the same.

The graduated dial on the housing 6 and the fistulas provide means whereby the driver of the motor vehicle can readily ascertain when the apertures are in registered alignment. The annular rings 13, 17 and 23 are provided with set screws as hereinbefore described and it will be understood that these rings may be shifted or turned to form various combinations as desired.

The vibration of the motor vehicle on which this locking device is positioned will have a tendency to shift the fistulas and the spindle so that the apertures will not be in vertical alignment to allow the feeding of the fuel. To overcome this inadequacy, we provide locking means which we will now describe. Formed in the housing 6, the fistulas 9 and 15, are apertures in which are disposed coil springs designated by the numerals 43. At the outer terminal of each coil spring is disposed a ball indicated by the numeral 44, which ball is held in position by the upset periphery of the said aperture. In the abutting walls of the fistulas 9 and 15 and the spindle 21 are formed a plurality of concave seats 45 disposed in a concentric manner as clearly illustrated in Figure 4. In operation, the balls 44 engage with these apertures and prevent accidental turning of the elements as hereinbefore set forth.

In Figure 2, we have illustrated a modified form of lock when the spindle is divided into two sections indicated by the numerals 46 and 47 respectively. The inner terminal of section 47 is provided with a transverse ridge which seats in a groove formed in the member 46. The spindle being constructed in this manner provides a means whereby the member 47 of the spindle may be withdrawn from the lock so that the lock cannot be actuated. To secure this member 47 in position, we provide coil springs 48 having balls disposed on the outer terminals thereof indicated by the numeral 49. These balls engage with concave seats formed in the inner cylindrical surface of the fistulas 15. The construction of this lock is otherwise congruent to the one hereinbefore described.

From the foregoing description, it is thought that the construction and operation of our invention will be readily understood and while we have illustrated and described the preferred construction of the same, we desire to have it understood that deviations from such detail in the adaptation of the device for commercial purposes may be resorted to as do not form a departure from the spirit of the invention as defined by the appended claims.

What we claim as new is:

1. A device of the character described constituting an outer cylindrical casing, nipples formed on the said cylindrical casing, primary and secondary fistulas disposed in the said outer cylindrical casing, a casing over the said nipples and one extremity of the said outer cylindrical casing, a spindle formed of two sections, the outer terminal of one section being provided with a shank, the said shank extending through the said outer cylindrical casing and locked means for retaining the said primary fistula, secondary fistula and said shank in position, means for connecting the sections of the spindle so that the same will turn simultaneously, aligned apertures formed in the said spindle, fistulas and nipples, means for ascertaining when the said apertures are in communicating alignment and means for preventing accidental displacement of the said free portion of spindle.

2. A device of the character described constituting an outer cylindrical casing, nipples carried by the said cylindrical casing, primary and secondary fistulas disposed in the said outer cylindrical casing, a casing over the said nipples and one extremity of the said outer cylindrical casing, a solid spindle, the outer terminal of said solid spindle being provided with a shank, the said shank extending through the said outer cylindrical casing, locked means for retain-

ing the said primary fistula, secondary fistula and said spindle in position, aligned apertures formed in the said solid spindle, fistulas and nipples, means for ascertaining when the said apertures are in communicating alignment, and means for preventing accidental displacement of the said solid spindle.

In testimony whereof, we affix our signatures in the presence of two witnesses.

ROBERT C. PORTEOUS.
JAMES A. TANNAHILL.

Witnesses:
H. B. MacLean,
Albert Farmer.